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**FINAL PROGRAM**

# **MONTREAL**

**ISHLT • INTERNATIONAL SOCIETY FOR  
HEART AND LUNG TRANSPLANTATION**

**33rd ANNUAL MEETING and SCIENTIFIC SESSIONS**  
April 24 – 27, 2013

**ISHLT Academy: Core Competencies in  
Mechanical Circulatory Support**  
Tuesday, April 23, 2013

**ISHLT Academy: Core Competencies in  
Pediatric Heart and Lung Transplantation**  
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# ABOUT ISHLT

THE INTERNATIONAL SOCIETY FOR HEART AND LUNG TRANSPLANTATION (ISHLT) is a not-for-profit, multidisciplinary, professional organization dedicated to improving the care of patients with advanced heart or lung disease through transplantation, mechanical support and innovative therapies via research, education and advocacy.

ISHLT was created in 1981 at a small gathering of about 15 cardiologists and cardiac surgeons. Today we have over 2700 members from over 45 countries, representing over fifteen different professional disciplines involved in the management and treatment of end-stage heart and lung disease. This multinational, multidisciplinary mix is one of the biggest strengths of the Society. It brings greater breadth and depth to our educational offerings and provides an exceptional environment for networking and exchanging information on an informal basis.

Our members include anesthesiologists, basic scientists, cardiologists, cardiothoracic surgeons, ethicists, immunologists, nurses, pathologists, perfusionists, pharmacists, pulmonologists, tissue engineers, transplant coordinators, and infectious disease specialists. Despite their differing specializations, all ISHLT members share a common dedication to the advancement of the science and treatment of end-stage heart and lung disease.

## THE PURPOSES OF THE SOCIETY ARE:

1. To associate persons interested in the fields of heart and lung transplantation, end-stage heart and lung disease, and related sciences.
2. To encourage and stimulate basic and clinical research in these disciplines and to promote new therapeutic strategies.
3. To hold scientific meetings featuring presentations and discussions relevant to these disciplines.
4. To sponsor a scientific journal for the publication of manuscripts related to these disciplines.
5. To establish and maintain an international registry for heart and lung transplantation.
6. To award research grants and establish endowments for the study of these disciplines.



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**Robert J. Boucek, Jr., MD**, Standards & Guidelines Committee Representative  
**Richard Kirk, MA FRCP FRCPC**, Board of Directors Liaison  
**Carol K. Conrad, MD**, Basic Science and Translational Research Council Liaison  
**Kimberly L. Gandy, MD**, Communications Liaison  
**Yuk M. Law, MD**, Pediatric Heart Failure Representative

## PHARMACY AND PHARMACOLOGY

**Christopher R. Ensor, PharmD, BCPS-CV**, Chair  
**Michael A. Shullo, BS, PharmD**, Vice Chair and 2013 Annual Meeting Program Committee Co-Representative  
**Patricia A. Uber, PharmD**, Past Chair, Board of Directors Liaison and I2C2 Committee Representative  
**Walter Uber, PharmD**, 2013 Annual Meeting Program Committee Co-Representative  
**Robert L. Page, II, PharmD, MSPH**, Development Committee Representative

**Haifa Lyster, BPharm(Hons), MSc**, Education Committee Representative

**Tam Khuu, PharmD, BCPS**, Registries & Databases Committee Representative

**Adam B. Cochrane, PharmD, BCPS**, Standards & Guidelines Committee Representative

**Paul E. Nolan, PharmD, FCCP, FASHP**, Basic Science and Translational Research Council Liaison

**Steven P. Ivulich, BPharm**, Communications Liaison

## PULMONARY HYPERTENSION

**Robert P. Frantz, MD**, Chair

**Mardi Gomberg-Maitland, MD, MSc**, Vice Chair

**Myung H. Park, MD, FACC**, Past Chair

**Paul A. Corris, MB FRCP**, 2013 Annual Meeting Program Committee Co-Representative

**Marc de Perrot, MD**, 2013 Annual Meeting Program Committee Co-Representative

**Evelyn Horn, MD**, Development Committee Representative

**Dana P. McGlothlin, MD**, Education Committee Representative

**John Granton, MD**, I2C2 Committee Representative

**Stephen C. Mathai, MD**, Registries & Databases Committee Representative

**Ivan Robbins, MD**, Registries & Databases Committee Representative

**Teresa De Marco, MD, FACC**, Standards & Guidelines Committee Representative

**Raymond L. Benza, MD**, Board of Directors Liaison

**James D. West, PhD**, Basic Science and Translational Research Council Liaison

**Veronica Franco, MD**, Communications Liaison

## PULMONARY TRANSPLANTATION

**David Weill, MD**, Chair

**Michael Mulligan**, Vice Chair

**Lianne G. Singer, MD, FRCP**, Past Chair and I2C2 Committee Representative

**Denis Hadjiladis, MD**, 2013 Annual Meeting Program Committee Co-Representative

**Deborah J. Levine, MD**, 2013 Annual Meeting Program Committee Co-Representative

**Geert M. Verleden, MD, PhD**, 2013 Annual Meeting Program Committee Co-Representative

**Glen P. Westall, FRACP, PhD**, Development Committee Representative

**Kevin M. Chan, MD**, Education Committee Representative

**Roger D. Yusen, MD, MPH**, Registries & Databases Committee Representative

**Peter M. Hopkins, FRACP**, Standards & Guidelines Committee Representative

**R. Duane Davis, MD**, Board of Directors Liaison

**Daniel C. Chambers, MBBS, MD**, Basic Science and Translational Research Council Liaison

**Tereza Martinu, MD**, Communications Liaison

**Jonathan P. Singer, MD MS**, Quality of Life Representative

# PAST PRESIDENTS

1981-1982

Michael Hess, MD

1982-1984

Jack Copeland, MD

1984-1986

Terence English, FRCS

1986-1988

Stuart Jamieson, MD

1988-1990

Bruno Reichart, MD

1990-1991

Margaret Billingham, MD

1991-1992

Christian Cabrol, MD

1992-1993

John O'Connell, MD

1993-1994

Eric Rose, MD

1994-1995

John Wallwork, FRCS

1995-1996

Sharon Hunt, MD

1996-1997

William Baumgartner, MD

1997-1998

Leslie Miller, MD

1998-1999

Alan Menkis, MD, FRCS(C)

1999-2000

Robert L. Kormos, MD

2000-2001

Anne Keogh, MBBS, MD

2001-2002

James B. Young, MD

2002-2003

Stephan Schueler, MD

2003-2004

Jon Kobashigawa, MD

2004-2005

Alec Patterson, MD

2005-2006

Mark L. Barr, MD

2006-2007

Robert C. Robbins, MD

2007-2008

Paul A. Corris, MB FRCP

2008-2009

Mandeep R. Mehra, MD

2009-2010

James K. Kirklin, MD

2010-2011

John Dark, MB, FRCS

2011-2012

Lori J. West, MD, DPhil

## Past Scientific Program Chairs

1981	San Francisco, CA	Edward B. Stinson, MD and Michael L. Hess, MD
1982	Phoenix, AZ	Michael Kaye and Bernard Gersh
1983	New Orleans, LA	Stuart W. Jamieson, MD and Mark E. Thompson, MD
1984	New York, NY	Randall B. Griepp, MD
1985	Anaheim, CA	Terence A. H. English and Hillel Laks
1986	New York, NY	
1987	New Orleans, LA	
1988	Los Angeles, CA	John C. Baldwin, MD
1989	Munich, Germany	Bruno Reichart, MD
1990	San Diego, CA	D. Glenn Pennington, MD
1991	Paris, France	John B. O'Connell, MD
1992	San Diego, CA	Eric A. Rose, MD
1993	Boca Raton, FL	Maria Rosa Costanzo, MD
1994	Venice, Italy	John Wallwork, MBChB, FRCS
1995	San Francisco, CA	Leslie W. Miller, MD
1996	New York, NY	William A. Baumgartner, MD
1997	London, England	Stephan Schueler, MD
1998	Chicago, IL	James B. Young, MD
1999	San Francisco, CA	Mark L. Barr, MD
2000	Osaka, Japan	Jon Kobashigawa, MD
2001	Vancouver, Canada	David O. Taylor, MD
2002	Washington, DC	Robert C. Robbins, MD
2003	Vienna, Austria	Bruce R. Rosengard, MD
2004	San Francisco, CA	Mandeep R. Mehra, MD
2005	Philadelphia, PA	Shaf Keshavjee, MD
2006	Madrid, Spain	John Dark, MB, FRCS
2007	San Francisco, CA	Duane Davis, MD
2008	Boston, MA	Lori J. West, MD, DPhil
2009	Paris, France	Randall C. Starling, MD, MPH
2010	Chicago, IL	Hermann Reichenspurner, MD, PhD
2011	San Diego, CA	Richard N. Pierson, III, MD
2012	Prague, Czech Republic	Stuart C. Sweet, MD, PhD

## Editors, Journal Of Heart And Lung Transplantation

1981-1985	Jacques G. Losman, MD
1986-1994	Michael P. Kaye, MD
1995-1999	Maria Rosa Costanzo, MD
2000-2009	James K. Kirklin, MD
2010-Present	Mandeep R. Mehra, MD

## Editors, Links Newsletter

2008-2011	David S. Feldman, MD, PhD
2011-Present	Vincent G. Valentine, MD

## Medical Directors, Thoracic Organ Transplant Registry

1987-1993	Michael P. Kaye, MD
1993-2001	Jeffrey D. Hosenpud, MD
2001-2012	Marshall I. Hertz, MD
2012-Present	Josef Stehlik, MD, PhD

## ISHLT AWARD RECIPIENTS

### Lifetime Achievement Award

1996	Norman Shumway, MD
1999	Keith Reemtsma, MD
2004	Sir Magdi Yacoub, MD
2010	Margaret Billingham, MD
2012	Sharon Hunt, MD

### Lifetime Service Award

1996	Michael P. Kaye, MD
1997	Jacques G. Losman, MD

### Pioneers in Transplantation Lecture

2000	Christiaan Barnard, MD Joel D. Cooper, MD Norman E. Shumway, MD
2002	Michael DeBakey, MD Bruce A. Reitz, MD
2006	Leonard L. Bailey, MD
2008	Richard E. Lower, MD
2009	Christian E. A. Cabrol, MD
2011	Elizabeth Hammond, MD

### Norman E. Shumway ISHLT Career Development Award

2000	Gordon D. Wu, MD (supported by Roche)
2002	Anthony Azakie, MD (supported by Roche)
2004	Allan M. Ramirez, MD (supported by Novartis Pharma)
2006	Dennis W. Wigle, MD, PhD (supported by Astellas Pharma)
2008	Glen Westall, MD, PhD (supported by Roche)
2010	Sonja Schrepfer, MD, PhD (supported by Astellas)
2012	Tereza Martinu, MD

T-23	517AB	516	517CD	511	510	512A-G
7:00 AM						
7:45 AM						
8:00 AM	EXHIBIT HALL BUILD 8 AM – 6 PM	POSTER HALL BUILD 8 AM – 6 PM		MASTERS ACADEMY MCS 8 AM – 6:30 PM TICKET REQUIRED		MASTERS ACADEMY PDS 7:45 AM – 7:30 PM TICKET REQUIRED
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							7:00 AM
							7:45 AM
				ISHLT BOARD OF DIRECTORS MEETING 7:45 AM – 2 PM			8:00 AM
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							10:00 AM
							10:30 AM
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						PATHOLOGY COUNCIL LUNG AMR WORKSHOP NOON – 4 PM	12:30 PM
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## ISHLT Research Fellowship Grant

- 1995** Frances L. Johnson, MD (supported by Ortho-Biotech)
- 1996** Tuija S. Ikonen, MD (supported by Roche)  
Andrew F. Pierre, MD (supported by Ortho-Biotech)
- 1997** Jonathan Chen, MD (supported by Roche)  
Alyssa M. Krasinskas, MD (supported by Astellas)  
Owen T. Lawrence, MD (supported by Ortho-Biotech)  
Anne K. Raisanen-Sokolowski, MD (supported by Roche)
- 1998** Kelly S.A. Blair, MD (supported by Roche)  
A.M. El Gamei, MD (supported by Roche)  
Christine L. Lau, MD (supported by Wyeth-Ayerst)  
Scott D. Ross, MD  
Margaret L. Schwarze, MD (supported by Novartis)
- 1999** George Juang, MD (supported by Novartis)  
Sivasai Krovvidi, PhD (supported by Roche)  
Satoshi Saito, MD (supported by Novartis)  
Donald Wong, PhD (supported by Roche)
- 2000** Richard S. Lee, MD (supported by Novartis)  
Christopher H. Wigfield, FRCS (supported by Roche)
- 2001** Arnar Geirsson, MD (supported by Roche)  
Matteo Vatta, PhD (supported by Roche)
- 2002** Ruediger Hoebelt, MD (supported by Roche)
- 2003** Ewout J. van den Bos, MD (supported by Astellas)  
Felix Fernandez, MD (supported by Roche)
- 2004** Christian A. Gleissner, MD (supported by Astellas)  
Tsuyoshi Shoji, MD, PhD (supported by Actelion)  
Kendra N. Taylor, PhD (supported by Roche)  
Monica Zwierzchowieuska, MD (supported by XDx)
- 2005** Ryan C. Fields, MD (supported by Chiron)  
Arne Neyrinck, MD (supported by Astellas)  
Ahmad Saad, MD (supported by Roche)
- 2006** Rachel L. Anderson, MBBS (supported by Roche)  
Zhaohui Li, PhD (supported by Transmedics)  
Heather E. Merry, MD (supported by Encysive)  
Edward N. Seung, PhD (supported by XDx)  
Matthew J. Weiss, MD (supported by Novartis)
- 2007** J. Raymond Fitzpatrick, III, MD (supported by Encysive)  
Howard J. Huang, MD (supported by Transmedics)  
Mylvganam Jeyakanthan, MD (supported by XDx)  
Timothy M. Millington, MD (supported by Novartis)  
Satish N. Nadig, MD (supported by Roche)  
Takeshi Oyaizu, MD, PhD (supported by Actelion)  
Sonja Schrepfer, MD (supported by Astellas)

- 2008** Jonathan Choy, PhD (supported by XDx)  
Satoshi Itoh, MD (supported by Transmedics)  
Tereza Martinu, MD (supported by Novartis)  
Deepti Saini, PhD (supported by Gilead)  
Atsushi Shiozaki, MD, PhD (supported by Astellas)  
Seiichiro Sugimoto, MD, PhD (supported by Roche)
- 2009** Hua Shen, MD, PhD (supported by Astellas)  
Tobias Deuse, MD, PhD (supported by Novartis)  
Masahiro Miyajima, MD, PhD (supported by XDx)  
Shin Hirayama, MD, PhD (supported by Gilead)
- 2010** Esme Dijke, PhD (supported by Novartis)  
Smita Sihag, MD (supported by Genentech)  
Sumiharu Yamamoto, MD (supported by Gilead)  
Khurram Shahzad, MD (supported by United Therapeutics)  
Nina Pilat, MSc, PhD (supported by XDx)
- 2011** Alejandro Bribriescio, MD (supported by Astellas)  
Alexey Dashkevich, MD (supported by XDx)  
Patricia E. de Almeida, DVM, MS, PhD  
Tiago Machuca, MD, PhD
- 2012** Stephen C. Juvet, MD, FRCPC  
Maria Lucia L. Madariga, MD  
Jessica H. Spahn, PhD  
Konstantinos Malliaras, PhD

## ISHLT Transplant Registry Early Career Award (formerly Junior Faculty)

- 2007** Beth D. Kaufman, MD
- 2008** Cynthia Gries, MD, MSc  
Scott Halpern, MD, PhD  
Josef Stehlik, MD, MPH
- 2010** Jennifer Conway, MD, FRCPC  
Kiran K. Khush, MD, MAS
- 2011** Jose Nativi, MD
- 2012** Erin M. Lowery, MD  
Omar E. Wever-Pinzon, MD

## ISHLT Nursing and Social Sciences Research Grant

- 1997** Eileen Collins, RN, PhD
- 1998** Katherine St. Clair, RN, MSN
- 1999** Jeanne Salyer, PhD
- 2000** Nancy M. Albert, MSN, RN
- 2001** Lynn Doering, RN, DNSc
- 2002** Annette J. De Vito Dabbs, RN, MN, PhD
- 2003** Diane H. Leloudis, RN, MSN  
Janet E. Madill, PhD
- 2004** Deidre E. Logan, PhD
- 2005** Annemarie F. Kaan, MCN
- 2006** Thierry Troosters, PhD
- 2007** Mi-Kyung Song, PhD
- 2008** Stacey M. Pollock-BarZiv, PhD
- 2009** Jane MacIver, RN, MSc
- 2010** Heike Spaderna, PhD  
Gerdi Weidner, PhD
- 2011** Christiane Kugler, PhD (supported by CSL Behring)  
Hilde Bollen, RN
- 2012** Lut Berben, PhD, RN (supported by CSL Behring)  
Connie White-Williams, PhD, RN, FAAN

## ISHLT Branislav Radovancevic Memorial Fellowship Grant

- 2009** Sasa D. Borovic, MD (supported by Thoratec)
- 2010** Iki Adachi, MD (supported by Thoratec)
- 2012** Antigone Koliopoulou, MD (supported by Thoratec)

## PHILIP K. CAVES AWARD

- 1983** Robbin G. Cohen, MD
- 1984** Hermann Reichensperner, MD
- 1985** Michael A. Breda, MD
- 1986** Stuart J. Knechtle, MD
- 1987** Wim Van Der Bij, MD
- 1988** Charles D. Fraser, Jr., MD
- 1989** A.M. Wood, MD
- 1990** Andres J. Duncan, MD
- 1991** A. Jiminez, MD
- 1992** David P. Kapelanski, MD
- 1993** David Marshman, MD
- 1994** Jobst Winter, MD  
Alain Chapelier, MD
- 1995** Elizabeth A. Davis, MD
- 1996** Moninder S. Bhabra, MD
- 1997** Simon D. Eiref, MD
- 1998** Carla C. Baan, MD
- 1999** Joerg Koglin, MD
- 2000** Michael P. Fischbein, MD
- 2001** Alexander S. Krupnick, MD
- 2002** Peter Blaha, MD
- 2003** Sigrid Sandner, MD
- 2004** M.D. Peterson, MD
- 2005** Sigrid Sandner, MD  
Frank D'Ovidio, MD
- 2006** Gregor Warnecke, MD
- 2007** Heather E. Merry, MD
- 2008** Satish N. Nadig, MD
- 2009** Howard Huang, MD
- 2010** Tobias Deuse, MD, PhD
- 2011** Ankit Bharat, MD
- 2012** Simo Syrjälä, MD



## Nursing and Social Sciences Excellence in Research Award

2005	Mary Amanda Dew, PhD
2006	Kathleen L. Grady, PhD, RN
2007	Christianne Kugler, PhD
2008	Annette DeVito Dabbs, RN, PhD
2009	Connie White-Williams, MSN
2010	Bronwyn Levvey, RN
2011	Samantha J. Anthony, PhD, MSW
2012	Kate Hayes, MPhysio (Cardio)

## ISHLT Branislav Radovancevic Memorial Best MCSD Paper Award

2009	Nishant Shah, MD (supported by Thoratec)
2010	Jose N. Nativi, MD (supported by Thoratec)
2011	Dan Spiegelstein, MD (supported by Thoratec)
2012	Arun Raghav Mahankali Sridhar, MD, MPH (supported by Thoratec)

## ISHLT International Traveling Scholarship Recipients

2011	Stephanie T. Yerkovich, PhD Sarah E. Gilpin, PhD Kimberly M. Derkatz, BNSc Jennifer Conway, MD, FRCPC
2012	Ramin E. Beygui, MD Kevin C. Carney, MSN Alexandre Souza Cauduro, MD Esme Dijke, PhD Ana Belen Mendez, MD David Schibilsky, MD Aleem Siddique, MBBS Amparo Solé, MD, PhD Manon Huibers, MSc Daniel R. Goldstein, MD Laveena Munshi, MD, FRCPC Marco Masetti, MD Rochelle M. Gellatly, PScPharm, ACPR, PharmD

## ISHLT Leach-Abramson-Imhoff Links Travel Awards

2012	Tereza Martinu, MD, Writer of the Year Stanley I. Martin, MD, First Runner-Up Luciano Potena, MD, PhD, First Runner-Up Nancy P. Blumenthal, CRNP, Honorable Mention Bronwyn J. Levvey, RN, Honorable Mention Javier Carbone, MD, PhD, Honorable Mention Stavros G. Drakos, MD, Honorable Mention Daniel F. Dilling, MD, Honorable Mention
2013	Michele Estabrook, MD, Writer of the Year Melanie Everitt, MD, First Runner-Up Christina Migliore, MD, First Runner-Up Veronica Franco, MD, Honorable Mention Manreet Kanwar, MD, Honorable Mention Luciano Potena, MD, PhD, Honorable Mention Macé Schuurmans, MD, Honorable Mention Jeffrey J. Teuteberg, MD, Honorable Mention

# The International Society for Heart and Lung Transplantation

*Is most grateful for  
the educational  
grants and support of*

# SILVER

LEVEL PARTNER

Actelion  
Gilead  
Thoratec

# BRONZE

LEVEL PARTNER

Astellas  
Bayer  
Heartware

*Toward this  
33rd Annual Meeting and  
Scientific Sessions*

## ANNUAL MEETING CONTINUING MEDICAL EDUCATION INFORMATION

### ACCREDITATION STATEMENT

The International Society for Heart and Lung Transplantation (ISHLT) is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

### CREDIT DESIGNATION STATEMENT

ISHLT designates this live activity for a maximum of 28.0 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity. Continuing Education Points for Transplant Certification (CEPTC) have been applied for through the American Board for Transplant Certification.

### DISCLOSURE

Current guidelines state that participants in CME activities must be made aware of any affiliation or financial interest that may affect the program content or a speaker's presentation. Planners, Faculty and Chairs participating in this meeting are required to disclose to the program audience any real or apparent conflict(s) of interest related to the content of their presentations or service as Chair/Planner. These disclosures will be distributed at the meeting. Additionally, all speakers have been asked to verbally disclose at the start of their presentation any financial interest or affiliations and to indicate if a product they are discussing is not labeled for the use under discussion or is still investigational.

### EDUCATIONAL OBJECTIVES

The International Society for Heart and Lung Transplantation is a leading organization providing education for medical professionals involved in heart and lung transplantation. Because of the rapid advances in medicine in general and transplantation medicine specifically, transplant professionals are in need of regular opportunities to update and maintain their knowledge of advances and changes in transplant medicine. This meeting is designed to address their needs.





**EDUCATIONAL GOALS**

The educational goals of this activity are: to enable participants to learn about current practices, emerging technologies and medical advances related to heart and lung transplantation and end-stage heart and lung disease and to provide a forum for participants to engage in discussion, debate and examination regarding the efficacy and applicability of these current practices, emerging technologies and medical advances.

**TARGET AUDIENCE**

The audience for this program includes physicians, surgeons, scientists, nurses and transplant coordinators engaged in the practice of heart and lung transplantation, the management and treatment of heart and lung transplant recipients, the management and treatment of patients with end-stage heart or lung disease, basic science or clinical research related to these fields or specialties which cause them to become involved in the treatment of transplant recipients or patients with end-stage heart or lung disease.

**LEARNING OBJECTIVES**

AT THE CONCLUSION OF THIS MEETING, participants will have improved competence and professional performance in the areas of:

1. Understanding the latest information and approaches regarding transplant research, surgical techniques, medical therapies, donor management and patient management for the treatment of patients suffering from end-stage heart and lung disease.
2. Understanding the state-of-the-art treatment approaches, risk factors, risk management approaches, patient selection criteria, disease prevention strategies, outcome implications and psychosocial management strategies for patients with end-stage heart and lung failure.
3. Understanding emerging technologies, medical advances and the clinical applications of basic science models of end-stage heart and lung disease management and prevention.



# HIGHLIGHTS OF THE MEETING

## PIONEERS IN TRANSPLANTATION AWARD



**JACK G. COPELAND, MD**

*The **Pioneers in Transplantation Award** is bestowed every other year to an ISHLT member who is recognized for their landmark contributions as a pioneer in the field of heart and/or lung transplantation.*

*A pioneer lecture will be given by the 2013 recipient, Jack G. Copeland, MD in the Opening Plenary Session.*

F-26	517AB	516	517CD	511	510	512A-G		
7:00 AM		POSTER MOUNT 7 AM – 9 AM	SUNRISE SYMP 4 VAD OPTIMIZATION	SUNRISE SYMP 5 CHT OMICS	SUNRISE SYMP 6 BRONCHOSCOPIC BATTLES	SUNRISE SYMP 7 PROTEINS & PATHOGENESIS PH		
7:30 AM								
8:00 AM			CONCURRENT 19 VAD AFTERMATH	CONCURRENT 20 CARDIAC ALLGRFT IMMUNE	CONCURRENT 21 LUNG MONITORING	CONCURRENT 22 RV MATTERS		
8:30 AM								
9:00 AM	EXHIBIT HALL OPEN 9 AM – 2 PM	POSTER HALL OPEN 9 AM – 6:30 PM	ANNUAL BUS MTG.	COFFEE BREAK	COFFEE BREAK	COFFEE BREAK		
9:30 AM								
10:00 AM				PLENARY SESSION HOW TO SUCCEED WHEN RV FAILS				
10:30 AM								
11:00 AM								
11:30 AM								
12:00 PM					LUNCH BREAK	LUNCH BREAK	LUNCH BREAK	LUNCH BREAK
12:30 PM								
1:05 PM								
1:30 PM								
2:00 PM			CONCURRENT 25 PUMP FAILURE	CONCURRENT 26 RISK OF AMR	CONCURRENT 27 LUNG IMMUNO- SUPPRESSION	CONCURRENT 28 MCS CHANGES DURING SUPPORT		
2:30 PM								
3:00 PM								
3:30 PM			COFFEE BREAK	COFFEE BREAK	COFFEE BREAK	COFFEE BREAK		
4:00 PM			CONCURRENT 31 MCS QOL POST VAD	CONCURRENT 32 ACUTE REJECTION	CONCURRENT 33 BOS UPDATE	CONCURRENT 34 PH RIGHT VENTRICULAR UPDATE		
4:30 PM								
5:00 PM								
5:30 PM		WINE & CHEESE/ VIEW POSTERS 5:30 PM – 6:30 PM						
6:00 PM								
6:30 PM		POSTER REMOVAL 6:30 PM – 7:30 PM						
7:00 PM								
7:30 PM	PRESIDENT'S GALA RECEPTION • FORTIFICATION CENTER • 7:30 PM – 8:45 PM							
8:00 PM								
8:30 PM								

513ABC	513DEF	514B	514C	512D	512H	519A
SUNRISE SYMP 8 ADVANCED CARE PLANNING		SUNRISE SYMP 9 WHAT'S NEW IN XENOTX				
CONCURRENT 23 NNSAH MCS & HEART TX	SYMPOSIUM 25 JHLT AT ISHLT	CONCURRENT 24 BSTR				
COFFEE BREAK	COFFEE BREAK	COFFEE BREAK				
MCS COUNCIL MEETING 12:10 – 1:05 PM	PH COUNCIL MEETING 12:10 – 1:05 PM	PED COUNCIL MEETING 12:10 – 1:05 PM	NNSAH COUNCIL MEETING 12:10 – 1:05 PM	ID COUNCIL MEETING 12:10 – 1:05 PM		
HEART COUNCIL MEETING 1:05 – 2:00 PM	LUNG COUNCIL MEETING 1:05 – 2:00 PM	PED HTX WF MEETING 1:05 – 2:00 PM	PATH COUNCIL MEETING 1:05 – 2:00 PM	PHARM COUNCIL MEETING 1:05 – 2:00 PM		
CONCURRENT 29 RETHINKING THE CARDIAC DONOR	SYMPOSIUM 26 AST AT ISHLT SESSION I	CONCURRENT 30 TRANSLATIONAL SCIENCE				
COFFEE BREAK	COFFEE BREAK	COFFEE BREAK				
CONCURRENT 35 MCS IN CHILDREN	SYMPOSIUM 27 AST AT ISHLT SESSION II	CONCURRENT 36 PHARMACO- THERAPEUTIC APPROACHES				
MINI ORALS 6 HEART FAILURE, DX, THERAPY	MINI ORALS 7 MCS	MINI ORALS 8 DMD	MINI ORALS 9 NNSAH	MINI ORALS 10 PED & ID	INTL MCS REIMBURSEMENT SESSION 5:30 PM – 7 PM	PAST PRESIDENT COUNCIL MTG. & RECEPTION 5:30 PM – 7 PM
PRESIDENT'S GALA RECEPTION • FORTIFICATION CENTER • 7:30 PM – 8:45 PM						



## JOINTLY SPONSORED SESSIONS

ANTI-DONOR ANTIBODIES REMAIN AN OBSTACLE to successful thoracic transplantation. The combined expertise of ISHLT and the American Transplant Society come to bear on this timely topic in two separate sessions. The first, *Pre-transplant Circulating Antibodies: Making Sense of Sensitization*, explores the detection, interpretation and potential treatments of these antibodies prior to transplantation. The second, *Antibody-Mediated Rejection: State of the “Current” Art*, explores the development of antibody-mediated rejection after thoracic transplantation and importantly includes the perspective of the non-thoracic transplant community.

## HEART FAILURE AND TRANSPLANTATION

EVEN THOUGH HEART TRANSPLANTATION ACTIVITY and immunosuppression pipelines appear stagnant around the world, Heart Failure and Transplantation disciplines remains a flagship of ISHLT. Five dedicated and interactive symposia will renew enthusiasm and energy to heart transplant clinicians by covering hot topics in transplant medicine. Awareness and management of donors, changing epidemiology, clinical handling of HLA antibodies and the heart-kidney relationship, challenges in resolving unanswered post-transplant issues and a glance into the future with clinical applications of proteomics and genomics will be embraced by interactive formats and bench to bedside approaches. Some heavy brainstorming and hurricanes of brisk ideas are forecasted... and desired.

A number of exciting abstract sessions have been planned for heart failure and transplantation. In *What’s New in Translational Science*, CD34+ transplantation, post-transcriptional regulation and miRNA modulation are center stage. For your pleasure, progenitor cells will circulate, free fatty acid will challenge glucose in the oxidation contest and expression of cardiolipin biosynthesis will change your way of thinking about heart failure as a simple clinical phenomenon. In *Focus on the Right Heart*, the delicate, innocent, yet vulnerable Right Ventricle brings together all corners of the ISHLT. Here are some of the most recent RV carols manufactured and interpreted for you by the Clinical Heart Failure Choir in six tasty chapters including prognosis, sildenafil,



pulmonary wedge pressure and arrhythmogenic cardiomyopathy.

In *Can We Improve Transplant Risk Assessment and Outcome Prediction?* titanic dilemmas and naïve questions – in an effort to save as many lives as it is possible with our more and more limited donor heart resources – will be prepared and served to you in the form of six short stories about HIV-positive recipients, UNOS status modifying human fate, kidney-heart brotherhood in transplantation and others. *News from the Registries – What We Need To Learn To Achieve Long-Long Term* will discuss very long term survival and guidance to support customized strategies: two holy grails that transplant clinicians cannot achieve with the limited everyday single center experience. In this concurrent session, evidence confirming or contradicting common experience-based concepts will be served, thanks to robust data regarding age and causes of death, racial differences and PRA, oversized hearts and recipients’ pulmonary hypertension, and long term survival.

*Coronary Artery Vasculopathy in 2013 – Diagnosis, Prognosis and Treatment* will provide a late breaking overview of a classical topic at the ISHLT meeting. Ranging from novel diagnostic views to detect prognostic relevant CAV, to the effects of mTOR inhibitors on coronary morphology and cardiovascular events, the audience will have a great opportunity to receive a full update on current and future perspectives on CAV diagnosis, prognosis and treatment. In *Living with a Transplanted Heart – A Narrow Pathway in the Jungle*, a successful heart transplant surgery is just the beginning of a hopefully long, but surely complex, journey in a minefield, which often distances recipients’ life from the mirage of healthy normality. The dream of a successful pregnancy, the amplified negative effects of excessive food intake, the torture of receiving periodical invasive procedures, the nightmare of facing chronic and hazardous diseases of organs other than heart: the management these side-effects of our life-saving strategy – substituting one deadly disease with a

bunch of dangerous others – will be discussed in this exciting session that will provide audiences with compass directions to recover the many patients wandering in the jungle.

After being “easily” accustomed to pathologists’ biopsy diagnoses—sometimes disconnected from patients clinical picture—transplant clinicians now must learn to deal with immunogenetists, a new species of lab-people providing reports containing obscure antibody names and typing, that may or may not be coherent with pathologists’ readings, and may or may not trigger a treatment. In the session, *Are All Antibodies Equal? Predicting, Managing and Treating the Risk for AMR*, the audience will have a unique opportunity to attend cutting edge presentations unraveling the complexities of different kinds of HLA antibodies, their time course and how to manage organ allocation and post-transplant treatments. Returning back to clinic attendance, participants will have new tools to build a coherent view and management of the clinical and laboratory picture of sensitized patients.

Endomyocardial biopsy is still considered a gold standard for the diagnosis of rejection in clinical practice. However, established grading for T Cell mediated rejection, but also for antibody-mediated rejection, does not always include all the available information that could be gained from the myocardial specimens. On the other hand, non-invasive markers for rejection diagnosis haven’t conquered clinical practice yet. In the visionary concurrent session, *Mechanisms and Markers of Acute Rejection: Within and Without Biopsy Sampling*, the audience will be excited by novel ways of looking at a biopsy to understand different mechanisms of rejection, insights on promising non-invasive methodologies for rejection diagnosis and global clinical views on the interplay between histology, DSA and hemodynamics.

## RESPIRATORY FAILURE AND LUNG TRANSPLANTATION

THE PULMONARY COUNCIL IS LOOKING FORWARD with great excitement to the ISHLT Annual Scientific Program in Montréal April 2013. Council members and the Program Committee have worked diligently to create a program that includes several valuable sessions and symposiums that are vital to setting the tone for an outstanding educational forum for all ISHLT attendees. The scientific program itself is filled





with vital symposia and sessions presenting a forum for challenging debates and discussions on important issues regarding lung transplantation.

There are eight total symposia throughout the meeting, which cover a broad range of important topics. Some of these are collaborative efforts with other councils (including pathology, basic science, nursing, health science and allied health and pharmacy). Along with the scientific program, there are a large number of original scientific investigations focused on both basic and clinical science that were submitted for the meeting. These topics will be highlighted in six oral presentation sessions (thirty-six abstracts), eighteen mini-oral presentations and more than eighty posters for presentation. Translational science will be highlighted in the “Bench to Bedside” session. Topics will range from BOS to infection.

There will be several sessions highlighting antibody mediated rejection (AMR) in lung transplantation. AMR has become increasingly more recognized over the last several years; however, there still is considerable controversy on its diagnosis, unique features and treatment. Two symposia in collaboration with the pathology and basic science councils will focus on discussions that will hopefully lead to better understanding of this issue. The interest in the current topic is also featured in the oral, mini-oral and poster sessions. Bronchiolitis obliterans remains a major complication after lung transplant and is the major cause for late morbidity and mortality. We now understand that different processes can lead to allograft dysfunction. The term chronic lung allograft dysfunction (CLAD) has been incorporated to include these other processes. One symposium will provide state-of-the-art information on these issues and an abstract session will update us on its pathophysiology. Another area of significant interest to our council members is how to best support patients with end-stage lung disease while bridging them to a successful lung transplant. A symposium will bring experts together to discuss techniques of bridging patients that are critically ill prior to transplant. A Sunrise symposium will discuss patient selection as part of this ongoing debate. Immunosuppression is also featured prominently with an abstract session presenting interesting conundrums on the use of different therapeutic agents. This session will be nicely paired with a symposium on T Cells and their roles post-transplant.



Other interesting sessions include outcomes after lung transplantation. Primary graft dysfunction is featured in an abstract session and a Sunrise symposium will discuss patient-reported outcomes. Two additional Sunrise symposia have been planned: one will assess anastomotic issues and the utility of bronchoscopy; the other will present different lung allocation systems around the world and discuss their merits and limitations. Finally, common topics of interest that will also be discussed include a joint Saturday symposium with the Pharmacy council which assesses the journey of a cystic fibrosis patient through transplant. It discusses many unique pharmacologic, infectious challenges that this group of patients face, while undergoing lung transplantation.

## INFECTIOUS DISEASES

MONTRÉAL WILL FEATURE BENCH-TO-BEDSIDE developments in the diagnosis and management of infectious diseases in thoracic transplant and MCSD patients. In addition to Symposia on CMV (*The Spectrum of CMV: Young or Old, Heart or Lung*), we will be entertained (*Nightmare Syndromes*) and enlightened (*Travel, Leisure and Work After Transplant: Keeping Our Patients Safe From Infections*) by leaders in the field during Symposia throughout the meeting. Together with the Basic Science and Translational Research Council, the immunity to infectious diseases and its effect on the allograft will be discussed (*Natural Immunity, Adaptive Response to Infection and Immunosuppression: The Piñata Cocktail*).

Specific infectious diseases topics are also embedded in other thoracic transplant and MCSD symposia and Concurrent Oral Abstract sessions. In *Concurrent Session 18: From Fungus to Virus – The Microbiome Elicited*, as our knowledge grows of microbial colonization and growth in the lung allograft, share in these new findings and the implications they have for our lung transplant recipients. One of the biggest limitations in mechanical circulatory support today remains infectious complications and pump failure. Come pump up your own knowledge of these issues with a host of abstracts on these complications and their implications for patient management in *Concurrent Session 25: MCS 6: Infectious Issues and Pump Failure*.

## NURSING, HEALTH SCIENCES AND ALLIED HEALTH

THE PROGRAM FOR THE 2013 ANNUAL MEETING includes a diverse series of plenary sessions and symposia that are sure to excite NNSAH professionals. NNSAH research will be highlighted throughout the Program with an emphasis on new evidence, innovative interventions, and remaining controversies. The plenary lecture, “The Mind Matters” will present the results of a systematic review on psychological distress in transplant recipients, including evidence for impact on key areas of morbidity. The symposium, *Motivational Interviewing (MI): An Intervention Aimed at Change* will introduce the concept of MI as a potential treatment to address the issue of non-adherence within the field of transplantation. Other jointly sponsored symposia include *Psychosocial Issues in Pediatric Cardiothoracic Transplant (Peds)*, *Beyond Survival: Evaluating Lung Transplant Success through Patient-Ori-*



ented Outcomes (NNSAH/JFTC/Pulm) and Avatars and Advanced Care Planning (NNSAH/MCS). Together these presentations will provide guidelines to improve patient care and include recommendations for intervention research to further enhance the health and overall well-being of transplant patients and their caregivers.



The session *Implications and Innovations Throughout the Lung Transplant Trajectory*, sponsored by the NNSAH Council, is sure to interest clinicians from a variety of disciplines who are involved in lung transplantation. Several of the presenters will discuss predictors of post-lung transplant outcomes, such as hospital readmission, medication adherence, health related quality of life and survival. Other presenters will discuss the impact of novel interventions, including a consent process where recipients choose their donors and a stress reduction intervention for family caregivers. The research findings will be directly relevant to clinical practice and quality improvement in the setting of lung transplantation.

The session *MCS and Heart Transplantation: Assessment, Outcomes and Interventions*, sponsored by the NNSAH Council, combines topics of interest to clinicians who are involved in the care of patients with heart failure facing MCS or heart transplantation. Several of the presenters will discuss the challenges of managing MCS devices such risk for hospital readmission and driveline site selection. Other presenters will discuss the impact of interventions on heart transplant candidates and early and long-term outcomes among heart recipients, including cardiac rehabilitation on cardiac vasculopathy, psychosocial assessment on medical outcomes, and the relationships between adherence, mental health and hygiene behaviors. The research findings will be directly relevant to clinical practice and quality improvement in the setting of heart failure and heart transplantation.

## MECHANICAL CIRCULATORY SUPPORT

THE ANNUAL MEETING WILL OFFER A RICH PROGRAM that will address all the aspects of the rapidly evolving field of mechanical circulatory support (MCS). Physicians, surgeons, VAD coordinators, pharmacists, as well as basic, translational and clinical science researchers will all find presentations of interest to their particular angle of expertise. The Wednesday MCS program will start off with a session that will explore the molecular pathways engaged in the process of mechanical unloading of the myocardium, and continue with a session that will explore different approaches to treatment of severe biventricular failure. A session to follow will focus on important aspects of long-term care of a patient supported with an LVAD. The Wednesday MCS program will conclude with what is likely to be a memorable set of debates on controversial topics in MCS.

In addition, there will be three sunrise symposia that will provide 'hands-on' advice and room for interaction with the presenters. The *Pump It Up* symposium will provide up to date information on the use of echocardiography, right heart catheterization and how to adjust device settings to optimize left ventricular assist device function. A case based discussion using graphics and echo will illustrate how to optimize speed and device settings. *The Congenital Heart Disease – Success and Failure* symposium will address challenges and potential solutions to managing complex congenital heart disease patients undergoing transplant and mechanical circulatory support. Avatars and Advanced Care Planning will address challenges in managing patients from a distance, empowering patients to be responsible for their care and optimizing palliative care in patients with advanced heart failure.

A record 337 MCS abstracts were submitted to the 2013 ISHLT Annual meeting. This made the job of the planning committee – to prepare a terrific MCS program – quite easy! The top graded abstracts were selected for presentation in 11 oral and 2 mini-oral sessions. Two oral sessions will explore specifics of different devices as well as patient selection considerations. Another session will focus on physiological changes seen after VAD implant. Several sessions will focus on key complications seen with MCS support and discuss approaches to prevent and treat these. A review of clinical outcomes will be provided and approaches to maximize patient quality of life and survival after VAD placement discussed. A separate session will analyze the cost of achieving

# HIGHLIGHTS of the MEETING

longevity and good quality of life in advanced heart failure patients through MCS support. A number of additional topics will be addressed during MCS poster sessions.

## PEDIATRICS

THE MONTRÉAL PROGRAM OFFERS A WIDE VARIETY of sessions of interest to the pediatric cardiothoracic transplant community including a plenary session **How to Succeed When the Right Ventricle Fails**. Symposia address the *Unique Aspects of Heart Failure in Children, Mechanical Circulatory Support in Congenital Heart Disease and Developments and Controversies in Pediatric Lung Transplantation*. Some of the current management controversies are on the agenda in a debate session titled **Pediatric Heart Transplantation: Art, Science, or Voodoo?** that will include audience questions to the speakers. Together with the Nursing, Health Science and Allied Health Council, we plan to discuss *Psychosocial issues in Pediatric Cardiothoracic Transplantation*.

There are three Oral Sessions planned including **Pediatric Heart and Lung Transplantation, Pediatric Heart Failure and Heart Transplantation and Mechanical Circulatory Support in Children**. The Session on **Pediatric Heart and Lung Transplantation** focuses on aspects such as de novo donor specific HLA antibodies and rejection and graft loss in Pediatric heart transplant recipients, CMV specific immunity, the lung microbiome and the development of BOS in Pediatric lung transplantation and Pediatric thoracic multi-organ transplantation. In addition, there is a Mini Oral Poster Session on Pediatrics and Infectious Diseases.

Finally, more than 40 abstracts were selected for Poster Sessions, the largest number ever of Pediatric abstracts accepted for presentation at an ISHLT Annual Meeting. So you better make your travel arrangements and register for the 2013 ISHLT Annual Meeting in Montréal in April to be part of the ever growing Pediatric cardiothoracic transplant community.

## PULMONARY HYPERTENSION

THE PULMONARY HYPERTENSION SESSIONS IN MONTRÉAL reflect the growing strength in this area within ISHLT as a result of the unique background mix of its membership from Cardiology (pediatric and adult), Respiratory Medicine and Cardiothoracic Surgery. We will debate an exciting range of topical issues including a stellar plenary session on right ventricular failure and a ple-

nary talk from Marlene Rabinovitch discussing how basic research into BMPR mutations is offering novel targets for therapeutic manipulation in patients with PAH. There are other stunning symposia covering state of the art issues in chronic thromboembolic pulmonary hypertension, the right ventricle and lung transplantation, pulmonary hypertension and parenchymal lung disease, proteins and pathogenesis and novel pathways.

A total of 53 abstracts will be presented covering a broad variety of clinical and translational research topics in the field. The Thursday oral session entitled **All About Outcomes** will lead off with the much anticipated initial results from the PROSPECT registry of 331 PAH patients treated with the room-temperature stable epoprostenol with arginine (Veletri®). The group from the University of Minnesota will present survival data using a simplified version of the REVEAL prediction model that does not require right heart cath or pulmonary function variables. Vizza et al will present their intriguing finding of a relatively high proportion of extra-cardiac causes of death in PAH. As the use of extra-corporeal support continues to expand worldwide, the Papworth group will present their experience with this modality following thrombo-endarterectomy for chronic thrombo-embolic pulmonary hypertension. Granton and co-workers will show the results of a microarray expression study in explanted PAH lungs demonstrating prominent upregulation of osteopontin, a potent vascular smooth muscle mitogen. The session will be rounded out with a paper from Rigshospitalet, Denmark on pulmonary hypertension in end-stage IPF.

Reflecting the increasingly recognized importance of right ventricular (RV) function in PH, two oral sessions will be devoted to this topic on Friday. The morning session, **Right Ventricular Matters** will include two presentations on the use of RV strain and other echocardiographic derived indices of RV function as predictors of outcome in PAH. Large animal models of RV failure were used in three studies to characterize RV function, assess RV angiogenesis and explore the feasibility of mechanical RV support. Wrapping up the session will be the team from Sapienza University in Rome presenting data on the impact of RV dyssynchrony in PAH. Later in the day, six more outstanding abstracts on **Right Ventricular Assessment and Function** will be presented. Investigators from Lyon, France will report on the prognostic value of RV ejection fraction in PAH. Researchers from Alberta, Canada will describe the role of HIF-1 $\alpha$  signaling in RV myocardium. Sagar and colleagues will report their experience with parenteral treprostinil therapy on

# HIGHLIGHTS of the MEETING

RV function in PH associated with pulmonary fibrosis. Finally, the group from Allegheny General Hospital in Pittsburgh will report on echocardiographic assessment of the RV as a predictor of RV fibrosis, as determined by late gadolinium enhancement by MRI and the prognostic value of the latter.

## PATHOLOGY

THE PATHOLOGY WORKING FORMULATIONS for heart and lung transplants will be reviewed and discussed by clinicians (addressing adult and pediatric patients) to assess their current state and usefulness. This will provide the Pathology Council with further targets for improvement of the formulations in the symposium *Are the Pathology Working Formulations the Gold Standard for Diagnosing AMR in Heart and Lung in 2013?* The current status of the pathologic working formulation for the evaluation for Antibody Mediated Rejection (AMR) in lung transplants will be presented in the symposium: *AMR in Lung: Definitions and Current State*. This symposium is organized in tandem with a clinical correlation symposium on evaluation of AMR in Lung Transplants. (*Lung AMR: “How I Do It” A Multidisciplinary Case Based Discussion*).

## BASIC SCIENCE

EXPECT TO FIND BASIC SCIENCE INFORMATION throughout the meeting including several multi-disciplinary sponsored symposia with a basic science focus (for example *T Cell 101 in Lung Transplantation* is jointly sponsored with the Pulmonary Council) as well as “bench to bedside” presentations and themes integrated into clinically-focused sessions. In addition, there will be two Wednesday symposia with a basic science focus. The first, *Cell Migration and Trafficking in Lung and Heart Transplantation* will provide an update on cellular migration and homing in thoracic transplantation with a focus on new visualization techniques as well as interesting chemokine and other homing receptors. The second, *Natural Immunity, Adaptive Response, Infection and Immunosuppression: The Piñata Cocktail*, jointly sponsored by the ID Council, will provide a state of the art view of the interplay between infection, innate and adaptive immunity and allograft dysfunction. There will also be a sunrise session entitled *What’s New in Xenotransplantation* that will provide a summary of the current state of xenotransplant immunobiology followed by updates on the



status of efforts to achieve success with heart and lung xenotransplantation.

*New Frontiers in Cardiothoracic Organ Regeneration – From Cosmetic to Prosthetic* will showcase the rapid developments in bioengineering which are already impacting on heart and lung transplantation, and which will transform our field into the future. Chaired by Sonja Schrepfer and Shaf Keshavjee, the session will cover the breadth of organ rejuvenation from the relatively cosmetic improvements which can be made during ex-vivo lung perfusion to the “knock-down and rebuild” approach to organ replacement achieved using decellularised matrix.

The session combining the highest scoring abstracts on exploration and modification of the immune system, *Exploring and Modifying the Immune Response – Cells, Antibodies and Tolerance*, will feature presentations on the impact of natural killer cells and T Cell deficiency on graft survival and BOS in lung transplantation. Innovative therapeutic approaches discussed in this session include pre-clinical evaluation of JAK 1/3 inhibitors and MHC-encoding chitosan-DNA microparticles in animal models.

During *The Fundamental Difference – Innate Immunity and Xenotransplantation*, new research on the challenges of platelet



# HIGHLIGHTS of the MEETING

activation and aggregation in the setting of xenotransplantation and lung reperfusion will be presented. Further presentations evaluate Caspase 1 as a serum marker of myocardial remodeling and pre-clinical data on therapeutic use of VEGF-C/D for improved cardiac allograft survival.



## PHARMACY AND PHARMACOLOGY

THE PHARMACY AND PHARMACOLOGY COUNCIL, now in its second year, continues to evolve in developing unique educational programming focused on pharmacologic therapy for the ISHLT Annual Meeting. For the 33rd Annual Meeting, the Program Committee has designed sessions and symposiums showcasing innovative science and real world clinical applications. Our programming which focuses on drug therapy lends applicability across all disciplines represented by the ISHLT membership.

There are two sessions sponsored by our council this year. The first is an Oral Scientific Session on Friday titled, *Innovative Pharmacotherapeutic Approaches to Thoracic Transplant and Mechanically Assisted Patients*. This session explores novel uses

of drug therapy to improve outcomes in multiple therapeutic areas including treatment strategies for rejection and infection in heart and lung transplant patients as well as pharmacologic treatments for pulmonary hypertension in patients requiring mechanical circulatory support.

The second, on Saturday, is a symposium that continues our successful “Lifecycle Journey” series creating an enduring case to create a panel facilitated and audience supported best practice based discussion at predefined key “journey intervals.” This year the session is titled, *A Lifecycle Journey in Cystic Fibrosis and Lung Transplantation*. In this session, members of the Pharmacy and Pharmacology and the Pulmonary Transplantation Councils will focus on four “journey points” which include: (1) listing considerations and pre-transplant infections, (2) peri-operative and immediate post-operative management issues, (3) metabolic and interaction considerations to drug dosing and (4) immunomodulation strategies for the management of bronchiolitis obliterans syndrome.

In addition, several posters selected by our council demonstrating the diversity and scope of pharmacotherapy as applied to multiple areas, including; Heart Transplantation, Lung Transplantation and Mechanical support will be presented.

## JUNIOR FACULTY AND TRAINEES

THE JUNIOR FACULTY AND TRAINEES COUNCIL (JFTC) is comprised of individuals who are early in their career with an aim of fostering mentorship and developing the tools necessary for leadership and success within the transplant community. The Annual JFTC Mentor Luncheon will again take place on Wednesday. Junior faculty and trainees, regardless of council or ISHLT membership, are encouraged to attend and interact with some of transplant and mechanical circulatory support’s most renowned clinicians (pre-registration required and limited). New this year to the meeting is a joint session between the JFTC and Journal of Heart and Lung Transplantation (JHLT), summarizing some of the most exciting publications in the JHLT. Senior editorial consultants will then discuss the publications’ impact on advancing science and knowledge. Finally, the JFTC is again hosting the very popular session, *Clinical Case Dilemmas in Thoracic Transplantation*. Test your own clinical skills as junior faculty present clinical conundrums to the field’s experts. Ask questions, share management strategies and enjoy intellectual banter.

# Meeting Rooms Floor Plan Level 5

## Palais des congrès de Montréal

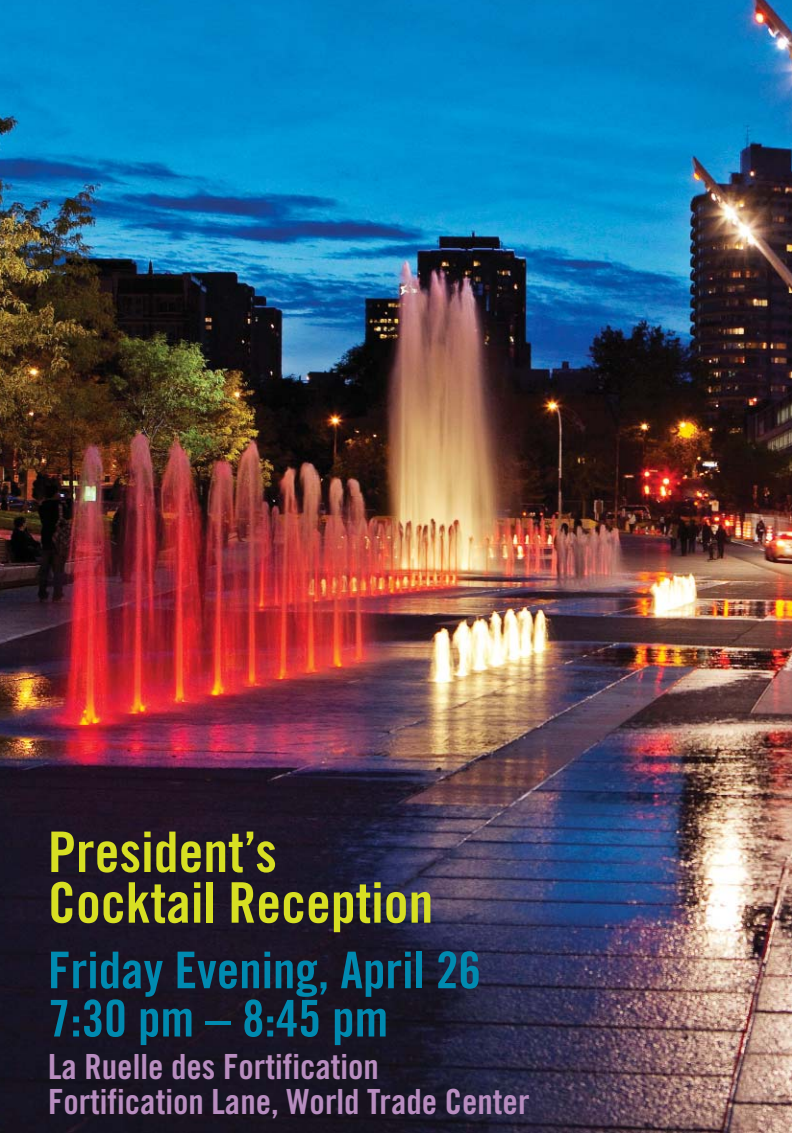


**MEETING ROOMS**

**EXHIBIT HALL**  
SEE DETAILED EXHIBIT HALL  
FLOOR PLAN ON PAGE 246







## President's Cocktail Reception

Friday Evening, April 26  
7:30 pm – 8:45 pm

La Ruelle des Fortification  
Fortification Lane, World Trade Center

Known as La Ruelle in French, this historic alley is a landmark in Montréal. It dates back to the 18th century when the first French settlers erected a fortress around the settlement of Montréal, originally called Ville Marie. La Ruelle's 600-foot long walkway provides visitors with an architectural history of the city. Its private glass-covered atrium square features a fragment of the Berlin Wall, a magnificent reflecting pool, a water fountain with a marble staircase and an 18th-century sculpture of the mythological goddess, Amphitrite. It is connected to the underground city and Square-Victoria metro station and houses the Montréal InterContinental Hotel. One ticket to this event is included with all scientific session registration fees. Additional tickets may be purchased. As always, you can expect plenty of food, drink, music and friends.

The purpose of the **ishlt academy** is to develop an enduring resource of education in core competencies in the field of cardiopulmonary transplantation, mechanical and biological support of the failing heart, advanced lung disease (including pulmonary vascular disease) and cell replacement therapy. These educational endeavors will complement the ISHLT's existing activities in the promulgation of new science, registry analyses, guideline statements and monograph series as a consolidated activity designed to train and educate young clinicians, trainees and those looking for a refresher course in clinical practice mandates in the field.

The **ishlt academy** draws on the wealth of experience and expertise within the society to deliver high quality educational experiences with the goal of enabling our members to improve and maintain the highest possible standards in the care of patients with advanced heart and lung disease and those undergoing heart or lung transplantation. The **ishlt academy** represents the 'brand name' that will be associated with the educational opportunities offered by the ISHLT to its members and interested non-members.





## ISHLT ACADEMY: Core Competencies in Mechanical Circulatory Support



ishlt  
academy

TUESDAY, APRIL 23, 2013  
MONTREAL, QUEBEC, CANADA

**In response to high demand, on Tuesday, April 23, 2013, the day prior to the 2013 ISHLT Annual Meeting, we are conducting, for a second time, the ISHLT Academy: Core Competencies in Mechanical Circulatory Support.**

This Academy will provide a concise review of clinical knowledge and essential professional skills to facilitate the surgical and medical management of patients with advanced heart failure who are being assessed for and who have received durable mechanical circulatory support. The course consists of focused presentations covering a broad array of topics for both inpatient and outpatient management with an emphasis on a practical approach to patient care, implementing best practices and clinical problem solving. All lectures will be delivered by internationally recognized experts in the field and include cardiologists, cardiac surgeons and VAD coordinators. Audience participation and interaction with the faculty will be actively encouraged throughout the Academy with Question and Answer sessions following each major topic and by limiting the enrollment to 200 participants. The educational workforce of the Mechanical Circulatory Support Counsel of the ISHLT is confident this will be the most comprehensive and valuable summary for practitioners in the field of mechanical circulatory support.

The 2013 ISHLT Academy: Core Competencies in Mechanical Circulatory Support will cover the same broad categories that were presented for the 2012 Academy in Prague: Review of the Current State of MCS, Patient Selection, Surgical Considerations, Post-operative Management, the Transition to Home and Long-term Management. However the program has been refocused as a result of participant feedback, with a particular emphasis on more audience participation and case studies.

## CONTINUING MEDICAL EDUCATION INFORMATION

### Accreditation Statement

The International Society for Heart and Lung Transplantation (ISHLT) is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

### Credit Designation Statement

ISHLT designates this live activity for a maximum of *8.0 AMA PRA Category 1 Credits*.™ Physicians should claim only the credit commensurate with the extent of their participation in the activity.

### Disclosure

Current guidelines state that participants in CME activities must be made aware of any affiliation or financial interest that may affect the program content or a speaker's presentation. Planners, Faculty and Chairs participating in this meeting are required to disclose to the program audience any real or apparent conflict(s) of interest related to the content of their presentations or service as Chair/Planner. These disclosures will be distributed at the meeting. Additionally, all speakers have been asked to verbally disclose at the start of their presentation if a product they are discussing is not labeled for the use under discussion or is still investigational.

### Educational Goals

The educational goals of this activity are to provide a concise review of clinical knowledge and essential professional skills to facilitate best practice of surgical and medical aspects involved in the care of patients during assessment as candidates and as recipients of mechanical circulatory support.

### Target Audience

While all members are invited to enroll, this course is primarily designed to be of benefit for clinicians and allied professionals who are in the early stages of their careers or who are in training, are part of a new program or desire an update on the current state of the field. The information presented is intended to provide a strong foundation of the overarching principles of mechanical support, rather than as a detailed update for those who are already proficient in the field.

## Learning Objectives

At the conclusion of this meeting, participants will have improved competence and professional performance in their ability to:

1. Recognize the various types of mechanical circulatory support, their outcomes and rates of adverse events.
2. Identify the clinical signs and risk factors of advanced heart failure in order to optimally time implantation.
3. Recognize the medical and social factors which impact patient outcomes on MCS.
4. Optimize implantation techniques and pump selection.
5. Manage patients after MCS in the intensive care unit, as an inpatient and as an outpatient.
6. Diagnose and manage common clinical dilemmas and adverse events in patients after MCS.

## PROGRAM SCHEDULE

**CHAIRS:** Jeffrey Teuteberg, MD  
Andreas Zuckermann, MD  
David S. Feldman, MD, PhD  
Daniel J. Goldstein, MD

### ROOM 511

#### 7:00 AM – 8:00 AM

REGISTRATION AND MORNING COFFEE

#### 8:00 AM – 8:15 AM

##### INTRODUCTIONS

**8:00 AM** *Welcome and Brief Overview*  
Jeffrey J. Teuteberg, MD,  
University of Pittsburgh, Pittsburgh, PA, USA

#### 8:15 AM – 9:15 AM

##### REVIEW OF THE CURRENT STATE OF MCS

**8:15 AM** *Technology 101: Review of Current Technologies, Types of Flow, Pump Parameters*  
Francis D. Pagani, MD, PhD,  
University of Michigan, Ann Arbor, MI, USA

**8:30 AM** *BTT/Long-term Support/Recovery: Review State of Outcomes and Adverse Events with Current Technologies*  
Andreas Zuckermann, MD,  
University of Vienna, Vienna, AUSTRIA

**8:45 AM** *Shock: Role of Biventricular Support, TAH and ECMO*  
Pascal Leprince, MD, PhD,  
La Pitie Hospital, Paris, FRANCE

**9:00 AM** *Q & A*

#### 9:15 AM – 10:30 AM

##### PATIENT SELECTION

**9:15 AM** *Worrisome Signals: Risk Factors Which Presage Patient Decline*  
Nicholas R. Banner, FRCP  
Harefield Hospital, Harefield, Middlesex, UK

**9:30 AM** *RV Assessment and Prediction*  
Jeffrey J. Teuteberg, MD,  
University of Pittsburgh, Pittsburgh, PA, USA

**9:45 AM** *End-Organ Assessment*  
Lee R. Goldberg, MD, MPH,  
University of Pennsylvania, Philadelphia, PA, USA

**10:00 AM** *Timing of Implantation: When is the Patient  
“Sick Enough” to Implant MCS?*  
Andrew J. Boyle, MD,  
Cleveland Clinic Florida, Weston, FL, USA

**10:15 AM** *Q & A*

## **10:30 AM – 10:45 AM**

COFFEE BREAK

## **10:45 AM – 12:00 PM**

### **SURGICAL CONSIDERATIONS**

**10:45 AM** *Implantation 101: Overview of the Most Crucial  
Surgical Considerations: Inflow Cannula/Pump  
Placement, Driveline, etc.*  
Nader Moazami, MD,  
The Cleveland Clinic, Cleveland, OH, USA

**11:05 AM** *How Much Else is Too Much? – Concomitant  
Operative Procedures*  
Stephan Schueler, MD, PhD, FRCS,  
Freeman Hospital, Newcastle upon Tyne, UK

**11:25 AM** *Matching Pumps to Patients: Considerations for  
Device Type, Type of Flow Based Upon Patient  
Factors*  
Mark Slaughter, MD, PhD,  
University of Louisville, Louisville, KY, USA

**11:45 AM** *Q & A*

## **NOON – 1:00 PM**

LUNCH BREAK (*lunch on own; delegates are encouraged to pre-register for a box lunch so they can spend the lunch break interacting with the faculty*)

## **1:00 PM – 2:15 PM**

### **POST-OP**

**1:00 PM** *Managing the RV: Post-Operative Approach to the  
RV: Surgical Considerations, Pump Speed, iNo,  
Inotropes, etc.*  
David S. Feldman, MD, PhD, FACC, FAHA,  
Minneapolis Heart Institute/Abbott  
Northwestern Hospital, Minneapolis, MN, USA

**1:20 PM** *Anticoagulation Protocols*  
Vivek Rao, MD, PhD,  
Toronto General Hospital, Toronto, ON, CANADA

**1:40 PM** *The Role of Imaging in Managing the VAD Patient*  
Shashank S. Desai, MD,  
Inova Fairfax Hospital, Falls Church, VA, USA

**2:00 PM** *Q & A*

## **2:15 PM – 3:15 PM**

### **TRANSITION TO HOME**

**2:15 PM** *Teaching/Patient Assessment*  
Michael G. Petty, PhD, RN, CCNS, CNS,  
University of Minnesota Medical Center-  
Fairview, Minneapolis, MN, USA

**2:30 PM** *Outpatient Management – Clinic Structure, Typical  
Items Addressed, Focused Medical Management  
(BP, Rhythms, etc.), Rehab*  
Joseph G. Rogers, MD,  
Duke University, Durham, NC, USA

**2:45 PM** *Quality of Life, Functional Capacity, End of Life –  
The Need For, Timing Of, and Measures to Assess*  
Salpy Pamboukian, MD, MSPH,  
University of Alabama at Birmingham,  
Birmingham, AL, USA

**3:00 PM** *Q & A*

## **3:15 PM – 3:30 PM**

COFFEE BREAK

## **3:30 PM – 5:10 PM**

### **LONG-TERM MANAGEMENT/CASE STUDIES**

#### **CASE DISCUSSANT PANEL:**

Christopher T. Salerno, MD,  
CorVasc, Indianapolis, IN, USA;

Sean P. Pinney, MD,  
Mount Sinai Medical Center, New York, NY, USA;

Michele Pilato, MD, ISMETT, Palermo, ITALY

**3:30 PM** *Infections: Prevention, Diagnosis, Medical and  
Surgical Management*  
Evgenij Potapov, MD, PhD, Deutsches  
Herzzentrum Berlin, Berlin, GERMANY

**3:45 PM** *Case and Discussion*



**3:55 PM** *GI Bleeding: Review of Pathophysiology, Incidence, and Diagnostic/Therapeutic Approach*

Benjamin C. Sun, MD, The Minneapolis Heart Institute, Minneapolis, MN, USA

**4:10 PM** *Case and Discussion*

**4:20 PM** *Pump Thrombosis: Diagnostic and Management Algorithm*

Daniel J. Goldstein, MD, Montefiore Medical Center, New York, NY, USA

**4:35 PM** *Case and Discussion*

**4:45 PM** *Aortic Insufficiency: Incidence, Screening, Management*

Martin Strueber, MD, University Heart Center Leipzig, Leipzig, Germany

**5:00 PM** *Case and Discussion*

**5:10 PM – 5:30 PM**

**ISHLT MCS GUIDELINES PANEL DISCUSSION  
DISCUSSANTS:**

David S. Feldman, MD, PhD, FACC, FAHA, Minneapolis Heart Institute/Abbott Northwestern Hospital, Minneapolis, MN, USA

Salpy Pamboukian, MD, MSPH, University of Alabama at Birmingham, Birmingham, AL, USA

Jeffrey J. Teuteberg, MD, University of Pittsburgh, Pittsburgh, PA, USA

**5:20 PM** *Summary/Adjourn*

**5:30 PM – 6:30 PM**

RECEPTION



## ISHLT ACADEMY: Core Competencies in Pediatric Heart and Lung Transplantation



ishlt  
academy

TUESDAY, APRIL 23, 2013  
MONTREAL, QUEBEC, CANADA

This academy will provide a concise review of clinical knowledge and essential professional skills to facilitate the surgical and medical management of pediatric patients with advanced heart failure who are being assessed for and who have received a heart or lung transplant. The course consists of focused presentations covering a broad array of topics for both inpatient and outpatient management with an emphasis on a practical approach to patient care, implementing best practices and clinical problem solving. The course will highlight particular areas of interest in pediatric heart and lung transplantation, including management of patients with congenital heart disease, ABO incompatible heart transplantation and antibody-mediated rejection in children. All lectures will be delivered by internationally recognized experts in the field of pediatric thoracic transplantation and include cardiologists, cardiac surgeons and transplant coordinators.

Audience participation and interaction with the faculty will be actively encouraged throughout the Academy with Case Studies with audience participation following each major topic and by limiting the enrollment to 200 participants.

The educational workforce of the Pediatric Transplant Council of the ISHLT is confident this will be the most comprehensive and valuable summary for practitioners in the field of pediatric heart and lung transplantation.

## CONTINUING MEDICAL EDUCATION INFORMATION

### Accreditation Statement

The International Society for Heart and Lung Transplantation (ISHLT) is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians and allied health professionals.

### Credit Designation Statement

ISHLT designates this live activity for a maximum of *8.75 AMA PRA Category 1 Credits*.™ Participants should claim only the credit commensurate with the extent of their participation in the activity.

### Disclosure

Current guidelines state that participants in CME activities must be made aware of any affiliation or financial interest that may affect the program content or a speaker's presentation. Planners, Faculty and Chairs participating in this meeting are required to disclose to the program audience any real or apparent conflict(s) of interest related to the content of their presentations or service as Chair/Planner. These disclosures will be distributed at the meeting. Additionally, all speakers have been asked to verbally disclose at the start of their presentation if a product they are discussing is not labeled for the use under discussion or is still investigational.

### Educational Goals

The educational goals of this activity are to provide a concise review of clinical knowledge and essential professional skills to facilitate best practice of surgical and medical aspects involved in the care of pediatric patients undergoing heart or lung transplantation, with an emphasis on patients with congenital heart disease.

### Target Audience

While all members are invited to enroll, this course is primarily designed to be of benefit for clinicians and allied professionals who are in the early stages of their careers or who are in training, are part of a new program or desire an update on the current state of the field. The information presented is intended to provide a strong foundation of the overarching principles of pediatric transplantation, rather than as a detailed update for those who are already proficient in the field.

## Learning Objectives

At the conclusion of this meeting, participants will have improved competence and professional performance in the areas of:

1. Describing the evolution of pediatric heart and lung transplantation.
2. Identifying the risk factors for survival following heart or lung transplantation in patients with congenital heart disease and cardiomyopathy.
3. Evaluating and managing children presenting with heart or lung failure.
4. Completing a comprehensive evaluation and listing for pediatric heart or lung transplantation.
5. Managing a pediatric patient awaiting heart or lung transplantation including the use of mechanical support.
6. Evaluating a potential pediatric donor heart or lung.
7. Managing a pediatric patient in the early post-operative period following heart or lung transplantation.
8. Optimizing immunosuppression in children following heart or lung transplantation.
9. Evaluating and treating rejection following pediatric heart or lung transplantation.
10. Managing the co-morbidities of pediatric heart or lung transplantation.

## PROGRAM SCHEDULE

**CHAIRS:** Debra Dodd, MD      Christian Benden, MD  
Daphne Hsu, MD      Kimberly Gandy, MD, PhD

### ROOM 512A-G

#### 7:00 AM – 7:45 AM

REGISTRATION AND MORNING COFFEE

#### 7:45 AM – 8:00 AM

INTRODUCTION

#### 8:00 AM – 8:15 AM

##### OVERVIEW

**8:00 AM** *Overview of Pediatric Heart and Lung Transplantation: History, Registries and Outcomes*

Daphne T. Hsu, MD,  
Children's Hospital at Montefiore,  
Bronx, NY, USA

#### 8:15 AM – 9:45 AM

##### ADVANCED PEDIATRIC HEART AND LUNG FAILURE

**8:15 AM** *Mechanisms and Pathophysiology of Heart Failure in Children*

Daniel Bernstein, MD,  
Stanford University, Stanford, CA, USA

**8:15 AM** *Management of Heart Failure in Children*

Paul F. Kantor, MD,  
Stollery Children's Hospital,  
Edmonton, Alberta, CANADA

**8:30 AM** *Medical Management of Pulmonary Failure in Children*

Bart Rottier, MD, PhD,  
Beatrix Children's Hospital, University  
Medical Center Groningen, Groningen,  
THE NETHERLANDS

**8:45 AM** *Evaluation and Listing for Heart Transplantation*

Debra A. Dodd, MD,  
Monroe Carell, Jr. Children's Hospital at  
Vanderbilt, Nashville, TN, USA



**9:00 AM** *Evaluation and Listing for Lung Transplantation*

Christian Benden, MD,  
University Hospital Zurich,  
Zurich, SWITZERLAND

**9:15 AM** *Case Presentations*

Presenters and participants

**9:45 AM – 10:00 AM**

COFFEE BREAK

**10:00 AM – 11:15 AM**

**MANAGEMENT OF THE LISTED PATIENT**

**10:00 AM** *Evaluation and Decision-Making for*

*Mechanical Assist Device Support*

Evgenij Potapov, MD, PhD,  
Deutsches Herzzentrum Berlin,  
Berlin, GERMANY

**10:15 AM** *Management of Mechanical Assist Device*

*Support and Outcomes*

David LS Morales, MD,  
Cincinnati Children's Hospital Medical Center,  
Cincinnati, OH, USA

**10:30 AM** *Evaluation and Management of the Donor Lung*

Shaf Keshavjee, MD, FRCSC,  
Hospital for Sick Children, University of  
Toronto, Toronto, ON, CANADA

**10:45 AM** *Evaluation and Management of the Donor Heart*

Kirk R. Kanter, MD,  
Emory University School of Medicine, Atlanta,  
GA, USA

**11:00 AM** *Case Presentations*

Presenters and participants

**11:15 AM – 11:30 AM**

COFFEE BREAK

**11:30 AM – 12:30 PM**

**MANAGEMENT OF SPECIAL POPULATIONS**

**11:30 AM** *Evaluation and Management of ABO*

*Incompatible Transplantation*

Simon Urschel, MD,  
University of Alberta, Edmonton,  
Alberta, CANADA

**11:45 AM** *Evaluation and Management of the*

*Sensitized Patient*

Steven A. Webber, MBChB,  
Vanderbilt University School of Medicine,  
Nashville, TN, USA

**12:00 PM** *Evaluation and Management of the Complex*

*Congenital Heart Disease Patient*

Beth Kaufman, MD,  
Stanford University, Palo Alto, CA, USA

**12:15 PM** *Case Presentations*

Presenters and participants

**12:30 PM – 1:30 PM**

LUNCH BREAK (*lunch on own; delegates are encouraged to pre-register for a box lunch so they can spend the lunch break interacting with the faculty*)

**1:30 PM – 3:00 PM**

**PERI-TRANSPLANT MANAGEMENT**

**1:30 PM** *Transplantation and Immediate Post-Transplantation Management*

Charles E. Canter, MD,  
Washington University School of Medicine,  
St. Louis, MO, USA

**1:45 PM** *Immunosuppression: Induction and Maintenance*

Richard Kirk, FRCP, FRCPC,  
Freeman Hospital, Newcastle, UK

**2:00 PM** *Management of Acute Cellular Rejection*

Micheal A. Kuhn, MD,  
Loma Linda University Children's Hospital,  
Loma Linda, CA, USA

**2:15 PM** *Management of Antibody-Mediated Rejection*

Anne I. Dipchand, MD, FRCPC,  
Hospital for Sick Children, Toronto,  
Ontario, CANADA

**2:30 PM** *Case Presentations*

Presenters and participants

**3:00 PM – 3:15 PM**

COFFEE BREAK

## 3:15 PM – 4:45 PM

### LONG-TERM MANAGEMENT I

**3:15 PM** *Designing a Follow-up Program*  
Tajinder P Singh, MD, MSc,  
Boston Children's Hospital, Boston, MA, USA

**3:30 PM** *Transition to Home and Quality of Life*  
Connie White-Williams, PhD, RN, FAAN, UAB  
Hospital, Birmingham, AL, USA

**3:45 PM** *Evaluation of the Failing Graft*  
Gerard J. Boyle, MD, FACC,  
Cleveland Clinic Children's Hospital,  
Cleveland, OH, USA

**4:00 PM** *Diagnosis and Management of Graft Vasculopathy*  
Elfriede Pahl Schuette, MD,  
Lurie Children's/Northwestern Feinberg  
School of Medicine, Chicago, IL, USA

**4:15 PM** *Case Presentations*  
Presenters and participants

## 4:45 PM – 5:00 PM

COFFEE BREAK

## 5:00 PM – 6:30 PM

### LONG-TERM MANAGEMENT II

**5:00 PM** *Infections: Prevention, Diagnosis, and Management*  
Lara Danziger-Isakov, MD, MPH,  
Cincinnati Children's Hospital Medical Center,  
Cincinnati, OH, USA

**5:15 PM** *Late Complications Following Heart and Lung Transplantation*  
Stuart C. Sweet, MD, PhD,  
Washington University, St. Louis, MO, USA

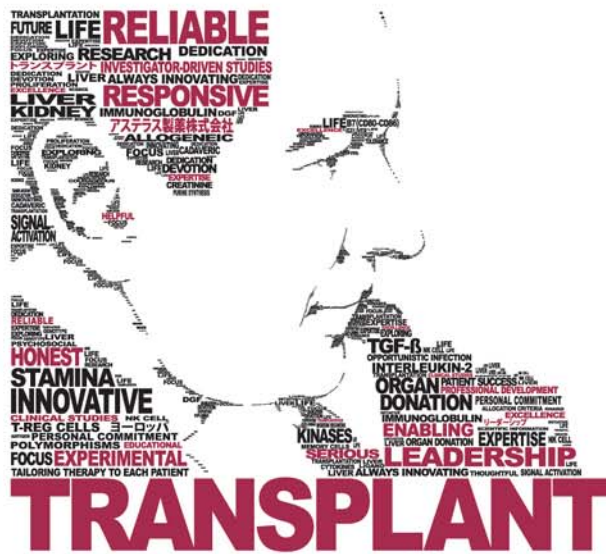
**5:30 PM** *Re-transplantation: Is the Second Time the Charm?*  
Linda J. Addonizio, MD,  
Columbia University, New York, NY, USA

**5:45 PM** *Case Presentations*  
Presenters and participants

**6:15 PM** *SUMMARY/ADJOURN*

## 6:30 PM – 7:30 PM

RECEPTION



In you, we see the future of  
transplant medicine.

The future of transplant medicine has always been fuelled by individual efforts and collective experience. At Astellas Transplant, we continuously seek to improve our knowledge of transplantation. We always look forward to the challenges ahead, and strive to work in partnership with you to advance the future of the field. Our goal is to support you in improving the quality of your patients' lives – today and tomorrow. Whether it's with our cornerstone therapies, our innovative compounds in development, or our support of transplant associations, clinical studies, and fellowships, we're continually looking for ways to anticipate and meet your needs, and the needs of your patients. Together, we can advance the future of transplantation.



INTERNATIONAL SOCIETY FOR  
HEART AND LUNG TRANSPLANTATION

# Annual Meeting Schedule at a Glance



MORE THAN  
**13,000**  
REASONS to BELIEVE

Celebrating more than 13,000 patients<sup>1</sup> implanted  
with HeartMate II® *in partnership with you.*

Find out more at booth 211



**Reference**

1. Data on file as of January 2013. Pleasanton, Calif. Thoratec Corp.

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33rd Annual Meeting  
and Scientific Sessions  
April 24-27, 2013



**TUESDAY, APRIL 23, 2013**

**6:30 AM – 8:00 PM**  
SPEAKER READY ROOM OPEN (515AB)

**6:30 AM – 8:30 AM**  
ACADEMY REGISTRATION DESK OPEN (517 FOYER)

**7:45 AM – 2:00 PM**  
ISHLT BOARD OF DIRECTORS MEETING (512D)

**7:45 AM – 7:30 PM**  
*ISHLT ACADEMY: CORE COMPETENCIES IN PEDIATRIC HEART AND LUNG TRANSPLANTATION (512A-G)*  
(SEE PAGE 70 FOR SCIENTIFIC PROGRAM AND SCHEDULE)

**8:00 AM – 6:30 PM**  
*ISHLT ACADEMY: CORE COMPETENCIES IN MECHANICAL CIRCULATORY SUPPORT (511)*  
(SEE PAGE 62 FOR SCIENTIFIC PROGRAM AND SCHEDULE)

**8:00 AM – 4:00 PM**  
ID COUNCIL FUNGAL WORKSHOP (515C)

**NOON – 4:00 PM**  
PATHOLOGY COUNCIL LUNG AMR WORKSHOP (512H)

**2:00 PM – 4:00 PM**  
EDUCATION COMMITTEE MEETING (514C)

**2:00 PM – 6:00 PM**  
HEART TRANSPLANT LISTING CONSENSUS CRITERIA WORKSHOP (512D)

**3:30 PM – 5:00 PM**  
TRANSPLANT REGISTRY EXECUTIVE COMMITTEE MEETING (514B)

**4:00 PM – 6:00 PM**  
STANDARDS AND GUIDELINES COMMITTEE MEETING (514C)

**5:00 PM – 6:00 PM**  
REGISTRIES AND DATABASES COMMITTEE MEETING (514B)

**5:00 PM – 8:00 PM**  
IMACS USERS GROUP MEETING (512H)

**5:00 PM – 8:00 PM**  
REGISTRATION DESK OPEN

**WEDNESDAY, APRIL 24, 2013**

(SEE PAGE 92 FOR ANNUAL MEETING SCIENTIFIC PROGRAM DETAILS)

**7:00 AM – 6:30 PM**  
SPEAKER READY ROOM OPEN (515AB)

**7:00 AM – 7:00 PM**  
REGISTRATION DESK OPEN (517 FOYER)

**8:00 AM – 10:00 AM**  
*SYMPOSIUM 1: Molecular Pathways of Cardiac Mechanical Unloading (517CD)*

*SYMPOSIUM 2: The Changing Landscape in Heart Transplantation: Surviving in the New Age (511)*

*SYMPOSIUM 3: BOS: Back to the Drawing Board (510)*

*SYMPOSIUM 4: Clarifying Chronic Thromboembolic Pulmonary Hypertension (CTEPH) (512A-G)*

*SYMPOSIUM 5: Nightmare Syndromes (513ABC)*

*SYMPOSIUM 6: Pediatric Heart Transplantation: Art, Science, or Voodoo? (513DEF)*

**10:00 AM – 10:15 AM**  
COFFEE BREAK (517 FOYER)

**10:15 AM – 12:15 PM**  
*SYMPOSIUM 7: LVAD Support: Ensuring Long-Term Success (517CD)*

*SYMPOSIUM 8: How to Face Antibodies: A Practicum for the Cardiac Transplantation Clinician (511)*

*SYMPOSIUM 9: Bridging to Lung Transplantation: Who, When and With What (510)*

*SYMPOSIUM 10: New Pathways and Controversies in PAH (512A-G)*

*SYMPOSIUM 11: T Cell 101 in Lung Transplantation (513ABC)*

*SYMPOSIUM 12: Joint ISHLT/IPTA Session – Psychosocial Issues in Pediatric Cardiothoracic Transplantation (513DEF)*

**12:15 PM – 2:15 PM**  
LUNCH BREAK

**12:15 PM – 2:15 PM**  
JUNIOR FACULTY MENTOR LUNCH (514C)

**12:15 PM – 1:15 PM**

BASIC SCIENCE AND TRANSLATIONAL RESEARCH COUNCIL MEETING (512D)

DCD REGISTRY STEERING COMMITTEE MEETING (512H)

**1:15 PM – 2:15 PM**

I2C2 COMMITTEE MEETING (512D)

TRANSPLANT REGISTRY MEETING (512H)

**2:15 PM – 4:15 PM**

*SYMPOSIUM 13: Machines vs. Medications for Biventricular Failure (517CD)*

*SYMPOSIUM 14: Common Debates After Cardiac Transplantation (511)*

*SYMPOSIUM 15: AMR in Lung: Definitions and Current State (510)*

*SYMPOSIUM 16: Mapping the Management of the RV in Lung Transplantation (512A-G)*

*SYMPOSIUM 17: Cell Migration and Trafficking in Lung and Heart Transplantation (513ABC)*

*SYMPOSIUM 18: The Spectrum of CMV: Young or Old, Heart or Lung (513DEF)*

**4:15 PM – 4:30 PM**

COFFEE BREAK (517 FOYER)

**4:30 PM – 6:30 PM**

*SYMPOSIUM 19: Great Debates in MCS (517CD)*

*SYMPOSIUM 20: The Cardio-Renal Syndrome: End of a Happy Marriage (511)*

*SYMPOSIUM 21: Lung AMR: "How I do it" A Multidisciplinary Case Based Discussion (510)*

*SYMPOSIUM 22: Motivational Interviewing: An Approach to Improving Outcomes in Transplantation (512A-G)*

*SYMPOSIUM 23: Natural Immunity, Adaptive Response Infection and Immunosuppression: The Piñata Cocktail (513ABC)*

*SYMPOSIUM 24: Unique Aspects of Heart Failure in Children: Physiology and Management (513DEF)*

**6:30 PM – 7:30 PM**

EXHIBIT HALL OPENING RECEPTION (517AB)

GENERAL POSTER SESSION 1 (516)

JUNIOR FACULTY CLINICAL CASE POSTERS (516)

**THURSDAY, APRIL 25, 2013****6:00 AM – 6:30 PM**

SPEAKER READY ROOM OPEN (515AB)

**6:30 AM – 6:30 PM**

REGISTRATION DESK OPEN (517 FOYER)

**7:00 AM – 8:00 AM**

*SUNRISE SYMPOSIUM 1: Are the Pathology Working Formulations the Gold Standard for Diagnosing AMR in Heart and Lung in 2013? (514B)*

*SUNRISE SYMPOSIUM 2: Beyond Survival: Evaluating Lung Transplant Success Through Patient-Oriented Outcomes (514C)*

*SUNRISE SYMPOSIUM 3: Controversies in Lung Allocation Around the World (512D)*

**8:00 AM – 10:00 AM**

OPENING PLENARY SESSION (517CD)

**10:00 AM – 4:00 PM**

EXHIBIT HALL OPEN (517AB)

**10:00 AM – 6:30 PM**

POSTER HALL OPEN (516)

**10:00 AM – 10:30 AM**

COFFEE BREAK / VISIT EXHIBITS / VIEW POSTERS (516; 517AB)

**10:30 AM – 12:00 PM**

*Concurrent Session 1: MCS 1: VADS in the Real World – Clinical Outcomes (517CD)*

*Concurrent Session 2: Heart 1: News from the Registries – What We Need To Learn To Achieve Long-Term (511)*

*Concurrent Session 3: Donor Management 1: Lung (510)*

*Concurrent Session 4: PH 1: All about Outcomes (512A-G)*

*Concurrent Session 5: PATH AMR: Exploring the New Frontier (513ABC)*

*Concurrent Session 6: Heart 2: Heart Failure – Focus on the Right Heart (513DEF)*

**NOON – 2:00 PM**

LUNCH BREAK

VISIT EXHIBITS / VIEW POSTERS (516; 517AB)

**NOON – 2:00 PM**

JFT COUNCIL MEETING (514C)

JHLT EDITORIAL BOARD MEETING/LUNCH (519A)

PULMONARY COUNCIL QOL WORKFORCE MEETING (512H)

**1:00 PM – 2:00 PM**

2014 PROGRAM COMMITTEE MEETING (514B)

**2:00 PM – 3:30 PM***Concurrent Session 7: MCS 2: How to Bridge Over Troubled Waters (517CD)**Concurrent Session 8: Heart 3: Coronary Artery Vasculopathy in 2013 - Diagnosis, Prognosis and Treatment (511)**Concurrent Session 9: Lung 1: Transplantation – Bench to Bedside (510)**Concurrent Session 10: MCS 3: Pump and Patient Crosstalk (512A-G)**Concurrent Session 11: Philip K. Caves Award Candidate Presentations (513ABC)**Concurrent Session 12: PEDS 1: Heart Failure and Transplantation (513DEF)***3:30 PM – 4:00 PM**

COFFEE BREAK / VISIT EXHIBITS / VIEW POSTERS (516; 517AB)

**4:00 PM – 5:30 PM***Concurrent Session 13: MCS 4: VAD Clots – Beyond LDH (517CD)**Concurrent Session 14: Heart 4: Living with a Transplanted Heart - A Narrow Pathway in the Jungle (511)**Concurrent Session 15: Lung 2: Primary Graft Dysfunction (510)**Concurrent Session 16: NNSAH 1: Implications and Innovations throughout the Lung Transplant Trajectory (512A-G)**Concurrent Session 17: BSTR 1: New Frontiers in Cardiothoracic Organ Regeneration - From Cosmetic to Prosthetic (513ABC)**Concurrent Session 18: ID 1: From Fungus to Virus – The Microbiome Elicited (513DEF)***5:30 PM – 6:30 PM**

GENERAL POSTER SESSION 2 (516)

**5:30 PM – 6:30 PM***Mini Oral Session 1: Heart Post-Transplantation (513ABC)**Mini Oral Session 2: Mechanical Circulatory Support (513DEF)**Mini Oral Session 3: Lung Failure, Diagnosis and Therapy (514B)**Mini Oral Session 4: Pulmonary Hypertension (514C)**Mini Oral Session 5: Basic Science (512D)***5:30 PM – 7:00 PM**

COUNCIL CHAIRS' RECEPTION/MEETING (519A)

**FRIDAY, APRIL 26, 2013****6:30 AM – 6:30 PM**

SPEAKER READY ROOM OPEN (515AB)

**6:30 AM – 6:30 PM**

REGISTRATION DESK OPEN (517 FOYER)

**7:00 AM – 8:00 AM***SUNRISE SYMPOSIUM 4: VAD Optimization – Pump It Up (517CD)**SUNRISE SYMPOSIUM 5: The “Omics” of Cardiac Transplantation (511)**SUNRISE SYMPOSIUM 6: Bronchoscopic Battles and Anastomotic Atrocities (510)**SUNRISE SYMPOSIUM 7: Proteins and Pathogenesis of PH (512A-G)**SUNRISE SYMPOSIUM 8: Avatars and Advanced Care Planning (513ABC)**SUNRISE SYMPOSIUM 9: What's New in Xenotransplantation (514B)*



**8:00 AM – 9:30 AM**

*Concurrent Session 19: MCS 5: The Aftermath of VAD Implantation (517CD)*

*Concurrent Session 20: Heart 5: Advances in Interpretation of Cardiac Allograft Immune Activation (511)*

*Concurrent Session 21: Lung 3: Clinical and Immune Monitoring (510)*

*Concurrent Session 22: PH 2: Right Ventricular Matters (512A-G)*

*Concurrent Session 23: NNSAH 2: MCS and Heart Transplantation – Assessment, Outcomes and Interventions (513ABC)*

*Concurrent Session 24: BSTR 2: Exploring and Modifying the Immune Response – Cells, Antibodies, and Tolerance (514B)*

*SYMPOSIUM 25: JHLT AT ISHLT – The Year in a Capsule (513DEF)*

**9:00 AM – 2:00 PM**

EXHIBIT HALL OPEN (517AB)

**9:00 AM - 6:30 PM**

POSTER HALL OPEN (516)

**9:30 AM – 10:00 AM**

ANNUAL BUSINESS MEETING (517CD)

COFFEE BREAK / VISIT EXHIBITS / VIEW POSTERS (516; 517AB)

**10:00 AM – NOON**

*PLENARY SESSION: How to Succeed When the Right Ventricle Fails (517CD)*

**NOON – 2:00 PM**

LUNCH BREAK

VISIT EXHIBITS / VIEW POSTERS (516; 517AB)

**12:10 PM – 12:55 PM**

MECHANICAL CIRCULATORY SUPPORT COUNCIL MEETING (513ABC)

PULMONARY HYPERTENSION COUNCIL MEETING (513DEF)

PEDIATRIC TRANSPLANTATION COUNCIL MEETING (514B)

NURSING, HEALTH SCIENCE, ALLIED HEALTH COUNCIL MEETING (514C)

INFECTIOUS DISEASES COUNCIL MEETING (512D)

**1:05 PM – 1:50 PM**

HEART FAILURE AND TRANSPLANT MEDICINE COUNCIL MEETING (513ABC)

PULMONARY TRANSPLANTATION COUNCIL MEETING (513DEF)

PEDIATRIC HEART FAILURE WORKFORCE MEETING (514B)

PATHOLOGY COUNCIL MEETING (514C)

PHARMACY AND PHARMACOLOGY COUNCIL MEETING (512D)

**2:00 PM – 3:30 PM**

*ISHLT and AST JOINT SESSION I: Pretransplant Circulating Antibodies: Making Sense of Sensitization (513DEF)*

*Concurrent Session 25: MCS 6: Infectious Issues and Pump Failure (517CD)*

*Concurrent Session 26: Heart 6: Are All Antibodies Equal? Predicting, Managing and Treating the Risk for AMR (511)*

*Concurrent Session 27: Lung 4: Immunosuppression and Therapeutics (510)*

*Concurrent Session 28: MCS 7: Changes in Physiology During Support (512A-G)*

*Concurrent Session 29: Donor Management 2: Rethinking the Cardiac Donor (513ABC)*

*Concurrent Session 30: Heart 7: Heart Failure – What's New in Translational Science (514B)*

**3:30 PM – 4:00 PM**

COFFEE BREAK / VIEW POSTERS (516)

**4:00 PM – 5:30 PM**

*Concurrent Session 31: MCS 8: The Cost for Quality of Life after VAD (517CD)*

*Concurrent Session 32: Heart 8: Mechanisms and Markers of Acute Rejection - Within and without Biopsy Sampling (511)*

*Concurrent Session 33: Lung 5: BOS – An Update (510)*

*Concurrent Session 34: PH 3: Right Ventricular Assessment and Function (512A-G)*

*Concurrent Session 35: PEDS 2: Mechanical Circulatory Support in Children (513ABC)*

*Concurrent Session 36: PHARM 1: Innovative Pharmacotherapeutic Approaches to Thoracic Transplant and Mechanically Assisted Patients (514B)*

*ISHLT and AST JOINT SESSION II: Antibody-Mediated Rejection: State of the “Current” Art (513DEF)*

**5:30 PM – 6:30 PM**

*Mini Oral Session 6: Heart Failure, Diagnosis and Therapy*  
(513ABC)

*Mini Oral Session 7: Mechanical Circulatory Support*  
(513DEF)

*Mini Oral Session 8: Lung Failure, Heart Donor Management and Lung Donor Management* (514B)

*Mini Oral Session 9: Nursing, Health Science and Allied Health* (514C)

*Mini Oral Session 10: Pediatrics and Infectious Diseases*  
(512D)

**5:30 PM – 6:30 PM**

GENERAL POSTER SESSION 3 (516)

**5:30 PM – 7:00 PM**

INTERNATIONAL MCS REIMBURSEMENT SESSION (512H)

PAST PRESIDENT'S COUNCIL MEETING/RECEPTION (519A)

**7:30 PM – 8:45 PM**

PRESIDENT'S GALA COCKTAIL RECEPTION,  
Fortification Centre

**SATURDAY, APRIL 27, 2013****6:30 AM – 12:15 PM**

REGISTRATION DESK OPEN (517 FOYER)

**6:30 AM – 1:30 PM**

SPEAKER READY ROOM OPEN (515AB)

**7:00 AM – 8:00 AM**

*SUNRISE SYMPOSIUM 10: Congenital Heart Disease – Success and Failure* (511)

*SUNRISE SYMPOSIUM 11: PH and the Lung Parenchyma*  
(510)

*SUNRISE SYMPOSIUM 12: Challenging Candidates for Lung Transplant Selection* (512A-G)

*SUNRISE SYMPOSIUM 13: Pediatric Lung Transplantation: Developments and Controversies* (513ABC)

*SUNRISE SYMPOSIUM 14: Travel, Leisure And Work After Transplant: Keeping Our Patients Safe from Infections*  
(513DEF)

**8:00 AM – 9:30 AM**

*Concurrent Session 37: MCS 9: Before the VAD!* (511)

*Concurrent Session 38: Heart 9: Progress in Cardiac Allograft Immunosuppression* (510)

*Concurrent Session 39: BSTR 3: The Fundamental Difference – Innate Immunity and Xenotransplantation* (513ABC)

*Concurrent Session 40: Clinical Case Dilemmas in Thoracic Transplantation* (513DEF)

*PHARM SYMPOSIUM: A Lifecycle Journey in Cystic Fibrosis and Lung Transplantation* (512A-G)

**9:30 AM – 9:45 AM**

COFFEE BREAK (517 FOYER)

**9:45 AM – NOON**

*PLENARY SESSION: From Bench to Bedside* (511)

**NOON – 12:15 PM**

COFFEE BREAK (517 FOYER)

**12:15 PM – 1:30 PM**

*Concurrent Session 41: MCS 10: Outcomes Potpourri* (511)

*Concurrent Session 42: Heart 10: Can We Improve Transplant Risk Assessment and Outcome Prediction?* (510)

*Concurrent Session 43: Lung 6: Transplant Complications and Outcomes* (512A-G)

*Concurrent Session 44: MCS 11: Translational Science and New Devices* (513ABC)

*Concurrent Session 45: PEDS 3: Heart and Lung Transplantation* (513DEF)

**1:30 PM – 3:00 PM**

COUNCIL AND COMMITTEE REPORTS TO THE BOARD AND MEMBERSHIP (513DEF)

**3:00 PM – 10:00 PM**

ISHLT BOARD OF DIRECTORS MEETING (514C)

INTERNATIONAL SOCIETY FOR  
HEART AND LUNG TRANSPLANTATION

# Scientific Program

33rd ANNUAL MEETING and SCIENTIFIC SESSIONS  
APRIL 24 – 27, 2013

All meetings and activities will take place at the Palais des congrès de Montréal unless otherwise specified.

All papers will be presented in English.

**TUESDAY, APRIL 23, 2013**

**6:30 AM – 8:00 PM**

SPEAKER READY ROOM OPEN (515AB)

**6:30 AM – 8:30 AM**

ACADEMY REGISTRATION DESK OPEN (517 FOYER)

**7:45 AM – 2:00 PM**

ISHLT BOARD OF DIRECTORS MEETING (512D)

**7:45 AM – 7:30 PM**

*ISHLT ACADEMY: CORE COMPETENCIES IN PEDIATRIC HEART AND LUNG TRANSPLANTATION (512A-G)*

(SEE PAGE 70 FOR SCIENTIFIC PROGRAM AND SCHEDULE)

**8:00 AM – 6:30 PM**

*ISHLT ACADEMY: CORE COMPETENCIES IN MECHANICAL CIRCULATORY SUPPORT (511)*

(SEE PAGE 62 FOR SCIENTIFIC PROGRAM AND SCHEDULE)

**8:00 AM – 4:00 PM**

ID COUNCIL FUNGAL WORKSHOP (515C)

**NOON – 4:00 PM**

PATHOLOGY COUNCIL LUNG AMR WORKSHOP (512H)

**2:00 PM – 4:00 PM**

EDUCATION COMMITTEE MEETING (514C)

**2:00 PM – 6:00 PM**

HEART TRANSPLANT LISTING CONSENSUS CRITERIA WORKSHOP (512D)

**3:30 PM – 5:00 PM**

TRANSPLANT REGISTRY EXECUTIVE COMMITTEE MEETING (514B)

**4:00 PM – 6:00 PM**

STANDARDS AND GUIDELINES COMMITTEE MEETING (514C)

**5:00 PM – 6:00 PM**

REGISTRIES AND DATABASES COMMITTEE MEETING (514B)

**5:00 PM – 8:00 PM**

IMAGS USERS GROUP MEETING (512H)

**5:00 PM – 8:00 PM**

REGISTRATION DESK OPEN (517 FOYER)



## WEDNESDAY, APRIL 24, 2013

7:00 AM – 6:30 PM

SPEAKER READY ROOM OPEN (515AB)

7:00 AM – 7:00 PM

REGISTRATION DESK OPEN (517 FOYER)

8:00 AM – 10:00 AM

### SYMPOSIUM 1

#### Molecular Pathways of Cardiac Mechanical Unloading (517CD)

**CHAIRS:** Lee R. Goldberg, MD, MPH and Craig H. Selzman, MD

**SESSION SUMMARY:** This session highlights the molecular pathways associated with mechanical unloading of the failing myocardium. Topics include the myocardial response affecting cardiac contractility, fibrosis and metabolism as well as the vasculature. Further, we will discuss molecular patterns associated with a favorable response of the myocardium to mechanical unloading and the potential impact on myocardial recovery after mechanical unloading.

**8:00 AM** *Impact of Mechanical Circulatory Support on Myocardial Contractility and Calcium Handling*, Daniel Burkhoff, MD, PhD, Columbia University, New York, NY, USA

**8:18 AM** Discussion

**8:24 AM** *Myocardial Fibrosis in Heart Failure and Its Response to Mechanical Unloading*, Hendrik Milting, PhD, Heart and Diabetes Center NRW, Ruhr-University, Clinic for Thoracic & Cardiovascular Surgery, E & H Klessmann-Institute, Bad Oeynhausen, NRW, Germany

**8:42 AM** Discussion

**8:48 AM** *Impaired Cardiac Metabolism in Heart Failure and the Impact of Left Ventricular Assist Device Support*, P. Christian Schulze, MD, PhD, Columbia University, New York, NY, USA

**9:06 AM** Discussion

**9:12 AM** *Vascular Changes in Patients Supported by Ventricular Assist Devices*, Stavros G. Drakos, MD, PhD, University of Utah & UTAH Cardiac Transplant Program, Salt Lake City, Utah, USA

**9:30 AM** Discussion

**9:36 AM** *The Molecular Signature of Myocardial Recovery Following Ventricular Assist Device Support*, Kenneth B. Margulies, MD, University of Pennsylvania, Philadelphia, PA, USA

**9:54 AM** Discussion

8:00 AM – 10:00 AM

### SYMPOSIUM 2

#### The Changing Landscape in Heart Transplantation: Surviving in the New Age (511)

**CHAIRS:** John Wallwork, FRCS and Marisa Crespo-Leiro, MD

**SESSION SUMMARY:** A dramatic epidemiological shift in the heart transplant donor and recipient characteristic in recent years has led to a need to review our current allocation and matching systems. In this symposium, we shall review the changing landscape, evaluate the different allocation systems

world-wide across diverse continents and debate whether an international consensus is timely for developing clinical algorithms that facilitate optimal donor and recipient matching. How shall we allocate donors for those with durable LVAD's? Is it time to develop a universal classification for the "marginal" donor? Are "sensitized" patients a unique group for a targeted allocation system? These and other burning issues will be addressed by a panel of international experts in the field.

**8:00 AM** *Changing Epidemiology of the Heart Transplant Candidate*, Josef Stehlik, MD, MPH, University of Utah School of Medicine, Salt Lake City, UT, USA

**8:10 AM** *Changing Epidemiology of the Optimal Heart Donor*, Guy A. MacGowan, MD, FACC FRCPI, Freeman Hospital, Newcastle upon Tyne, United Kingdom

#### Donor Allocation Systems Around the World: Current Approaches, Advantages, Challenges

**8:20 AM** *USA* – Joseph G. Rogers, MD, Duke University, Durham, NC, USA

**8:25 AM** *Canada* – Debra L. Isaac, MD, University of Calgary, Calgary, Alberta, Canada

**8:30 AM** *Eurotransplant* – Andreas Zuckermann MD, Medical University of Vienna, Vienna, Austria

**8:35 AM** *Spain* – Juan F. Delgado, MD, Universitary Hospital 12 de Octubre, Madrid, Spain

**8:40 AM** *Italy* – Maria Frigerio, MD, Niguarda-Ca' Granda Hospital, Milan, Italy

**8:45 AM** *Australia* – Peter MacDonald, MD, PhD, St. Vincent's Hospital, Sydney, Australia

#### Expanding and Maximizing the Donor Pool

**8:50 AM** *Expanding the Donor Pool: UK Experience*, Stephen C. Clark, FRCS, Freeman Hospital, Newcastle upon Tyne, United Kingdom

**9:05 AM** *Pushing the Limits for Organ Acceptability*, Ashish S. Shah, MD, Johns Hopkins Hospital, Baltimore, MD, USA

#### DEBATE: It Is Time For An International Consensus For A Recipient Scoring System

**9:20 AM** **PRO:** Keith D. Aaronson, MD, University of Michigan, Ann Arbor, MI, USA

**9:30 AM** **CON:** Lynne Warner Stevenson, Brigham and Women's Hospital, Boston, MA, USA

**9:40 AM** Panel Discussion and Audience Q & A

8:00 AM – 10:00 AM

### SYMPOSIUM 3

#### BOS: Back to the Drawing Board (510)

**CHAIRS:** Denis Hadjiiladis, MD, MHS and Robin Vos, MD, PhD

**SESSION SUMMARY:** Phenotyping and adding new terminology to chronic rejection have been major issues in the last few years. This session will clarify some well-defined phenotypes and put them into perspective of the "old BOS" where everything was pulled together with fewer diagnostic tools.

**8:00 AM** *Basic Science and Mechanisms*, Laurie D. Snyder, MD, Duke University, Durham, NC, USA

**8:20 AM** Discussion

**8:30 AM** *Phenotypes of BOS*, Geert M. Verleden, MD, PhD, University Hospital Gasthuisberg, Leuven, Belgium

**8:50 AM** Discussion

- 9:00 AM** *Variability in Assessing Pulmonary Function Tests*, Sangeeta M. Bhorade, MD, University of Chicago Medicine, Chicago IL USA
- 9:20 AM** Discussion
- 9:30 AM** *Management of BOS*, Martin P. Iversen, MD, PhD, Rigshospitalet, Copenhagen University Hospital, Copenhagen, Denmark
- 9:50 AM** Discussion

## 8:00 AM – 10:00 AM

## SYMPOSIUM 4

**Clarifying Chronic Thromboembolic Pulmonary Hypertension (CTEPH) (512A-G)**

**CHAIRS:** Raymond L. Benza, MD and Marc de Perrot, MD, MSc

**SESSION SUMMARY:** CTEPH remains the only potentially curable form of PH to date underlying the huge importance of making an accurate diagnosis and thoroughly assessing suitability for thromboendarterectomy in any patient presenting with PH. This symposium covers the basics of diagnosis and surgical decision making, then moves to consider the current evidence base for using medical therapy for those patients who are not cured or curable by thromboendarterectomy. Finally the role of extracorporeal support in patients with acute adverse responses to thromboendarterectomy will be discussed to enable practical lessons to be learned.

- 8:00 AM** *Making the Diagnosis of CTEPH*, Irene M. Lang MD, Medical University of Vienna, Vienna, Austria
- 8:20 AM** *What are the Contraindications to Pulmonary Endarterectomy in CTEPH?*, Michael M. Madani, MD, University of California San Diego, San Diego, CA, USA
- 8:40 AM** *Medical Approaches in Non-Surgical CTEPH*, Hossein A. Ghofrani, University Hospital Giessen and Marburg, Justus-Liebig-University Giessen, Giessen, Germany
- 9:00 AM** *Managing Right Ventricular Failure and Reperfusion Injury Following Pulmonary Endarterectomy*, Marc de Perrot, MD, MSc, Toronto General Hospital, Toronto, ON, Canada
- 9:15 AM** *Role of ECLS for Failed/Suboptimal Pulmonary Endarterectomy: The Paris Experience*, Prof. Philippe G. Dartevelle, Marie Lannelongue Hospital Paris sud University, Le Plessis Robinson, France
- 9:30 AM** *Role of ECLS for Failed/Suboptimal Pulmonary Endarterectomy: The Cambridge Experience*, David P. Jenkins BSc, MS, FRCS(CTh), Papworth Hospital, Cambridge, United Kingdom
- 9:45 AM** Panel Discussion

## 8:00 AM – 10:00 AM

## SYMPOSIUM 5

**Nightmare Syndromes (513ABC)**

**CHAIRS:** Annette Boehler, MD and David Weill, MD

**SESSION SUMMARY:** This session will cover unique and challenging clinical syndromes that are difficult to diagnose and manage.

- 8:00 AM** *Thrombotic Microangiopathy*, Ramsey R. Hachem, MD, Washington University School of Medicine, St. Louis, MO, USA
- 8:15 AM** Discussion

- 8:20 AM** *Rash and Fever*, Martha L. Mooney, MD, FACP, Sentara Norfolk Transplant and Advanced Heart Failure Center, Eastern Virginia Medical School, Norfolk, VA, USA
- 8:35 AM** Discussion
- 8:40 AM** *Central Nervous System Infection*, Me-Linh Luong, MD, University of Montréal, Montréal, Québec, Canada
- 8:55 AM** Discussion
- 9:00 AM** *Hemophagocytic Syndrome*, Erik A. M. Verschuuren, MD, PhD, University Medical Centre Groningen, Groningen, The Netherlands
- 9:15 AM** Discussion
- 9:20 AM** *Tuberculosis and Transplantation*, Deborah JE Marriott, FRACP, FRCPA, St. Vincent's Hospital, Sydney, Australia
- 9:35 AM** Discussion
- 9:40 AM** *Parasites Gone Bad: The Monster Inside Your Transplant Patient*, Camille Nelson Kotton, MD, Massachusetts General Hospital, Boston, MA, USA
- 9:55 AM** Discussion

## 8:00 AM – 10:00 AM

## SYMPOSIUM 6

**Pediatric Heart Transplantation: Art, Science, or Voodoo? (513DEF)**

**CHAIRS:** Elizabeth D. Blume, MD and Jonathan N. Johnson, MD

**SESSION SUMMARY:** Management of pediatric heart transplant recipients differs across institutions with limited scientific data to guide best practice. Pro/Con discussions will address common controversies followed by audience questions to the speakers.

- 8:00 AM** *Management of Sensitized Candidates Using Desensitization and Virtual/Prospective Cross-Match: Patience is a Virtue!*, Richard Kirk, MA, FRCP, FRCPCH, Institute of Transplantation, Freeman Hospital, Newcastle upon Tyne, United Kingdom
- 8:15 AM** *Heart Transplantation with Positive Cross-Match: Just Do It!*, Steven A. Webber, MBChB, Vanderbilt University, Nashville, TN, USA
- 8:30 AM** Discussion
- 8:40 AM** *Antibody Mediated Rejection Diagnosis is Made by Histopathology Findings Which are Necessary and Sufficient for Treatment*, Charles C. Marboe, MD, Columbia University, New York, NY, USA
- 8:55 AM** *Antibody Mediated Rejection Diagnosis and Treatment Should be Based on DSA, Immunofluorescence and Graft Function in Children*, E. Rene Rodriguez, MD, Cleveland Clinic, Cleveland, OH, USA
- 9:10 AM** Discussion
- 9:20 AM** *Invasive Surveillance in Pediatric Heart Transplantation – A Necessary Evil*, Charles E. Canter, MD, Washington University/ St. Louis Children's Hospital, St. Louis, MO, USA
- 9:35 AM** *Routine Biopsies and Coronary Angiography are Over-rated in Children*, Francesco Parisi, MD, Bambino Gesù Children's Hospital, IRCCS, Rome, Italy
- 9:50 AM** Discussion

10:00 AM – 10:15 AM

COFFEE BREAK (517 FOYER)

10:15 AM – 12:15 PM

## SYMPOSIUM 7

## LVAD Support: Ensuring Long-Term Success (517CD)

**CHAIRS:** Jaap R. Lahpor, MD and Stephan Schueler, MD, PhD, FRCS

**SESSION SUMMARY:** The field of mechanical circulatory assistance has been expanding quickly and many patients are now benefiting from long-term VAD support. With this expanding experience, new challenges to the long-term success of VAD support have also been identified. This session will discuss several of the key adverse events that clinicians face while caring for VAD recipients on chronic support. The speakers will discuss proven and novel approaches to the management of these problems.

**10:15 AM Aortic Insufficiency – Pre-implant Management, Post-op Surveillance, Post-op Management,** Evgenij V. Potapov, MD, PhD, Deutsches Herzzentrum Berlin, Berlin, Germany

**10:35 AM Gastrointestinal Bleeding – Management, Including Endoscopy, Anticoagulation/Antiplatelet Management, Pump Settings,** Salpy V. Pamboukian MD MSPH, University of Alabama at Birmingham, Birmingham, AL, USA

**10:55 AM Thrombosis/Power Spikes/Hemolysis – Diagnosis, Management of Anticoagulation/Antiplatelets, Lytic Therapy, and Replacement,** Ulrich P. Jorde, MD, Columbia University/New York Presbyterian Hospital, New York, NY, USA

**11:15 AM VAD Infection Prevention Strategies,** Shimon Kusne, MD, Mayo Clinic in Arizona, Phoenix, AZ, USA

**11:35 AM The Emotional and Psychosocial Selection Criteria and Needs of Patients on VADs,** Kathleen L. Grady, PhD, APN, Northwestern University, Chicago, IL, USA

**11:55 AM** Panel Discussion

10:15 AM – 12:15 PM

## SYMPOSIUM 8

## How to Face Antibodies: A Practicum for the Cardiac Transplantation Clinician (511)

**CHAIRS:** Nicola E. Hiemann, MD, FACC and D. Brad Dyke, MD

**SESSION SUMMARY:** In this session, we have attempted to use a bench-top to bedside approach to explain the relevant science as it relates to sensitization, recognition and treatment of antibody mediated rejection (AMR) in cardiac transplantation. In this fast moving field, the science is distilled to provide an increased working knowledge of the translational science in order to better understand and treat patients with AMR. This session, led entirely by transplant clinicians, is targeted to clinicians to enhance their knowledge base and positively alter patient care strategies.

**10:15 AM How to Detect and Manage Sensitization Pre-Transplant,** Kathryn J. Tinckam, MD, MMSc, FRCP, University of Toronto, Toronto, ON, Canada

**10:35 AM** Discussion

**10:45 AM How to Choose and Match the Organ for the Sensitized Patient,** Lori J. West, MD, DPhil, FRCP, University of Alberta, Edmonton, AB, Canada

**11:05 AM** Discussion

**11:15 AM How to Monitor, Diagnose and Treat AMR After Cardiac Transplantation,** Eulàlia Roig, MD, Hospital Santa Creu i Sant Pau, Barcelona, Spain

**11:35 AM** Discussion

**11:45 AM How to Evaluate, Diagnose and Treat Chronic Allograft Dysfunction,** Jignesh K. Patel MD PhD, Cedars-Sinai Heart Institute, Los Angeles, CA, USA

**12:05 PM** Discussion

10:15 AM – 12:15 PM

## SYMPOSIUM 9

## Bridging to Lung Transplantation: Who, When and With What (510)

**CHAIRS:** Marc de Perrot, MD, MSc and Stephen C. Clark, FRCS

**SESSION SUMMARY:** This symposium will provide a review of the current status of mechanical bridging to lung transplantation. It will provide an overview of available techniques and outcomes.

**10:15 AM Selection and Timing,** Jasleen Kukreja, MD, University of California San Francisco, San Francisco, CA, USA

**10:35 AM Device Development and Choice,** Martin Strueber, MD, Heart Center Leipzig, University Leipzig, Leipzig, Germany

**10:55 AM Managing the Wait,** Jens Gottlieb MD, Hannover Medical School, Hannover, Germany

**11:15 AM Transplant Surgical Strategies,** Walter Klepetko, MD, Medical University of Vienna, Vienna, Austria

**11:35 AM Outcomes of Bridging to Transplantation,** R. Duane Davis, MD, MBA, Duke University, Durham, NC, USA

**11:55 AM** Panel Discussion

10:15 AM – 12:15 PM

## SYMPOSIUM 10

## New Pathways and Controversies in PAH (512A-G)

**CHAIRS:** Robert P. Frantz, MD and Myung H. Park, MD

**SESSION SUMMARY:** The field of PH is moving rapidly in both clinical and translational science and in this session our speakers will cover new evidence supporting firstly the respective value of monitoring right ventricular function and secondly combined clinical end points in the clinical management of patients. The second half of the symposium will discuss the potential link between insulin resistance and vascular inflammation, also describing the effect of targeted therapy on this axis. Finally the role of inflammation as a therapeutic target will be discussed.

**10:15 AM Is RVEF the Best Endpoint When Following Up a Patient with Pulmonary Arterial Hypertension?,** Anton Vonk Noordegraaf, MD, VU Medical Center, Amsterdam, The Netherlands

**10:35 AM** Discussion



- 10:45 AM** *Is Combined Clinical Endpoint the Best Way to Assess a Patient's Progress?*, Robert P. Frantz, Mayo Clinic, Rochester, MN, USA
- 11:05 AM** Discussion
- 11:15 AM** *Insulin Resistance and Pulmonary Hypertension – Shedding New Light?*, Roham T. Zamanian, MD, FCCP, Stanford University School of Medicine, Stanford, CA, USA
- 11:35 AM** Discussion
- 11:45 AM** *Inflammation – Playing a Central Role in Pulmonary Arterial Hypertension?*, Aaron B. Waxman, MD, PhD, Brigham and Women's Hospital, Harvard Medical School, Boston, MA, USA
- 12:05 PM** Discussion

## 10:15 AM – 12:15 PM

## SYMPOSIUM 11

**T Cell 101 in Lung Transplantation (513ABC)**

**CHAIRS:** Daniel C. Chambers, MBBS, MRCP, FRACP, MD and Annette Boehler, MD

**SESSION SUMMARY:** This session will bring basic scientists and clinicians together to jointly review sets of basic knowledge slides, slides addressing the current knowledge in animal models, slides addressing human data in the field and slides pulling the whole topic into clinical context

- 10:15 AM** *Overview of T Cell Differentiation*, Tereza Martinu, MD, Duke University, Durham, NC, USA
- 10:30 AM** Discussion / Q & A
- 10:35 AM** *Th1 and Lung Rejection*, John F. McDyer, MD, University of Pittsburgh, Pittsburgh, PA, USA
- 10:50 AM** Discussion / Q & A
- 10:55 AM** *Th2 and Lung Rejection*, John A. Belperio, MD, UCLA Pulmonary & Critical Care Medicine, Los Angeles, CA, USA
- 11:10 AM** Discussion / Q & A
- 11:15 AM** *Th17 and Lung Rejection*, Bart M. Vanaudenaerde, Katholieke Universiteit Leuven, Leuven, Belgium
- 11:30 AM** Discussion / Q & A
- 11:35 AM** *Tregs and Lung Transplantation*, Gregor Warnecke, MD, Hannover Medical School, Hannover, Germany
- 11:50 AM** Discussion / Q & A
- 11:55 AM** *Gamma Delta T Cells and Lung Transplantation*, Andrew E. Gelman, PhD, Washington University School of Medicine, Saint Louis, MO, USA
- 12:10 PM** Discussion / Q & A

## 10:15 AM – 12:15 PM

## SYMPOSIUM 12

**Joint ISHLT/IPTA Session – Psychosocial Issues in Pediatric Cardiothoracic Transplantation (513DEF)**

**CHAIRS:** Christian Benden, MD and Alison Amegatcher, RN

**SESSION SUMMARY:** The session will discuss psychosocial aspects of pediatric cardio-thoracic transplantation, both in heart and lung transplant

recipients, using a multi-disciplinary team approach. In addition, the intersection between transplant and palliative care will be discussed.

- 10:15 AM** *The Psychosocial Transplant Evaluation – What Works?*, Jo Wray, PhD, Great Ormond Street Hospital for Children NHS Foundation Trust, London, United Kingdom
- 10:35 AM** Discussion
- 10:40 AM** *Transplanting the Adolescent Patient – Can We Do It Successfully?*, Diana A. Shellmer, PhD, University of Pittsburgh and the Children's Hospital of Pittsburgh of UPMC, Pittsburgh, PA, USA
- 11:00 AM** Discussion
- 11:05 AM** *Socioeconomic Status in Pediatric Cardiothoracic Transplantation – Does It Impact On Outcomes?* Tajinder P. Singh, MD, MSc, Boston Children's Hospital, Boston, MA, USA
- 11:25 AM** Discussion
- 11:30 AM** *Intersection of Transplant Medicine and Palliative Care – Can We Work Together?*, Elisabeth P. Dellon, MD, MPH, University of North Carolina, Chapel Hill, NC, USA
- 11:50 AM** Discussion
- 11:55 AM** (1) *Physician and Parent Perceptions of End-of-Life Experience in Children with Advanced Heart Disease*; E. Morell,<sup>1</sup> J. Wolfe,<sup>2</sup> S. Ziniel,<sup>3</sup> R. Thiagarajan,<sup>3</sup> P. Lang,<sup>3</sup> H. Cheng,<sup>3</sup> T. Kulik,<sup>3</sup> L. Smoot,<sup>3</sup> E.D. Blume.<sup>3</sup> <sup>1</sup>Harvard Medical School, Boston, MA; <sup>2</sup>Psychosocial Oncology and Palliative Care, Dana-Farber Cancer Institute, Boston, MA; <sup>3</sup>Pediatrics, Boston Children's Hospital, Boston, MA; <sup>3</sup>Cardiology, Boston Children's Hospital, Boston, MA.
- 12:10 PM** Discussion

## 12:15 PM – 2:15 PM

LUNCH BREAK

## JUNIOR FACULTY MENTOR LUNCH (514C)

## 12:15 PM – 1:15 PM

BASIC SCIENCE AND TRANSLATIONAL RESEARCH COUNCIL MEETING (512D)

DCD REGISTRY STEERING COMMITTEE MEETING (512H)

## 1:15 PM – 2:15 PM

I2C2 COMMITTEE MEETING (512D)

TRANSPLANT REGISTRY MEETING (512H)

## 2:15 PM – 4:15 PM

## SYMPOSIUM 13

**Machines vs. Medications for Biventricular Failure (517CD)**

**CHAIRS:** Robert L. Kormos MD, FRCS(C), FACS, FAHA and Jan F. Gummert, MD

**SESSION SUMMARY:** Biventricular failure represents significant challenges. Both medical and mechanical approaches have considerable limitations and risks. This session will provide an interactive forum for discussing a patient with biventricular failure, and exploring the potential benefits and risks of various therapeutic approaches available in our clinical armamentarium today.

- 2:15 PM** *Machines vs. Medications for Biventricular Failure: Case Presentation*, Jose Nativi-Nicolau, MD, University of Utah, Salt Lake City, Utah, USA
- 2:25 PM** *Why Right Ventricular Failure Prediction Scores Do Not Work*, Bart Meyns, MD, PhD, Uz KUIeuven, Leuven, Belgium
- 2:45 PM** *Medical Management – LVAD and Support Right Ventricle Medically*, Steven SL Tsui, MD FRCS, Papworth Hospital, Cambridge, United Kingdom
- 3:05 PM** *Implantable BiVADs*, Thomas Krabatsch, MD, PhD, Deutsches Herzzentrum Berlin, Berlin, Germany
- 3:25 PM** *Total Artificial Heart*, Francisco A. Arabia, MD, Cedars-Sinai Heart Institute, Los Angeles, CA, USA
- 3:45 PM** *Back to the Case*, Jose Nativi-Nicolau, MD, University of Utah, Salt Lake City, Utah, USA
- 3:55 PM** Panel Discussion

## 2:15 PM – 4:15 PM

## SYMPOSIUM 14

**Common Debates After Cardiac Transplantation (511)**

**CHAIRS:** David S. Feldman, MD, PhD and Mandeep R. Mehra, MD

**SESSION SUMMARY:** To biopsy or not to biopsy? How to manage long-term immunosuppression? How often to flush coronary lumens and watch plaques? Does this young patient with a failing graft deserve a second transplant option? These are just a few of the unanswered questions that we have to face with emotional-based decisions in heart transplant care. Four sparkling debates, comprised of short presentations with panel moderated discussions, will shape up the audience's opinion towards critical issues in transplant management, providing some solid ground to help decision making in everyday practice.

**DEBATE 1: Protocol Endomyocardial Biopsy is Not Necessary after the First Post-transplant Tear**

**2:15 PM PRO:** Hannah A. Valantine, MD, MRCP, Stanford University School of Medicine, Stanford, CA, USA

**2:25 PM CON:** Ingo Kaczmarek, MD, Transplantation Center, University of Munich, Munich, Germany

**2:35 PM** Panel Discussion with audience

**DEBATE 2: An Annual Coronary Angiogram is Necessary for Improving Late Outcomes**

**2:45 PM PRO:** Randall C. Starling, MD, MPH, Cleveland Clinic, Cleveland, OH, USA

**2:55 PM CON:** Hans Lehmkühl, MD, PhD, Deutsches Herzzentrum Berlin, Berlin, Germany

**3:05 PM** Panel Discussion with audience

**DEBATE 3: An mTOR Inhibitor is the Standard of Care to Improve Late Post-Transplant Outcomes**

**3:15 PM PRO:** Sudhir S. Kushwaha, MD, Mayo Clinic, Rochester, MN, USA

**3:25 PM CON:** Luciano Potena MD, PhD, University of Bologna, Bologna, Italy

**3:35 PM** Panel Discussion with audience

**DEBATE 4: Retransplant is Obsolete and Unethical for Chronic Allograft Dysfunction**

**3:45 PM PRO:** Heather Ross, MD, MHS (Bioethics), FRCPC, Toronto General Hospital, Toronto, ON, Canada

**3:55 PM CON:** Maryl Johnson, MD, University of Wisconsin, Madison, WI, USA

**4:05 PM** Panel Discussion with audience

## 2:15 PM – 4:15 PM

## SYMPOSIUM 15

**AMR in Lung Transplantation: Definitions and Current State (510)**

**CHAIRS:** Roberto Barrios, MD and Gerald J. Berry, MD

**SESSION SUMMARY:** The current status of the pathologic working formulation for the evaluation for Antibody Mediated Rejection (AMR) in lung transplants will be presented. This symposium is organized in tandem with a clinical correlation symposium on evaluation of AMR in Lung Transplants.

**2:15 PM** *Overview of AMR in Lung Transplantation at Banff*, W. Dean Wallace, David Geffen School of Medicine at UCLA, Los Angeles, CA, USA

**2:35 PM** Discussion

**2:45 PM** *Pathology of AMR*, Martin J. Goddard, BA, MB, ChB, FRCS, FRCP, Papworth Hospital NHS Trust, Cambridge, United Kingdom

**3:05 PM** Discussion

**3:15 PM** *Histocompatibility Assessment for AMR in Lung Transplants*, Dolly B. Tyan, PhD, D(ABHI), Stanford University School of Medicine, Palo Alto, CA, USA

**3:35 PM** Discussion

**3:45 PM** *Pediatric Lung Transplantation*, Carol Farver, MD, Cleveland Clinic, Cleveland, OH, USA

**4:05 PM** Discussion

## 2:15 PM – 4:15 PM

## SYMPOSIUM 16

**Mapping the Management of the Right Ventricle in Lung Transplantation (512A-G)**

**CHAIRS:** Paul A. Corris, FRCP and John Granton, MD

**SESSION SUMMARY:** The peri-operative management of the right ventricle during isolated lung transplantation for pulmonary arterial hypertension remains most challenging. This symposium will first cover recent developments in the non-invasive assessment of the right ventricle. Practical approach to the intra-operative management of patients with a failing right ventricle will then be reviewed. Finally, perspectives on potential recovery of the right ventricle after lung transplantation will be debated.

**2:15 PM** *Non-Invasive Assessment of the Right Ventricle*, Steven M Kawut, MD, MS, University of Pennsylvania, Philadelphia, PA, USA

**2:35 PM** Discussion

**2:45 PM** *Intra Operative Management of the Patient with a Failing Right Ventricle*, Karen M. McRae, MD, Toronto General Hospital, Toronto, ON, Canada

**3:05 PM** Discussion

**DEBATE: This House Believes the Right Ventricle Always Recovers after Isolated Lung Transplantation**

**3:15 PM PRO:** Walter Klepetko, MD, Medical University of Vienna, Vienna, Austria

**3:35 PM CON:** Elie Fadel, MD, Hospital Marie Lannelongue, Le Plessis Robinson, France

**3:55 PM** Panel Discussion

2:15 PM – 4:15 PM

**SYMPOSIUM 17****Cell Migration and Trafficking in Lung and Heart Transplantation (513ABC)****CHAIRS:** Stephan M. Ensminger, MD, DPhil and Andrew E. Gelman, PhD**SESSION SUMMARY:** This session will serve as an opportunity for basic and clinical scientists, pathologists, immunologists and clinicians to get an update on cellular migration and homing of different cell subsets in heart and lung transplantation and their visualization. There will be an update on new techniques in cell tracking, about potential new interesting homing receptors in transplantation and a summary of what is currently known about the relevance of chemokine receptors in transplantation.**2:15 PM** *Intravital Immunology: Visualizing T Cell Migration and Activation by Multiphoton Microscopy*, Thorsten R. Mempel, MD, PhD, Harvard Medical School, Boston, MA, USA**2:35 PM** Discussion**2:39 PM** *Donor Derived Mesenchymal Stem Cell Trafficking in Lung Transplantation*, Vibha N. Lama, MD, MS, University of Michigan, Ann Arbor, MI, USA**2:59 PM** Discussion**3:03 PM** *Vivo Imaging of Cell Trafficking into Heart Allografts*, Daniel Kreisel, MD, PhD, Washington University in St. Louis, St. Louis, MO, USA**3:23 PM** Discussion**3:27 PM** *Regulation of Chemokines in Lung Transplantation*, John A. Belperio, MD, UCLA Pulmonary & Critical Care Medicine, Los Angeles, CA, USA**3:47 PM** Discussion**3:51 PM** *Mechanisms of B cell Migration*, João P. Pereira, Yale University, New Haven, CT, USA**4:11 PM** Discussion

2:15 PM – 4:15 PM

**SYMPOSIUM 18****The Spectrum of CMV: Young or Old, Heart or Lung (513DEF)****CHAIRS:** Fernanda P. Silveira, MD, MS and Erik A. M. Verschuuren, MD, PhD**SESSION SUMMARY:** Although CMV has become quite effectively handled with the current arsenal, the new strategies have led to new problems. This session will use a bench to bedside approach to cover the current state of the art for CMV in heart and lung transplant recipients and will highlight the newly emerging pitfalls in the currently used prevention strategies. Pharmacokinetics (including adult and pediatric studies), monitoring strategies and treatment options including CMV resistance will be discussed.**2:15 PM** *CMV: Prevention Strategies: All Are Not Created Equal*, Luciano Potena MD, PhD, University of Bologna, Bologna, Italy**2:40 PM** *Antiviral Pharmacokinetics: Are All Recipients Equal?*, Patricia Uber, PharmD, University of Maryland, Baltimore, MD, USA**3:05 PM** *CMV: Monitoring For Risk and Recurrence*, Laurie D. Snyder, MD, Duke University, Durham, NC, USA**3:30 PM** *CMV: Resistance Emerging*, Robin K. Avery, MD, FIDSA, Johns Hopkins, Baltimore, MD, USA**3:55 PM** Panel Discussion of Challenging CMV Cases

4:15 PM – 4:45 PM

COFFEE BREAK (517 FOYER)

4:30 PM – 6:30 PM

**SYMPOSIUM 19****Great Debates in MCS (517CD)****CHAIRS:** Valluvan Jeevanandam, MD and Josef Stehlik, MD, MPH**SESSION SUMMARY:** This session will address four important topics in a debate format. At the end of the session, the attendees will be able to discuss the controversies in organ allocation in patients with mechanical assist and in patients with allosensitization, discuss the importance of psychosocial support in LVAD candidates and identify the pitfalls of advanced renal failure in patients requiring VADs.**DEBATE 1: Should Stable LVAD Patients Receive Organ Allocation Advantage?****4:30 PM** **PRO:** Hermann C. Reichenspurner, MD, PhD, University Heart Center Hamburg, Hamburg, Germany**4:40 PM** **CON:** Joseph G. Rogers, MD, Duke University, Durham, NC, USA**4:50 PM** Audience Participation**DEBATE 2: Should Sensitization Warrant Higher Priority on the Waiting List?****5:00 PM** **PRO:** Bruno Meiser, MD, Transplant Center Munich, University of Munich, Munich, Germany**5:10 PM** **CON:** A.G. Kfoury, MD, FACC, Intermountain Heart Institute (UTAH Cardiac Transplant Program), Salt Lake City, Utah, USA**5:20 PM** Audience Participation**DEBATE 3: Does Mechanical Support Work for Those with Poor Social Support?****5:30 PM** **PRO:** Stephan Schueler, MD, PhD, FRCS, Freeman Hospital, Newcastle upon Tyne, United Kingdom**5:40 PM** **CON:** Tonya I. Elliott, MSN, RN, CCTC, CHFNP, Inova Fairfax, Falls Church, VA, USA**5:50 PM** Audience Participation**DEBATE 4: Are VAD Destination Therapy and Hemodialysis Compatible?****6:00 PM** **PRO:** Andrew J. Boyle, MD, Cleveland Clinic Florida, Weston, FL, USA**6:10 PM** **CON:** John B. O'Connell MD, Medical Center of Central Georgia, Macon, GA USA**6:20 PM** Audience Participation



4:30 PM – 6:30 PM

## SYMPOSIUM 20

**The Cardio-Renal Syndrome: End of a Happy Marriage (511)****CHAIRS:** Michael M. Givertz, MD and Finn Gustafsson, MD, PhD, DMSci**SESSION SUMMARY:** Heart and kidney functions are linked in an elegantly harmonized physiology. However, when one of the two starts failing, the function of the other is impaired, and often the therapeutic strategy to recover the function for one organ may be dangerous for the other. In this session, speakers will discuss pathophysiological mechanisms and provide clinical hints to save the marriage of the two organs, before and after transplant.**4:30 PM** *The Cardio-Renal Syndrome Explained: Bench to Bedside Perspective*, Jeffrey M. Testani, MD, MTR, Yale University, New Haven, CT, USA**4:50 PM** *Predicting and Facilitating Renal Recovery after Heart Transplantation*, Marcelo Cantarovich, MD, FRCPC, McGill University Health Center, Montréal, Québec, Canada**Optimal Strategies****5:10 PM** *Pharmacological Management of Heart Transplant Recipients with Kidney Insufficiency*, Lars Gullestad, MD, Oslo University Hospital, Rikshospitalet, Oslo, Norway**5:30 PM** *Combined or Staged Heart – Kidney Transplantation for Refractory Renal Dysfunction*, Markus J. Barten, MD, PhD, University Leipzig, Heart Center, Leipzig, Saxonia, Germany**5:50 PM** *Case Presentation*, Kiran K. Khush, MD, MAS, Stanford University School of Medicine, Palo Alto, CA, USA**6:00 PM** Panel Discussion

4:30 PM – 6:30 PM

## SYMPOSIUM 21

**Lung AMR: “How I Do It” A Multidisciplinary Case Based Discussion (510)****CHAIRS:** Allan R. Glanville, MBBS, MD, FRACP and Deborah J. Levine, MD**SESSION SUMMARY:** Even with increased recognition and a progressively increasing literature base on single and multi-center experience, there is still a lack of consensus on our collective approach, diagnosis and treatment of pulmonary AMR. This will be a “How I do it” symposium which will include pulmonology, immunology and pathology. This will be an audience participation symposium: case presentations with audience participation and input from Pulmonary, Pathology and Immunology who will all comment on each case.**CASE PRESENTATION 1: The Presensitized Patient****4:30 PM** *Case Presenter:* Glen P. Westall, MD, Alfred Hospital, Melbourne, Australia**4:40 PM** *Immunologist Discussant:* Adriana Zeevi, PhD, University of Pittsburgh (UPMC), Pittsburgh, PA, USA**4:50 PM** *Pathologist Discussant:* Desley A. H. Neil, FRCPath, Queen Elizabeth Hospital Birmingham (QEHB), Birmingham, United Kingdom**5:00 PM** Panel Discussion**CASE PRESENTATION 2: Stable Lung Transplant Recipient with +HLA****5:10 PM** *Case Presenter:* Ramsey R Hachem, MD, Washington University School of Medicine, St. Louis, MO, USA**5:20 PM** *Immunologist Discussant:* Adriana Zeevi, PhD, UPMC, Pittsburgh, PA, USA**5:30 PM** *Pathologist Discussant:* Desley A. H. Neil, FRCPath, QEHB, Birmingham, United Kingdom**5:40 PM** Panel Discussion**CASE PRESENTATION 3: +DSA with Lung Dysfunction****5:50 PM** *Presenter:* Deborah J. Levine, MD, University of Texas Health Science Center, San Antonio, TX, USA**6:00 PM** *Immunologist Discussant:* Adriana Zeevi, PhD, UPMC, Pittsburgh, PA, USA**6:10 PM** *Pathologist Discussant:* Desley A. H. Neil, FRCPath, QEHB, Birmingham, United Kingdom**6:20 PM** Panel Discussion

4:30 PM – 6:30 PM

## SYMPOSIUM 22

**Motivational Interviewing: An Approach to Improving Outcomes in Transplantation (512A-G)****CHAIRS:** Susan M. Chernenko, RN, MN, NP and Emily Stimpson, RN, BSN, CCT

**SESSION SUMMARY:** Motivational interviewing (MI) is a goal-directed, client-centered intervention to help patients increase intrinsic motivation and strengthen commitment for change. Despite many discussions about the causes and detection of non-adherence in patients undergoing heart or lung transplantation or mechanical circulatory support, clinicians continue to report limited success in impacting the cooperation of non-adherent patients. This session is designed to introduce the concept of MI as a potential approach to such situations. Presenters will describe the concept, the fundamental changes to our language with patients and case studies demonstrating the effectiveness of this treatment.

**4:30 PM** *Following the Rules Seems So Obvious: Understanding Patients' Motivation to Follow Post-Transplant/MCS Regimens*, Fabienne Dobbels, PhD, University of Leuven, Belgium

**4:50 PM** *Introduction to Motivational Interviewing: Talking "The Change" Means "Changing The Talk,"* Nikole J. Cronk, PhD, University of Missouri School of Medicine, Columbia, MO, USA

**5:10 PM** *Case Studies: Putting Motivational Interviewing Into Practice*, Hilde Bollen, RN, UH Leuven, Leuven, Belgium

**5:30 PM** *Preparing the Team for this New Communication Style: TRANSIT as an Exemplar*, Nathalie Duerinckx, MSN, KU Leuven, University Hospitals of Leuven, Leuven, Belgium

**5:50 PM** *Motivational Interviewing: An Empirically Supported Intervention*, Mary Amanda Dew, PhD, University of Pittsburgh School of Medicine & Medical Center, Pittsburgh, PA, USA

**6:10 PM** Panel Discussion

4:30 PM – 6:30 PM

## SYMPOSIUM 23

**Natural Immunity, Adaptive Response Infection and Immunosuppression: The Piñata Cocktail (513ABC)****CHAIRS:** John P. Scott, MD and Martin R. Zamora, MD

**SESSION SUMMARY:** This session will bring bench to bedside by focusing on the responses to infections and microbial colonization in transplant recipients. The focus will be on innate immune function, their responses to microbes and their effects on graft function.

**4:30 PM** *Natural and Adaptive Immunity*, Javier Carbone, MD, PhD, Gregorio Marañón Hospital, Madrid, Spain

**4:50 PM** Discussion

**4:54 PM** *Immune Reconstitution Inflammatory Response Syndrome*, Martha L. Mooney, MD, FACP, Sentara Norfolk Transplant and Advanced Heart Failure Center, Eastern Virginia Medical School, Norfolk, Virginia, USA

**5:14 PM** Discussion

**5:18 PM** *The Role of Fungal and Viral Infection and Colonization on Chronic Lung Allograft Dysfunction*, Shahid Husain MD, MS, University Health Network, University of Toronto, Toronto, ON, Canada

**5:38 PM** Discussion

**5:42 PM** *The Role of Bacterial Infection and Colonization on Chronic Lung Allograft Dysfunction*, Aric L. Gregson, MD, UCLA, Los Angeles, CA, USA

**6:02 PM** Discussion

**6:06 PM** *The Role of Infections on Heart Allograft Chronic Dysfunction*, Nicolas Manito, MD, Hospital Bellvitge, Barcelona, Spain

**6:26 PM** Discussion

4:30 PM – 6:30 PM

## SYMPOSIUM 24

**Unique Aspects of Heart Failure in Children: Physiology and Management (513DEF)****CHAIRS:** Yuk M. Law, MD and Beth D. Kaufman, MD

**SESSION SUMMARY:** The pathophysiology and management of heart failure in children resemble those in adult heart failure patients. This symposium will discuss these similarities and highlight the unique aspects of heart failure in children.

**4:30 PM** *Neurohormonal Changes, Ventricular Remodeling and Clinical Presentation: Similarities and Differences with Adults*, Ulrich Schweigmann, MD, Medical University Hospital, Innsbruck, Austria

**4:50 PM** *Medical Management: Are Children Small Adults?*, Robert E. Shaddy, MD, The Children's Hospital of Philadelphia, Philadelphia, PA USA

**5:10 PM** *Medical Management of Children with Failed Fontan Physiology*, Elfriede Pahl Schuette, MD, Lurie Children's Hospital, Northwestern Feinberg School of Medicine, Chicago, IL, USA

**5:30 PM** *Biomarkers in Pediatric Heart Failure*, Robert G. Weintraub, MB BS FRACP FACC, Royal Children's Hospital, Melbourne, Victoria, Australia

**5:50 PM** *Cardiorenal Syndrome in Pediatric Heart Failure*, Jack F. Price, MD, Baylor College of Medicine/Texas Children's Hospital, Houston, TX, USA

**6:10 PM** Panel Discussion

6:30 PM – 7:30 PM

EXHIBIT HALL OPENING RECEPTION (517AB)

**GENERAL POSTER SESSION 1 (516)**

(SEE PAGE 190 FOR LISTING OF POSTER PRESENTATIONS)

**JUNIOR FACULTY CLINICAL CASE REPORTS (516)**

(SEE PAGE 237 FOR LISTING OF POSTER PRESENTATIONS)



## THURSDAY, APRIL 25, 2013

6:00 AM – 6:30 PM

SPEAKER READY ROOM OPEN (515AB)

6:30 AM – 6:30 PM

REGISTRATION DESK OPEN (517 FOYER)

7:00 AM – 8:00 AM

### SUNRISE SYMPOSIUM 1

#### Are the Pathology Working Formulations the Gold Standard for Diagnosing AMR in Heart and Lung in 2013? (514B)

**CHAIRS:** Jonathan B. Orens, MD and Randall C. Starling, MD, MPH

**SESSION SUMMARY:** The pathology working formulations for heart and lung transplants will be reviewed and discussed by clinicians (addressing adult and pediatric patients) to assess their current state and usefulness. This will provide the Pathology Council with further targets for improvement of the formulations.

**7:00 AM** *The Working Formulation for AMR Adult Heart*

Lawrence S.C. Czer, MD, Cedars-Sinai Heart Institute, Los Angeles, CA, USA

**7:12 AM** *The Working Formulation for AMR in Pediatric Heart*

Janet N. Scheel, MD, Johns Hopkins University, Baltimore, Maryland, USA

**7:24 AM** *How Do We Diagnose AMR in Adult Lung Transplant?*

Marie M. Budev, DO, MPH, The Cleveland Clinic, Cleveland, OH, USA

**7:36 AM** *How Do We Diagnose AMR in Pediatric Lung Transplant?* Stuart C. Sweet MD, PhD, Washington University, St. Louis, MO, USA

**7:48 AM** Panel Discussion

7:00 AM – 8:00 AM

### SUNRISE SYMPOSIUM 2

#### Beyond Survival: Evaluating Lung Transplant Success Through Patient-Oriented Outcomes (514C)

**CHAIRS:** Daniel F. Dilling, MD and Annette DeVito Dabbs PhD, RN

**SESSION SUMMARY:** Lung transplantation primarily aims to extend survival and improve quality of life (QOL). Despite its clinical primacy, however, QOL remains a poorly understood area of research hindering its integration into clinical care and counseling. This session will address QOL research in lung transplantation from the “bench to the bedside.” Content will include a primer on QOL instrument design and data interpretation, followed by a comprehensive review of state-of-the-art research in QOL, utility measures and interventions that can improve clinically relevant QOL outcomes in patients undergoing lung transplantation.

**7:00 AM** *What is Quality of Life, Really? Understanding QOL Research Instruments and Outcomes*, Jonathan P. Singer, MD, UCSF Medical Center, San Francisco, CA, USA

**7:10 AM** *Does Lung Transplantation Actually Improve Quality of Life?*, Lianne G. Singer, MD, FRCPC, University Health Network, University of Toronto, Toronto, ON, Canada

**7:20 AM** *Utilities in Lung Transplant – Moving Beyond Survival to Calculate “Net-Transplant Benefit,”* Roger D. Yusen, MD, MPH, Washington University School of Medicine, St. Louis, MO, USA

**7:30 AM** *Quality of Life in Pediatric Lung Transplantation*, Samantha J. Anthony, PhD MSW, The Hospital for Sick Children/McMaster University, Toronto, ON, Canada

**7:40 AM** *Determinants of QOL in Lung Transplantation: Pulmonary and Extrapulmonary Factors*, Christiane Kugler, University Witten and Hannover Medical School, Hannover, Germany

**7:50 AM** Panel Discussion

7:00 AM – 8:00 AM

### SUNRISE SYMPOSIUM 3

#### Controversies in Lung Allocation Around the World (512D)

**CHAIRS:** Leah B. Edwards, PhD and Dirk EM Van Raemdonck, MD, PhD

**SESSION SUMMARY:** Allocation of lungs occurs very differently across the world. Although there are many differences, there are several central controversies that warrant exploration. The goal of this session is to consider some of the controversies in allocation and determine whether or not there are ways we can improve lung allocation policy.

**7:00 AM** *LAS: Maximizing Transplant Benefit or Pushing the Limits?*, Cynthia J. Gries, MD MSc, University of Pittsburgh Medical Center, Pittsburgh, PA, USA

**7:15 AM** *Eurotransplant: A Model for International Sharing*, Jacqueline M. Smits, MD, PhD, Eurotransplant International Foundation, Leiden, The Netherlands

**7:30 AM** *Re-engineering Local Lung Allocation*, David J. Lederer, MD, MS, Columbia University Medical Center, New York, NY, USA

**7:45 AM** Discussion



## 8:00 AM – 10:00 AM

## OPENING PLENARY SESSION (517CD)

**CHAIRS:** Allan R. Glanville, MBBS, MD, FRACP and David O. Taylor, MD

- 8:00 AM** **Welcome/Program Chair Report,**  
Allan R. Glanville, MBBS, MD, FRACP, St. Vincent's Hospital, Sydney, Australia
- 8:05 AM** **President's Report,**  
David O. Taylor, MD, Cleveland Clinic, Cleveland, OH, USA
- 8:15 AM** **Thoracic Transplant Registry Report,**  
Josef Stehlik, MD, MPH, University of Utah School of Medicine, Salt Lake City, UT, USA
- 8:30 AM** **IMACS Registry Report,**  
James K. Kirklin, MD, University of Alabama at Birmingham, Birmingham, AL, USA
- 8:40 AM** **FEATURED ABSTRACT:**  
**(2) Two-Year Outcomes in the Destination Therapy Post-FDA-Approval Study with a Continuous Flow Left Ventricular Assist Device: A Prospective Study Using the INTERMACS Registry;** U.P. Jorde,<sup>1</sup> S.S. Khushwaha,<sup>2</sup> A.J. Tatroles,<sup>3</sup> Y. Naka,<sup>1</sup> G. Bhat,<sup>3</sup> J.W. Long,<sup>4</sup> D. Horstmanshof,<sup>3</sup> R.L. Kormos,<sup>5</sup> J.J. Teuteberg,<sup>5</sup> M.S. Slaughter,<sup>6</sup> E.J. Birks,<sup>6</sup> D.J. Farrar,<sup>7</sup> S.J. Park.<sup>2</sup>  
<sup>1</sup>Columbia University Medical Center, New York, NY; <sup>2</sup>Mayo Clinic, Rochester, MN; <sup>3</sup>Advocate Christ Medical Center, Oak Lawn, IL; <sup>4</sup>Integris Baptist Medical Center, Oklahoma City, OK; <sup>5</sup>University of Pittsburgh Medical Center, Pittsburgh, PA; <sup>6</sup>University of Louisville, Louisville, KY; <sup>7</sup>Thoratec Corporation, Pleasanton, CA.
- 8:55 AM** **INVITED LECTURE:**  
**The Human Microbiome: What Is It, How Do We Measure It, What Does It Mean for Thoracic Transplantation?**  
Ronald G. Collman, MD, University of Pennsylvania School of Medicine, Philadelphia, PA, USA
- 9:20 AM** **FEATURED ABSTRACT:**  
**(3) Longitudinal Holistic Profiling of the Lung Transplant Microbiome;** D. Willner,<sup>1</sup> N.A. Ab-Ghani,<sup>1</sup> S. Yerkovich,<sup>2,3</sup> M.E. Tan,<sup>2,3</sup> P.M. Hopkins,<sup>2,3</sup> D.C. Chambers,<sup>2,3</sup> P. Hugenholtz.<sup>1</sup>  
<sup>1</sup>Australian Centre for Ecogenomics, University of Queensland, St. Lucia, QLD, Australia; <sup>2</sup>School of Medicine, University of Queensland, Herston, QLD, Australia; <sup>3</sup>Queensland Lung Transplant Service, The Prince Charles Hospital, Brisbane, QLD, Australia
- 9:35 AM** **PIONEER LECTURE:**  
**Cardiac Replacement, A Journey Outside the Box,**  
Jack G. Copeland, MD, University of California San Diego, San Diego, CA, USA

## 10:00 AM – 10:30 AM

COFFEE BREAK / VISIT EXHIBITS / VIEW POSTERS (516; 517AB)

## 10:00 AM – 4:00 PM

EXHIBIT HALL OPEN (517AB)

## 10:00 AM – 6:30 PM

POSTER HALL OPEN (516)

## 10:30 AM – 12:00 PM

## CONCURRENT SESSION 1

## MCS 1: VADS in the Real World – Clinical Outcomes (517CD)

**CHAIRS:** Francis D. Pagani, MD, PhD and George Javorsky, MBBS FRACP

- 10:30 AM** **(4) Hemocompatibility of a Fully Magnetically Levitated Centrifugal LVAD: Results from the DuraHeart Pivotal Trial;** N. Moazami,<sup>1</sup> F. Pagani,<sup>2</sup> D. Feldman,<sup>3</sup> Y. Naka,<sup>4</sup> S. Bailey,<sup>5</sup> M. Camacho.<sup>6,1</sup> Thoracic & Cardiovascular Surgery, Cleveland Clinic, Cleveland, OH; <sup>2</sup>University of Michigan, Ann Arbor, MI; <sup>3</sup>Abbott Northwestern Hospital, Minneapolis, MN; <sup>4</sup>Columbia University, New York, NY; <sup>5</sup>Allegheny Hospital, Pittsburgh, PA; <sup>6</sup>St. Barnabas Medical Center, Newark, NJ.
- 10:45 AM** **(5) Results of the Registry To Evaluate the HeartWare Left Ventricular Assist System (The REVOLVE Registry);** M. Strueber,<sup>1</sup> R. Larbalestier,<sup>2</sup> P. Jansz,<sup>3</sup> D. Zimpfer,<sup>4</sup> A.E. Fiore,<sup>5</sup> S. Tsui,<sup>6</sup> A. Simon,<sup>7</sup> K. Najarian,<sup>8</sup> S. Shueler.<sup>9,1</sup> HERZZENTRUM Leipzig GmbH, Leipzig, Germany; <sup>2</sup>Royal Perth Hospital, Perth, Australia; <sup>3</sup>St. Vincent's Hospital, Sydney, Australia; <sup>4</sup>Medical University Vienna, Vienna, Austria; <sup>5</sup>Oslo University Medical Center, Oslo, Norway; <sup>6</sup>Papworth Hospital, Cambridge, United Kingdom; <sup>7</sup>Royal Brompton Hospital, London, United Kingdom; <sup>8</sup>HeartWare, Inc., Framingham, MA; <sup>9</sup>Freeman Hospital, Newcastle, United Kingdom.
- 11:00 AM** **(6) Japanese Experience of EVAHEART TM Left Ventricular Assist System;** S. Saito,<sup>1</sup> T. Nishinaka,<sup>1</sup> Y. Ichihara,<sup>1</sup> M. Komagamine,<sup>1</sup> H. Tsukui,<sup>1</sup> K. Yamazaki,<sup>1</sup> J-MACS Investigators.<sup>2</sup>  
<sup>1</sup>Cardiovascular Surgery, Tokyo Women's Medical University, Tokyo, Japan; <sup>2</sup>J-MACS Investigators, Tokyo, Japan.
- 11:15 AM** **(7) Outcomes of Patients with Peripartum Cardiomyopathy Who Received Mechanical Circulatory Support: Data from the INTERMACS Registry;** R. Loyaga-Rendon,<sup>1</sup> S.V. Pamboukian,<sup>1</sup> J.A. Tallaj,<sup>1</sup> D. Acharya,<sup>1</sup> R.S. Cantor,<sup>1</sup> R.C. Starling,<sup>2</sup> J.K. Kirklin.<sup>1</sup>  
<sup>1</sup>University of Alabama at Birmingham, Birmingham, AL; <sup>2</sup>Cleveland Clinic, Cleveland, OH.
- 11:30 AM** **(8) Use of Genetic Testing for Targeted Anticoagulation in Patients on Long-Term Mechanical Circulatory Support;** T.M. Dewey,<sup>1</sup> M.A. Herbert,<sup>1</sup> C.M. Worley,<sup>2</sup> D.S. Savor,<sup>1</sup> E.J. Eichhorn,<sup>1</sup> B.S. Bowers,<sup>1</sup> M.J. Magee.<sup>1,1</sup> Medical City Dallas Hospital, Dallas, TX; <sup>2</sup>Cardiopulmonary Research Science and Technology Institute, Dallas, TX.
- 11:45 AM** **(9) Multicenter Canadian Experience with the HeartWare HVAD;** V. Rao,<sup>1</sup> J.F. Legare,<sup>2</sup> R. MacArthur,<sup>3</sup> J. Bashir,<sup>4</sup> D. Freed,<sup>5</sup> A. Cheung,<sup>4</sup> R. Baskett,<sup>2</sup> J. Mullen,<sup>3</sup> I. Rebeyka,<sup>3</sup> T. Yau,<sup>1</sup> R.J. Cusimano.<sup>1,1</sup> Toronto General Hospital, Toronto, ON, Canada; <sup>2</sup>Dalhousie University, Halifax, NS, Canada; <sup>3</sup>University of Alberta, Edmonton, AB, Canada; <sup>4</sup>Vancouver General Hospital, Vancouver, BC, Canada.

10:30 AM – 12:00 PM

## CONCURRENT SESSION 2

**Heart 1: News from the Registries – What We Need To Learn To Achieve Long Long-Term (511)****CHAIRS:** Adrian B. Van Bakel, MD, PhD and Mirta Diez, MD

- 10:30 AM (10) Impact of Recipient Age on Differential Causes of Heart Transplant Mortality. Is It Time to Personalize Post-Transplant Management?**; O. Wever-Pinzon,<sup>1</sup> L.H. Lund,<sup>2</sup> L.B. Edwards,<sup>3</sup> D.O. Taylor,<sup>4</sup> J.N. Nativi,<sup>1</sup> S.G. Drakos,<sup>1</sup> A.G. Kfoury,<sup>5</sup> C.H. Selzman,<sup>1</sup> J. Stehlik,<sup>1</sup> UTAH Cardiac Transplant Program, University of Utah School of Medicine, Salt Lake City, UT; <sup>2</sup>Karolinska University Hospital, Stockholm, Sweden; <sup>3</sup>International Society for Heart and Lung Transplantation, Addison; <sup>4</sup>Cleveland Clinic, Cleveland; <sup>5</sup>UTAH Cardiac Transplant Program, Intermountain Medical Center, Salt Lake City, UT.
- 10:45 AM (11) Survival after Heart Retransplantation;** M. Colvin-Adams,<sup>1,2</sup> B. Heubner,<sup>1</sup> M. Skeans,<sup>1</sup> M. Hertz,<sup>1,2</sup> <sup>1</sup>Scientific Registry of Transplant Recipients, Minneapolis Medical Research Foundation, Minneapolis, MN; <sup>2</sup>University of Minnesota, Minneapolis, MN.
- 11:00 AM (12) Outcomes after Orthotopic Heart and Heart-Lung Transplantation for Congenital Heart Disease in Australia and New Zealand;** J. Hatzistergos,<sup>1,2</sup> K. Dhital,<sup>1,2</sup> D. Winlaw.<sup>3</sup> <sup>1</sup>Heart Lung Transplant Unit, St Vincent's Hospital, Darlinghurst, NSW, Australia; <sup>2</sup>Faculty of Medicine, University of New South Wales, Kensington, NSW, Australia; <sup>3</sup>Cardiothoracic Surgery, Westmead Children's Hospital, Westmead, NSW, Australia.
- 11:15 AM (13) Heart Transplant Recipients with LVADs and Pulmonary Hypertension Do Not Benefit from "Oversized" Donor Hearts;** B.A. Whitson, Y. Ravi, A. Kilic, A. Hasan, V. Franco, R.S.D. Higgins, C. Sai-Sudhakar. The Ohio State University Wexner Medical Center, Columbus, OH.
- 11:30 AM (14) Twenty Years Survivors after Heart Transplantation: La Pitié Experience;** A. Galeone,<sup>1</sup> S. Varnous,<sup>1</sup> E. Barreda,<sup>1</sup> F. Fernandez,<sup>1</sup> E. Vaissier,<sup>2</sup> A. Pavie,<sup>1</sup> P. Leprince,<sup>1</sup> M. Kirsch.<sup>1</sup> <sup>1</sup>Department of Thoracic and Cardiovascular Surgery, Cardiology Institute, La Pitié-Salpêtrière Hospital, Paris, France; <sup>2</sup>Department of Anesthesiology, Cardiology Institute, La Pitié-Salpêtrière Hospital, Paris, France.
- 11:45 AM (15) Influence of Race/Ethnic Differences in Pre-Transplant Panel Reactive Antibody on Outcomes in Heart Transplant Recipients;** A.A. Morris,<sup>1</sup> R.T. Cole,<sup>1</sup> E. Veledar,<sup>2</sup> A.L. Smith,<sup>1</sup> J. Butler.<sup>1</sup> <sup>1</sup>Cardiology, Emory University School of Medicine, Atlanta, GA; <sup>2</sup>Emory University School of Public Health, Atlanta, GA.

10:30 AM – 12:00 PM

## CONCURRENT SESSION 3

**Donor Management 1: Lung (510)****CHAIRS:** Kumud Dhital, FRCS-CTh, PhD, FRACS and Christopher H. Wigfield, MD, FRCS (C/Th)

- 10:30 AM (16) Favorable Outcomes of Donation after Cardiac Death in Lung Transplantation: A Multicenter Study;** M. Cypel,<sup>1</sup> B. Levvey,<sup>2</sup> D. Van Raemdonck,<sup>3</sup> M. Erasmus,<sup>4</sup> R. Love,<sup>5</sup> D. Mason,<sup>6</sup> A. Glanville,<sup>7</sup> J. Stehlik,<sup>8</sup> M. Herz,<sup>9</sup> B. Whitson,<sup>9</sup>

V. Puri,<sup>10</sup> J. Dark,<sup>11</sup> P. Hopkins,<sup>12</sup> G. Snell,<sup>2</sup> S. Keshavjee.<sup>1</sup> <sup>1</sup>University of Toronto, Toronto, Canada; <sup>2</sup>Alfred Hospital, Melbourne, Australia; <sup>3</sup>Leuven University, Leuven, Belgium; <sup>4</sup>University Hospital Groenigen, Groenigen, Netherlands; <sup>5</sup>Loyola University Medical Center, Chicago; <sup>6</sup>Cleveland Clinic, Cleveland; <sup>7</sup>St Vincent's Hospital, Sydney, Australia; <sup>8</sup>University of Utah, Salt Lake City; <sup>9</sup>University of Minnesota, Minneapolis; <sup>10</sup>Washington University, St. Louis; <sup>11</sup>Freeman Hospital, Newcastle upon Tyne, United Kingdom; <sup>12</sup>Queensland University, Brisbane, Australia.

- 10:45 AM (17) Donation after Circulatory Death Lung Activity in the UK – 100 Transplants and Counting;** H.L. Thomas,<sup>1</sup> R. Taylor,<sup>1</sup> A.R. Simon,<sup>2</sup> S.C. Clark,<sup>3</sup> J. Dunning,<sup>4</sup> N. Yonan,<sup>5</sup> N.R. Banner,<sup>2</sup> J.H. Dark,<sup>6</sup> On Behalf of the Steering Group, UK Cardiothoracic Transplant Audit.<sup>1</sup> <sup>1</sup>NHS Blood and Transplant, Bristol, United Kingdom; <sup>2</sup>Royal Brompton and Harefield NHS Foundation Trust, Harefield, United Kingdom; <sup>3</sup>Freeman Hospital, Newcastle upon Tyne Hospitals NHS Foundation Trust, Newcastle, United Kingdom; <sup>4</sup>Papworth Hospital NHS Trust, Papworth Everard, United Kingdom; <sup>5</sup>Wythenshawe Hospital NHS Trust, Manchester, United Kingdom; <sup>6</sup>Newcastle University, Newcastle, United Kingdom.
- 11:00 AM (18) Mesenchymal Stem Cell Pretreatment of Non-Heart-Beating-Donors in Experimental Lung Transplantation – Initial Experience;** T. Wittwer,<sup>1</sup> P. Rahmanian,<sup>1</sup> Y.H. Choi,<sup>1</sup> M. Zeriuoh,<sup>1</sup> A. Sabashnikov,<sup>1</sup> K. Neef,<sup>1</sup> C. Muehlfeld,<sup>2</sup> M. Ochs,<sup>2</sup> T. Wahlers.<sup>1</sup> <sup>1</sup>Cardiothoracic Surgery, Heart Center, University Hospital of Cologne, Cologne, Germany; <sup>2</sup>Institute of Functional and Applied Anatomy, Medical School Hannover, Hannover, Germany.
- 11:15 AM (19) The INSPIRE International Lung Trial with the Organ Care System Technology (OCS™);** G. Warnecke,<sup>1</sup> B. Weigmann,<sup>1</sup> D. Van Raemdonck,<sup>2</sup> G. Massard,<sup>3</sup> N. Satelmo,<sup>3</sup> P.-E. Falcoz,<sup>3</sup> A. Olland,<sup>3</sup> G. Leseche,<sup>4</sup> H. Mal,<sup>4</sup> P. Thomas,<sup>5</sup> F. Rea,<sup>6</sup> G. Marulli,<sup>6</sup> C. Knosalla,<sup>7</sup> R. Hetzer,<sup>7</sup> A. Ardehali,<sup>8</sup> J. Kukreja,<sup>9</sup> C. Bermudez,<sup>10</sup> F.J. Moradiellos,<sup>11</sup> A. Varela,<sup>11</sup> K. Dhital,<sup>12</sup> J. Nagendran,<sup>13</sup> K. McCurry,<sup>13</sup> A. Haverich.<sup>1</sup> <sup>1</sup>Thoracic and Cardiovascular Surgery, Hannover Medical School, Hannover, Germany; <sup>2</sup>University Hospital Leuven, Leuven, Belgium; <sup>3</sup>Hospital of University of Strasbourg, Strasbourg, France; <sup>4</sup>Hospital Bichat-Claude-Bernard, Paris, France; <sup>5</sup>University Hospitals of Marseille, Marseille, France; <sup>6</sup>University of Padova, Padova, Italy; <sup>7</sup>German Heart Institute Berlin, Berlin, Germany; <sup>8</sup>Ronald Reagan UCLA Medical Center, Los Angeles, CA; <sup>9</sup>University of California San Francisco, San Francisco, CA; <sup>10</sup>University of Pittsburgh Medical Center, Pittsburgh, PA; <sup>11</sup>University Hospital Puerta de Hierro, Madrid, Spain; <sup>12</sup>St. Vincent's Hospital, Sydney, Australia; <sup>13</sup>University of Alberta Medical Center, Edmonton, Canada; <sup>14</sup>Cleveland Clinic Foundation, Cleveland, OH.
- 11:30 AM (20) Three Center Experience with Clinical Normothermic Ex Vivo Lung Perfusion;** M. Cypel,<sup>1</sup> C. Aigner,<sup>2</sup> E. Sage,<sup>3</sup> T. Machuca,<sup>1</sup> A. Slama,<sup>2</sup> M. Stern,<sup>3</sup> W. Klepetko,<sup>2</sup> A. Chapelier,<sup>3</sup> S. Keshavjee.<sup>1</sup> <sup>1</sup>University of Toronto, Toronto, Canada; <sup>2</sup>Vienna University, Vienna, Austria; <sup>3</sup>Hopital Foch, Paris, France.
- 11:45 AM (21) Normothermic Ex Vivo Lung Perfusion as an Assessment of Marginal Donor Lungs – The NOVEL Lung Trial;** P.G. Sanchez,<sup>1</sup> R.D. Davis,<sup>2</sup> F. D'ovidio,<sup>3</sup> M.J. Weyan,<sup>4</sup> P.C. Camp,<sup>5</sup> E. Cantu III,<sup>6</sup> B.P. Griffith.<sup>1</sup> <sup>1</sup>Cardiac Surgery, University of Maryland, Baltimore, MD; <sup>2</sup>Cardiac Surgery, Duke University, Durham, NC; <sup>3</sup>Surgery, Columbia University, New York, NY; <sup>4</sup>Surgery, University of Colorado, Aurora, CO; <sup>5</sup>Thoracic Surgery, Brigham and Women's Hospital, Boston, MA; <sup>6</sup>Cardiac Surgery, University of Pennsylvania, Philadelphia, PA.

10:30 AM – 12:00 PM

## CONCURRENT SESSION 4

## PH 1: All About Outcomes (512A-G)

**CHAIRS:** Robert J. Moraca, MD and Teresa De Marco, MD

- 10:30 AM (22) PROSPECT Patient Subgroups and Etiologies: Predictors of Outcomes;** R.O. Schilz,<sup>1</sup> D.B. Badesch,<sup>2</sup> R.J. Barst,<sup>3</sup> M. Chakinala,<sup>4</sup> R.P. Frantz,<sup>5</sup> D.P. Miller,<sup>6</sup> B.K. Hartline,<sup>7</sup> W.W. Benton,<sup>7</sup> V.V. McLaughlin,<sup>8</sup> H.W. Farber.<sup>9</sup> <sup>1</sup>University Hospitals of Cleveland, Cleveland, OH; <sup>2</sup>University of Colorado Denver, Aurora, CO; <sup>3</sup>Columbia University College of Physicians and Surgeons, New York, NY; <sup>4</sup>Washington University School of Medicine, St. Louis, MO; <sup>5</sup>Mayo Clinic, Rochester, MN; <sup>6</sup>ICON Late Phase & Outcomes Research, San Francisco, CA; <sup>7</sup>Actelion Pharmaceuticals US, Inc., South San Francisco, CA; <sup>8</sup>University of Michigan Health System, Ann Arbor, MI; <sup>9</sup>Boston University School of Medicine, Boston, MA.
- 10:45 AM (23) REVEAL Model Simplified: Performance of the REVEAL Pulmonary Arterial Hypertension Prediction Model Using Non Invasive and Routinely Measured Parameters;** R.J. Cogswell,<sup>1,2</sup> M.R. Pritzker,<sup>1</sup> T. De Marco.<sup>2</sup> <sup>1</sup>Medicine-Division of Cardiology, University of Minnesota, Minneapolis, MN; <sup>2</sup>Medicine-Division of Cardiology, University of California, San Francisco, San Francisco, CA.
- 11:00 AM (24) Mode of Death in Patients with Pulmonary Arterial Hypertension;** C.D. Vizza,<sup>1</sup> B. Pezzuto,<sup>1</sup> R. Badagliacca,<sup>1</sup> R. Poscia,<sup>1</sup> M. Mezzapesa,<sup>1</sup> M. Nocioni,<sup>1</sup> M. D'Alto,<sup>2</sup> S. Ghio,<sup>3</sup> P. Vitulo,<sup>4</sup> M. Mulè,<sup>5</sup> C. Albera,<sup>6</sup> F. Fedele.<sup>1</sup> <sup>1</sup>Department of Cardiovascular and Respiratory Disease, Sapienza University of Rome, Rome, Italy; <sup>2</sup>Department of Cardiology, GUCH Unit, Monaldi Hospital, Second University of Naples, Naples, Italy; <sup>3</sup>Department of Cardiology, IRCCS San Matteo Hospital, Pavia, Italy; <sup>4</sup>Pneumology Unit, Mediterranean Institute and Advanced Specialized Therapies (ISMETT), Palermo, Italy; <sup>5</sup>Division of Cardiology, Ferrarotto Hospital, University of Catania, Catania, Italy; <sup>6</sup>Department of Clinical and Biological Sciences, Interstitial and Rare Diseases Unit, University of Turin, Turin, Italy.
- 11:15 AM (25) Successful Extracorporeal Membrane Oxygenation Support Following Pulmonary Endarterectomy;** M. Berman,<sup>1</sup> S. Tsui,<sup>1</sup> A. Vuylsteke,<sup>2</sup> J. Dunning,<sup>1</sup> J. Fowles,<sup>2</sup> C. Ng,<sup>1</sup> K. Valchanov,<sup>2</sup> S. Webb,<sup>2</sup> F. Falter,<sup>2</sup> N. Jones,<sup>2</sup> C. Treacy,<sup>2</sup> D. Jenkins.<sup>1</sup> <sup>1</sup>Cardiothoracic Surgery, Papworth Hospital, Cambridge, United Kingdom; <sup>2</sup>Anesthesia and Intensive Care, Papworth Hospital, Cambridge, United Kingdom.
- 11:30 AM (26) Osteopontin Lung Expression Is a Marker of Disease Severity in Pulmonary Arterial Hypertension;** M. Mura,<sup>1</sup> Y. Zhao,<sup>3</sup> S. Azad,<sup>2</sup> Z. Yun,<sup>3</sup> S. Mak,<sup>1</sup> J. Parker,<sup>1</sup> L.G. Singer,<sup>2</sup> S. Keshavjee,<sup>2</sup> M. de Perrot,<sup>1</sup> J.T. Granton.<sup>1</sup> <sup>1</sup>Pulmonary Hypertension Program, University of Toronto, Toronto, Canada; <sup>2</sup>Lung Transplant Program, University of Toronto, Toronto, Canada; <sup>3</sup>Latner Thoracic Surgery Research Laboratories, University of Toronto, Toronto, Canada.
- 11:45 AM (27) Pulmonary Hypertension in End-Stage Pulmonary Fibrosis: Prevalence, Predictors and Survival Before and After Lung Transplantation;** L. Bjurström, K.H. Andersen, J. Kjærgaard, M.P. Iversen, S. Boesgaard, J. Carlsen. Cardiology, Copenhagen University Hospital, Rigshospitalet, Copenhagen, Denmark.

10:30 AM – 12:00 PM

## CONCURRENT SESSION 5

## PATH AMR: Exploring the New Frontier (513ABC)

**CHAIRS:** Patrick Bruneval, MD and Carmela D. Tan, MD

- 10:30 AM (28) Inflammatory Cell Burden and Phenotype in Endomyocardial Biopsies from Patients with Antibody-Mediated Rejection (AMR) – An AECVP Multicenter Study;** M. Fedrigo,<sup>1</sup> O. Leone,<sup>2</sup> M. Burke,<sup>3</sup> A. Rice,<sup>3</sup> C. Toquet,<sup>3</sup> A.C. Frigo,<sup>1</sup> R. Guillemain,<sup>5</sup> S. Pattier,<sup>4</sup> J. Smith,<sup>3</sup> A. Lota,<sup>3</sup> L. Potena,<sup>2</sup> A. Bontadini,<sup>2</sup> C. Ceccarelli,<sup>2</sup> F. Poli,<sup>6</sup> G. Feltrin,<sup>1</sup> G. Gerosa,<sup>1</sup> E. Manzan,<sup>1</sup> G. Thiene,<sup>1</sup> P. Bruneval,<sup>5</sup> A. Angelini,<sup>1</sup> J.P. Duong Van Huyen.<sup>5</sup> <sup>1</sup>University of Padua, Padua, Italy; <sup>2</sup>Azienda Ospedaliero-Universitaria Sant'Orsola-Malpighi, Bologna, Italy; <sup>3</sup>Harefield Hospital, London, United Kingdom; <sup>4</sup>CHU Nantes, Nantes, France; <sup>5</sup>Hôpital Européen Georges Pompidou, Paris, France; <sup>6</sup>Policlinico Mangiagalli Regina Elena, Milan, Italy.
- 10:45 AM (29) Histological Characterization of Pulmonary Transplant Patients with Donor Specific Antibodies and Those without;** L. Xu,<sup>1</sup> C. Drachenberg,<sup>1</sup> A. Iacono,<sup>2</sup> A. Burke.<sup>1</sup> <sup>1</sup>Pathology, University of Maryland, Baltimore, MD; <sup>2</sup>Pulmonary Medicine, University of Maryland, Baltimore, MD.
- 11:00 AM (30) C4d by Immunofluorescence and Immunohistochemistry in Routine Lung Allograft Biopsies;** A.C. Roden, J.P. Scott, S.M. Jenkins, M.C. Aubry. Mayo Clinic, Rochester, MN.
- 11:15 AM (31) Clinical and Prognostic Significance of C3d and C4d Positive Immunopathology Pattern Versus C4d Positive Alone;** D.V. Miller, M.D. Everitt, K.M. Molina, R. Alharethi, D. Budge, B. Wachter, J. Stehlik, E.M. Gilbert, S.G. Drakos, J.N. Nativi, M.P. Revelo, M.E.H. Hammond, A.G. Kfoury. UTAH Cardiac Transplant Program, Salt Lake City, UT.
- 11:30 AM (32) The Activation of mTOR Pathway in Endothelial Cells Correlates with Antibody-Mediated Rejection (AMR) in Endomyocardial Biopsies (EMB);** M. Tible,<sup>1,2</sup> A. Loupy,<sup>1,2</sup> D. Vernerey,<sup>2</sup> T. Beuscart,<sup>1,2</sup> C. Mandet,<sup>2</sup> R. Guillemain,<sup>3</sup> C. Amrein,<sup>3</sup> C. Suberbielle,<sup>3</sup> A. Cazes,<sup>1</sup> V. Pezzella,<sup>3</sup> D. Charron,<sup>4</sup> X. Jouven,<sup>2</sup> P. Bruneval,<sup>1,2</sup> J.P. Duong Van Huyen.<sup>1,2</sup> <sup>1</sup>Pathology, University Paris Descartes, Paris, France; <sup>2</sup>Paris Cardiovascular Research Center, INSERM, Paris, France; <sup>3</sup>Cardiac Surgery-Thoracic Transplantation, Hôpital Européen Georges Pompidou, Paris, France; <sup>4</sup>Histocompatibility Regional Platform, Hôpital Saint-Louis, Paris, France.
- 11:45 AM (33) The Incidence of Circulating Antibodies at the Time of Pathology Defined Antibody-Mediated Rejection after Heart Transplantation;** J. Patel, M. Kittleston, M. Rafiei, A. Osborne, D. Chang, L. Czer, F. Esmailian, N. Reinsmoen, J. Kobashigawa. Cedars-Sinai Heart Institute, Los Angeles, CA.

10:30 AM – 12:00 PM

**CONCURRENT SESSION 6****Heart 2: Heart Failure – Focus on the Right Heart (513DEF)****CHAIRS:** Sean P. Pinney, MD and Miriam S. Jacob, MD

**10:30 AM (34) *Can the RV Be Prognostic for the Non-Ischemic Cardiomyopathy Patient but Not the Ischemic Cardiomyopathy Patient? A Cardiovascular MRI Study;* S.S. Gill, M. Doyle, D.V. Thompson, R.W. Biederman. Cardiovascular Magnetic Resonance Imaging Center, West Penn Allegheny Health System, Allegheny General Hospital, Pittsburgh, PA.**

**10:45 AM (35) *Prevalence and Clinical Correlates of Right Ventricular Dysfunction in Patients with Hypertrophic Cardiomyopathy;* G. Finocchiaro,<sup>1</sup>A. Pavlovic,<sup>1</sup>N.L. Sudini,<sup>1</sup>G. Sinagra,<sup>2</sup>F. Haddad,<sup>1</sup>E. Ashley.<sup>1</sup>Stanford University School of Medicine, Department of Medicine, Division of Cardiovascular Medicine, Palo Alto; <sup>2</sup>Cardiovascular Department, Ospedali Riuniti and University of Trieste, Trieste, Italy.**

**11:00 AM (36) *Hemodynamic Benefits of Chronic Sildenafil Therapy in Advanced Heart Failure (HF): A Multi-Center Experience;* J. Sassi,<sup>1</sup>F.P. Mongeon,<sup>2</sup>N. Piriou,<sup>1</sup>M. Carrier,<sup>3</sup>J.P. Gueffet,<sup>1</sup>M. White,<sup>2</sup>J.N. Trochu,<sup>1</sup>A. Ducharme.<sup>2</sup><sup>1</sup>Medicine, CHU Nantes, Nantes, France; <sup>2</sup>Surgery, Montréal Heart Institute, Montréal, QC, Canada; <sup>3</sup>Medicine, Montréal Heart Institute, Montréal, QC, Canada.**

**11:15 AM (37) *Right Atrial to Pulmonary Capillary Wedge Pressure Ratio Is Not Associated with Failure of Optimal Medical Management in the INTERMACS 4-5 Population;* J.N. Menachem,<sup>1</sup>G.M. Felker,<sup>2,3</sup>C.B. Patel.<sup>2,3</sup><sup>1</sup>Internal Medicine, Duke University Medical Center, Durham, NC; <sup>2</sup>Division of Cardiovascular Medicine, Duke University Medical Center, Durham, NC; <sup>3</sup>Duke Clinical Research Institute, Duke University Medical Center, Durham, NC.**

**11:30 AM (38) *Clinical Characteristics and Outcomes in Patients with Mismatched Filling Pressures in Advanced Heart Failure: Looking beyond the JVP;* C. Patel,<sup>1</sup>M. Daneshmand,<sup>1</sup>G.C. Stewart,<sup>2</sup>M.M. Kittleson,<sup>3</sup>J. Cowger,<sup>4</sup>E. Rame,<sup>5</sup>M. Mountis,<sup>6</sup>F. Johnson,<sup>7</sup>P. Patel,<sup>8</sup>M. Guglin,<sup>9</sup>J.J. Teuteberg,<sup>10</sup>M. Drazner,<sup>8</sup>J. Rogers.<sup>11</sup><sup>1</sup>Duke University, Durham, NC; <sup>2</sup>Brigham and Women's Hospital, Boston, MA; <sup>3</sup>Cedars-Sinai Hospital, Beverly Hills, CA; <sup>4</sup>University of Michigan, Ann Arbor, MI; <sup>5</sup>University of Pennsylvania, Philadelphia, PA; <sup>6</sup>Cleveland Clinic, Cleveland, OH; <sup>7</sup>University of Iowa, Iowa City, IA; <sup>8</sup>University of Texas Southwestern, Dallas, TX; <sup>9</sup>University of South Florida, Tampa, FL; <sup>10</sup>University of Pittsburgh, Pittsburgh, PA.**

**11:45 AM (39) *Outcomes of Arrhythmogenic Right Ventricular Cardiomyopathy (ARVC) Post Heart Transplant (HT);* E.C. DePasquale,<sup>1</sup>R.K. Cheng,<sup>1</sup>A. Baas,<sup>1</sup>M. Cadeiras,<sup>1</sup>D. Cruz,<sup>1</sup>T. Khuu,<sup>1</sup>A. Nsair,<sup>1</sup>M. Deng,<sup>1</sup>D.L. Jacoby.<sup>2</sup><sup>1</sup>Division of Cardiology, David Geffen School of Medicine, University of California, Los Angeles, Los Angeles, CA; <sup>2</sup>Division of Cardiology, Yale University School of Medicine, New Haven, CT.**

NOON – 2:00 PM

LUNCH BREAK

VISIT EXHIBITS / VIEW POSTERS (516; 517AB)

NOON – 2:00 PM

JFT COUNCIL MEETING (514C)

JHLT EDITORIAL BOARD MEETING (519A)

PULMONARY COUNCIL QOL WORKFORCE MEETING (512H)

1:00 PM – 2:00 PM

2014 PROGRAM COMMITTEE MEETING (514B)

2:00 PM – 3:30 PM

**CONCURRENT SESSION 7****MCS 2: How to Bridge Over Troubled Waters (517CD)****CHAIRS:** George M. Wieselthaler, MD and Ivan Netuka, MD, PhD

**2:00 PM (40) *Mortality Differences after Heart Transplantation in Patients Bridged with Balloon Pumps vs. Left Ventricular Assist Devices;* A.W. Castleberry,<sup>1</sup>C.B. Patel,<sup>2</sup>A.D. DeVore,<sup>2</sup>K. Southerland,<sup>1</sup>J.G. Rogers,<sup>2</sup>C.A. Milano.<sup>3</sup><sup>1</sup>Division of General Surgery, Duke University Medical Center, Durham, NC; <sup>2</sup>Division of Cardiology, Duke University Medical Center, Durham, NC; <sup>3</sup>Division of Thoracic and Cardiovascular Surgery, Duke University Medical Center, Durham, NC.**

**2:15 PM (41) *Hospital Readmission in Left Ventricular Assist Device (LVAD) Patients Compared to Patients Receiving Intra-venous Inotropic Therapy;* J. Whittier,<sup>1</sup>P. Pirlamarla,<sup>1</sup>J. Patel,<sup>1</sup>S. Feitell,<sup>1</sup>E. Gongora,<sup>1</sup>T. Rowe,<sup>2</sup>S. Hankins,<sup>1</sup>H.J. Eisen.<sup>1</sup><sup>1</sup>Division of Cardiology/Department of Medicine, Drexel University College of Medicine, Philadelphia, PA; <sup>2</sup>Center for Advanced Heart Failure Care, Hahnemann University Hospital, Philadelphia, PA.**

**2:30 PM (42) *Institutional Volume of Heart Transplantation with Left Ventricular Assist Device Explantation Influences Graft Survival;* S. Maltais,<sup>1</sup>N.A. Haglund,<sup>2</sup>I.D. Feurer,<sup>2</sup>M.A. Wigger,<sup>2</sup>T.G. DiSalvo,<sup>2</sup>K.H. Schendorf,<sup>2</sup>R.M. Ahmad,<sup>1</sup>D.J. Lenihan,<sup>2</sup>J.M. Stulak,<sup>3</sup>M.E. Keebler.<sup>2</sup><sup>1</sup>Cardiothoracic Surgery, Vanderbilt University Medical Center, Nashville, TN; <sup>2</sup>Cardiology, Vanderbilt University Medical Center, Nashville, TN; <sup>3</sup>Cardiothoracic Surgery, Mayo Clinic, Rochester, MN.**

**2:45 PM (43) *Impact of Demographic and On-Pump Factors on Post-Transplant Survival Following Support with the HVAD System;* R. John,<sup>1</sup>K.D. Aaronson,<sup>2</sup>F.D. Pagani,<sup>2</sup>D.R. Hathaway,<sup>3</sup>M.T. Swartz,<sup>3</sup>K. Najarian,<sup>3</sup>M.S. Slaughter.<sup>4</sup><sup>1</sup>Division of Cardiothoracic Surgery, University of Minnesota, Minneapolis, MN; <sup>2</sup>University of Michigan, Ann Arbor, MI; <sup>3</sup>HeartWare, Inc., Framingham, MA; <sup>4</sup>University of Louisville, Louisville, KY.**

**3:00 PM (44) *Age and Era-Based Survival Differences in Thoracic Transplantation Patients Who Require ECMO;* S. Law, T. Brogan, Y. Law, M. McMullan. Seattle Children's Hospital, Seattle.**

**3:15 PM (45) *Implantable Cardioverter-Defibrillators Do Not Reduce Mortality in Patients with the HeartMate II Left Ventricular Assist Device;* A. Enriquez, B. Calenda, A. Anyanwu, S. Pinney. Mount Sinai Medical Center, New York, NY.**



2:00 PM – 3:30 PM

## CONCURRENT SESSION 8

**Heart 3: Coronary Artery Vasculopathy in 2013 – Diagnosis, Prognosis and Treatment (511)****CHAIRS:** Mazen A. Hanna, MD and Javier Segovia, MD, PhD

- 2:00 PM (46) *Change in Maximum Intimal Thickness with Everolimus-Based Immunosuppression after Heart Transplantation in Patients at Increased Risk of Cardiac Allograft Vasculopathy;*** J. Kobashigawa,<sup>1</sup> R. Starling,<sup>2</sup> G. Dong,<sup>4</sup> P. Lopez,<sup>5</sup> H.J. Eisen.<sup>3</sup>  
<sup>1</sup>Cedars-Sinai Heart Institute, Los Angeles, CA; <sup>2</sup>Kaufman Center for Heart Failure, Heart & Vascular Institute, Cleveland Clinic Foundation, Cleveland, OH; <sup>3</sup>Division of Cardiology, Drexel University College of Medicine/Hahnemann University Hospital, Philadelphia, PA; <sup>4</sup>Novartis Pharmaceuticals, East Hanover; <sup>5</sup>Novartis Pharma AG, Basel, Switzerland.
- 2:15 PM (47) *Incidence of Allograft Vasculopathy in the TICTAC Trial as Compared to a Real World Cohort;*** D.A. Baran, J. Pieretti, C.G. Gidea, J.A. Weiss, C.Y. Guerrero-Miranda, H. Vefali, V. Costa, M. Camacho, M.J. Zucker. Heart Failure and Transplant Program, Newark Beth Israel Medical Center, Newark, NJ.
- 2:30 PM (48) *Cardiovascular Events with De Novo Use of Everolimus in Heart Transplant Recipients: 24-Month Analysis of the A2310 Study;*** L. Potena,<sup>1</sup> U. Schultz,<sup>2</sup> C. Bara,<sup>3</sup> J.M. Arizon,<sup>4</sup> G. Dong,<sup>5</sup> P. Lopez,<sup>6</sup> E. Epailly.<sup>7</sup>  
<sup>1</sup>Cardiovascular Department, University of Bologna, Bologna, Italy; <sup>2</sup>Herz- u. Diabeteszentrum NRW/Ruhr-Universität Bochum, Bad Oeynhausen, Germany; <sup>3</sup>Kliniken der Medizinischen Hochschule, Hannover, Germany; <sup>4</sup>Hospital Universitario Reina Sofia, Córdoba, Spain; <sup>5</sup>Novartis Pharmaceuticals, East Hanover; <sup>6</sup>Novartis Pharma AG, Basel, Switzerland; <sup>7</sup>CHU de Strasbourg Hopital Civile, Strasbourg, France.
- 2:45 PM (49) *Coronary Collaterals Predict Improved Survival and Allograft Function in Patients with Coronary Allograft Vasculopathy;*** K.J. Lavine, M. Sintek, E. Novak, G. Ewald, E. Geltman, S. Joseph, D. Mann. Internal Medicine, Division of Cardiology, Washington University School of Medicine, St Louis, MO.
- 3:00 PM (50) *Novel Model To Assess Prognosis of Transplant Vasculopathy Following Cardiac Transplantation;*** N.E. Hiemann,<sup>1</sup> E. Wellnhofer,<sup>2</sup> C. Christan,<sup>1</sup> S. Kretschmer,<sup>1</sup> R. Meyer,<sup>1</sup> H. Valantine,<sup>3</sup> R. Hetzer,<sup>1</sup> K.K. Khush.<sup>3</sup>  
<sup>1</sup>Cardiothoracic and Vascular Surgery, Deutsches Herzzentrum Berlin, Berlin, Germany; <sup>2</sup>Cardiology, Deutsches Herzzentrum Berlin, Berlin, Germany; <sup>3</sup>Cardiovascular Research, Stanford University School of Medicine, Stanford.
- 3:15 PM (51) *High Intensity Interval Training Reduces Progression of Cardiac Allograft Vasculopathy among Heart Transplant Recipients – Results from a Randomized Controlled Trial;*** K. Nytrøen,<sup>1</sup> R. Lene Annette,<sup>1,3</sup> E. Ingrid,<sup>1</sup> A. Pål,<sup>2,4</sup> U. Thor,<sup>2,4</sup> L. Tove,<sup>2,4</sup> G. Einar,<sup>1</sup> W.E. Nils,<sup>1</sup> H. Anders,<sup>1</sup> A. Svend,<sup>1</sup> G. Lars,<sup>1,4</sup> A. Satish.<sup>1</sup>  
<sup>1</sup>Department of Cardiology, Oslo University Hospital, Rikshospitalet, Oslo, Norway; <sup>2</sup>Research Institute for Internal Medicine, Oslo University Hospital, Rikshospitalet, Oslo, Norway; <sup>3</sup>Department of Circulation and Medical Imaging, Norwegian University of Science and Technology, Trondheim, Norway; <sup>4</sup>Faculty of Medicine, University of Oslo, Oslo, Norway.

2:00 PM – 3:30 PM

## CONCURRENT SESSION 9

**Lung 1: Transplantation - Bench to Bedside (510)****CHAIRS:** Sangeeta M. Bhorade, MD and Michael Mulligan, MD

- 2:00 PM (52) *Identical Biofilm Forming Strains of Pseudomonas aeruginosa Occur in Lung Allograft BAL and Gastric Juice from CF Patients with Gastro Oesophageal Reflux;*** A. Krishnan,<sup>2</sup> A. Perry,<sup>1</sup> A. Robertson,<sup>2</sup> M. Brodrie,<sup>2</sup> J. Perry,<sup>2</sup> P. Corris,<sup>2</sup> M. Griffin,<sup>3</sup> K. Gould,<sup>1</sup> I. Forrest,<sup>3</sup> J. Pearson,<sup>2</sup> C. Ward.<sup>2</sup>  
<sup>1</sup>Freeman Hospital, Newcastle upon Tyne, Tyne and Wear, United Kingdom; <sup>2</sup>University of Newcastle, Newcastle upon Tyne, United Kingdom; <sup>3</sup>Royal Victoria Infirmary, Newcastle upon Tyne, United Kingdom.
- 2:15 PM (53) *Anti-Fibrotic Effect of Combined mTORc1 and mTORc2 Inhibition in Bronchiolitis Obliterans;*** N. Walker, M. Mary, B. Linda, W. Anish, S. Linda, C. Kevin, L. Jules, L. Vibha. Pulmonary and Critical Care, Pharmacology, and Surgery, University of Michigan, Ann Arbor, MI.
- 2:30 PM (54) *Catenin Activation in Bronchiolitis Obliterans Syndrome;*** B. Linda, L.N. Vibha. Pulmonary and Critical Care, University of Michigan, Ann Arbor.
- 2:45 PM (55) *The CCL2/CCR2 Axis in Primary Graft Dysfunction and Bronchiolitis Obliterans Syndrome Following Lung Transplantation;*** A. DerHovanessian, V. Palchevskiy, S.S. Weigt, M.Y. Shino, A.L. Gregson, B.M. Kubak, J.P. Lynch, R. Saggari, D.J. Ross, A. Ardehali, R.M. Elashoff, J.A. Belperio. University of California, Los Angeles, Los Angeles, CA.
- 3:00 PM (56) *Plasma PAI-1 Used as a Quantitative Trait Implicates the Innate Immune Regulator TOLLIP in Post Lung Transplant Primary Graft Dysfunction Risk;*** E. Cantu,<sup>1</sup> Y. Suzuki,<sup>1</sup> J.M. Diamond,<sup>2</sup> R.J. Shah,<sup>2</sup> J.D. Flesch,<sup>2</sup> N.J. Meyer,<sup>2</sup> D.J. Lederer,<sup>3</sup> S.M. Kawut,<sup>2,4,5</sup> J.C. Lee,<sup>2</sup> S.M. Palmer,<sup>6</sup> V.N. Lama,<sup>7</sup> S.M. Bhorade,<sup>8</sup> M.M. Crespo,<sup>9</sup> E. Demissie,<sup>2,4</sup> K.M. Wille,<sup>10</sup> J.B. Orens,<sup>11</sup> P.D. Shah,<sup>11</sup> A. Weinacker,<sup>12</sup> D. Weill,<sup>12</sup> S.M. Acrasoy,<sup>3</sup> D.S. Wilkes,<sup>13</sup> L.B. Ware,<sup>14</sup> R. Feng,<sup>4</sup> J.D. Christie.<sup>2,4</sup>  
<sup>1</sup>Surgery, Cardiovascular Surgery, University of Pennsylvania Perelman School of Medicine, Philadelphia, PA; <sup>2</sup>Medicine, Pulmonary, Allergy, and Critical Care, University of Pennsylvania Perelman School of Medicine, Philadelphia, PA; <sup>3</sup>Medicine, Pulmonary, Allergy, and Critical Care Medicine, Columbia University College of Physicians and Surgeons, New York, NY; <sup>4</sup>Center for Clinical Epidemiology and Biostatistics, University of Pennsylvania Perelman School of Medicine, Philadelphia, PA; <sup>5</sup>Penn Cardiovascular Institute, University of Pennsylvania Perelman School of Medicine, Philadelphia, PA; <sup>6</sup>Medicine, Pulmonary, Allergy, and Critical Care Medicine, Duke University, Raleigh-Durham, NC; <sup>7</sup>Medicine, Pulmonary, Allergy, and Critical Care Medicine, University of Michigan, Ann Arbor, MI; <sup>8</sup>Medicine, Pulmonary, Allergy, and Critical Care Medicine, University of Chicago, Chicago, IL; <sup>9</sup>Medicine, Pulmonary, Allergy, and Critical Care Medicine, University of Pittsburgh, Pittsburgh, PA; <sup>10</sup>Medicine, Pulmonary, Allergy, and Critical Care Medicine, University of Alabama at Birmingham, Birmingham, AL; <sup>11</sup>Medicine, Pulmonary, Allergy, and Critical Care Medicine, Johns Hopkins University Hospital, Baltimore, MD; <sup>12</sup>Medicine, Pulmonary, Allergy, and Critical Care Medicine, Stanford University, Palo Alto, CA; <sup>13</sup>Medicine, Pulmonary, Allergy, and Critical Care, and Occupational Medicine, Indiana University School of Medicine, Indianapolis, IN; <sup>14</sup>Medicine and Pathology, Microbiology and Immunology, Vanderbilt University, Nashville, TN.

**3:15 PM (57) Immediate Post-Operative Bronchoalveolar IL-6 and IL-8 Cytokine Levels Are Associated with Short-Term Patient Outcome and Long-Term Allograft Outcome after Lung Transplantation;** R. Vos, D. Ruttens, S. Verleden, A. Vaneylen, E. Vandermeulen, J. Somers, D.E. Van Raemdonck, J. Yserbyt, L.J. Dupont, B.M. Vanaudenaerde, G.M. Verleden. Lung Transplant Unit, KU/UZLeuven, Leuven, Belgium.

2:00 PM – 3:30 PM

### CONCURRENT SESSION 10

**MCS 3: Pump and Patient Crosstalk (512A-G)**

**CHAIRS:** O. H. Frazier, MD and Peter Eckman, MD

**2:00 PM (58) Has the Incidence of Pump Thrombosis and Stroke in Patients with a HeartMate II Increased over Time?;** A.D. Nagpal,<sup>1</sup> K.J. Hoercher,<sup>1</sup> M.Z. Tong,<sup>1</sup> D. Kalavrouziotis,<sup>1</sup> S. Lee,<sup>2</sup> N. Moazami.<sup>1,3</sup> Cardiothoracic Surgery, Cleveland Clinic Foundation, Cleveland, OH; <sup>2</sup>Cardiology, Cleveland Clinic Foundation, Cleveland, OH.

**2:15 PM (59) The Value of Pump Audiosignals in Patients with Left Ventricular Assist Devices;** P. Markey,<sup>1,2</sup> K. Dhital,<sup>1,2</sup> S. Gupta,<sup>1,2</sup> K. Woldendorp,<sup>1,2</sup> D. Robson,<sup>1</sup> C. Hayward,<sup>1,2</sup> N. Lovell.<sup>3</sup> Heart Failure and Transplant Unit, St. Vincent's Hospital, Sydney, NSW, Australia; <sup>2</sup>Faculty of Medicine, University of New South Wales, Sydney, NSW, Australia; <sup>3</sup>Graduate School of Biomedical Engineering, University of New South Wales, Sydney, NSW, Australia.

**2:30 PM (60) Effect of Blood Pressure (BP) Control in Continuous Flow Left Ventricular Assist Devices (CF-LVAD) on Aortic Insufficiency (AI) and Neurologic Events;** B.C. Lampert,<sup>1</sup> M.A. Shullo,<sup>2</sup> N. Kunz,<sup>1</sup> K. Lockard,<sup>1</sup> C. Allen,<sup>1</sup> J. Bhama,<sup>1</sup> C. Bermudez,<sup>1</sup> R. Kormos,<sup>1</sup> J.J. Teuteberg.<sup>1,1</sup> Heart and Vascular Institute, University of Pittsburgh, Pittsburgh, PA; <sup>2</sup>Pharmacy and Therapeutics, University of Pittsburgh, Pittsburgh, PA.

**2:45 PM (61) Late Right Heart Failure after Left Ventricular Assist Device Implantation: Clinical Predictors and Outcomes;** S. Saxena,<sup>1</sup> J. Um,<sup>1</sup> I. Dumitru,<sup>1</sup> S. Pillaier,<sup>1</sup> T. Ryan,<sup>1</sup> S. Yannone,<sup>1</sup> M. Moulton,<sup>1</sup> B. Lowes,<sup>1</sup> E. Raichlin.<sup>1,1</sup> Cardiology, University of Nebraska Medical Center, Omaha, NE; <sup>2</sup>Surgery-Cardiovascular & Thoracic Surgery, University of Nebraska Medical Center, Omaha, NE.

**3:00 PM (62) Magnitude and Time Course of Changes Induced by Continuous-Flow Left Ventricular Assist Device Unloading in Chronic Heart Failure: Insights into Cardiac Recovery;** O. Wever-Pinzon, A.G. Kfoury, C.H. Selzman, B.B. Reid, R. Alharethi, D. Budge, E.M. Gilbert, S. McKellar, W. Caine, D.R. Verma, A. Saidi, K. Brunisholz, J. Stehlik, S.G. Drakos. UTAH Cardiac Transplant Program, Salt Lake City.

**3:15 PM (63) Effect of Continuous-Flow Mechanical Support on Microvasculature Remodeling in the Failing Heart;** T. Saito, K. Toda, S. Miyagawa, H. Nishi, Y. Yoshikawa, S. Fukushima, D. Yoshioka, M. Ishida, Y. Sawa. Department of Cardiovascular Surgery, Osaka University Graduate School of Medicine, Suita, Osaka, Japan.

2:00 PM – 3:30 PM

### CONCURRENT SESSION 11

**Philip K. Caves Award Candidate Presentations (513ABC)**

**CHAIRS:** R. Duane Davis, MD, MBA and Hermann C. Reichenspurner, MD, PhD

**2:00 PM (64) Association of Prior Implantation of HeartMate II Left Ventricular Assistive Device with Post-Heart Transplant Mortality;** M.M. Donneyong,<sup>1</sup> J.R. Trivedi,<sup>1</sup> M.L. Williams,<sup>1</sup> R. Singh,<sup>1</sup> K.C. McCants,<sup>2</sup> E.J. Birks,<sup>2</sup> M.S. Slaughter.<sup>1,1</sup> Division of Thoracic and Cardiac Surgery, University of Louisville, Louisville, KY; <sup>2</sup>Division of Cardiovascular Medicine, University of Louisville, Louisville, KY.

**2:15 PM (65) Intracoronary Treatment with VEGF-C/D Inhibitor Enhances Cardiac Allograft Survival and Prevents Chronic Rejection by Regulating Lymphatic Endothelial Cell Activation;** A. Dashkevich,<sup>1</sup> S.O. Syrjälä,<sup>1</sup> M.A. Keränen,<sup>1</sup> R. Tuuminen,<sup>1</sup> R. Krebs,<sup>1</sup> A.I. Nykänen,<sup>1,2</sup> K. Alitalo,<sup>3</sup> K.B. Lemström.<sup>1,2</sup> <sup>1</sup>Transplantation Laboratory, Haartman Institute, University of Helsinki, Helsinki, Finland; <sup>2</sup>Department of Cardiothoracic Surgery, Helsinki University Hospital, Helsinki, Finland; <sup>3</sup>Molecular Cancer Biology Program, Institute for Molecular Medicine Finland, Biomedicum Helsinki, University of Helsinki, Helsinki, Finland.

**2:30 PM (66) Functional Association between a Genetic Variant in the IL-17 Receptor Gene and Chronic Rejection after Lung Transplantation;** D. Ruttens,<sup>1</sup> E. Wauters,<sup>2</sup> M. Kicinski,<sup>3</sup> S.E. Verleden,<sup>1</sup> A. Vaneylen,<sup>1</sup> E. Vandermeulen,<sup>1</sup> R. Vos,<sup>1</sup> D.E. Van Raemdonck,<sup>1</sup> T.S. Nawrot,<sup>3,4</sup> D. Lambrechts,<sup>2</sup> G.M. Verleden,<sup>1</sup> B. Vanaudenaerde.<sup>1,1</sup> Lab of Pneumology, Lung Transplant Unit, KUL, University Hospital Gasthuisberg, Leuven, Belgium; <sup>2</sup>Vesalius Research Centrum, University Hospital Gasthuisberg, Leuven, Belgium; <sup>3</sup>Centre for Environmental Sciences, Hasselt University, Diepenbeek, Belgium; <sup>4</sup>Department of Public Health, KULeuven, Leuven, Belgium.

**2:45 PM (67) Circulating Mitochondrial DNA Is Elevated in Patients with Immediate Primary Graft Dysfunction;** M. Ibrahim,<sup>1,3</sup> H. Strah,<sup>2</sup> H. Huang,<sup>2</sup> A. Krupnick,<sup>1</sup> D. Kreisel,<sup>1</sup> R. Hachem,<sup>2</sup> E. Trulock,<sup>2</sup> A. Alouch,<sup>1</sup> A. Gelman.<sup>1,1</sup> Surgery, Washington University at St. Louis, St. Louis, MO; <sup>2</sup>Medicine, Washington University at St. Louis, St. Louis, MO; <sup>3</sup>Thoracic Surgery, Sapienza University of Rome, Rome, RM, Italy.

**3:00 PM (68) Late Changes in Maximal Intimal Thickness after Heart Transplant: Prognostic Implications and Risk Factors;** M. Masetti, L. Potena, V. Pece, P. Prestinenzi, I.G. Bianchi, C. Lonetti, N. Taglieri, A. Russo, G. Magnani, F. Grigioni, A. Branzi. Cardiovascular Department, University of Bologna, Bologna, Italy.

**3:15 PM (69) Longitudinal Study of Pulmonary Microbial Dynamics in Lung Transplant Recipients with and without Bronchiolitis Obliterans Syndrome;** V. Poroyko,<sup>1</sup> E. Semenyuk,<sup>2</sup> Z. Xu,<sup>1</sup> A. Sperling,<sup>1</sup> A. Chong,<sup>1</sup> M.L. Alegre,<sup>1</sup> E. Garrity,<sup>1</sup> S. Bhorade.<sup>1</sup> <sup>1</sup>Medicine, University of Chicago Medicine, Chicago, IL; <sup>2</sup>Microbiology and Immunology, Loyola University Health System, Maywood, IL.

2:00 PM – 3:30 PM

**CONCURRENT SESSION 12****PEDS 1: Heart Failure and Transplantation (513DEF)****CHAIRS:** Melanie D. Everitt, MD and Debra A. Dodd, MD

- 2:00 PM (70) Circulating microRNA: Prognostic Biomarker for Pediatric Heart Failure;** S.D. Miyamoto,<sup>1</sup> V. Peterson,<sup>2</sup> B. Freed,<sup>3</sup> L. Cagle,<sup>3</sup> B.L. Stauffer,<sup>2</sup> C.C. Sucharov,<sup>2</sup> <sup>1</sup>Pediatrics/Cardiology, University of Colorado Denver, Aurora, CO; <sup>2</sup>Medicine/Cardiology, University of Colorado Denver, Aurora, CO; <sup>3</sup>Allergy and Immunology, University of Colorado Denver, Aurora, CO.
- 2:15 PM (71) Are Smaller Children Waiting Longer? Trends in Median Waiting Time for Smaller Children Listed for Heart Transplant in the US;** C.S. Almond,<sup>1</sup> L.B. Smoot,<sup>1</sup> C. VanderPluym,<sup>1</sup> T.P. Singh,<sup>1</sup> E.D. Blume,<sup>1</sup> D. Rosenthal,<sup>2</sup> H. Bastardi,<sup>1</sup> S. Dillis,<sup>1</sup> K.P. Daly,<sup>1</sup> <sup>1</sup>Cardiology, Boston Children's Hospital, Boston, MA; <sup>2</sup>Cardiology, Stanford University/Lucile Packard Children's Hospital, Palo Alto, CA.
- 2:30 PM (72) Elevated Pre-Transplant Pulmonary Vascular Resistance Is Not Associated with Mortality in Children without Congenital Heart Disease: A Multi-Center Study;** M.E. Richmond,<sup>1</sup> Y.M. Law,<sup>6</sup> B. Das,<sup>2</sup> M.D. Everitt,<sup>3</sup> M. Kukreja,<sup>5</sup> D.C. Naffel,<sup>5</sup> M. Kemna,<sup>6</sup> H. Henderson,<sup>7</sup> K. Beddows,<sup>1</sup> F.J. Fricker,<sup>4</sup> W. Mahle.<sup>8</sup> <sup>1</sup>Division of Pediatric Cardiology, Columbia University College of Physicians and Surgeons, New York, NY; <sup>2</sup>Division of Cardiology, Children's Medical Center, UT Southwestern Medical Center, Dallas, TX; <sup>3</sup>Division of Cardiology, Primary Children's Medical Center, Salt Lake City, UT; <sup>4</sup>Division of Pediatric Cardiology, University of Florida, Gainesville, FL; <sup>5</sup>Cardiothoracic Surgery, University of Alabama at Birmingham, Birmingham, AL; <sup>6</sup>Seattle Children's Hospital, Seattle, WA; <sup>7</sup>Division of Pediatric Cardiology, Duke University School of Medicine, Durham, NC; <sup>8</sup>Emory University School of Medicine, Atlanta, GA.
- 2:45 PM (73) ECMO at Heart Transplant Listing: Has Waitlist Survival Improved in the Era of Pediatric VAD Support?;** C.S. Almond,<sup>1</sup> T.P. Singh,<sup>1</sup> K.P. Daly,<sup>1</sup> C. VanderPluym,<sup>1</sup> L.B. Smoot,<sup>1</sup> E. Kehoe,<sup>1</sup> D. Rosenthal,<sup>2</sup> <sup>1</sup>Cardiology, Boston Children's Hospital, Boston, MA; <sup>2</sup>Cardiology, Stanford University/Lucile Packard Children's Hospital, Palo Alto, CA.
- 3:00 PM (74) Liver Cirrhosis in Fontan Patients Does Not Affect One Year Post-Heart Transplant Mortality or Markers of Liver Function;** K.E. Simpson, A. Esmaeeli, G. Khanna, F.V. White, Y. Turmelle, C.E. Canter. Washington University Saint Louis School of Medicine, Saint Louis, MO.
- 3:15 PM (75) Maintenance Steroid Use and Outcomes of Pediatric Heart Transplantation: A Propensity Matched Analysis of the Pediatric Heart Transplant Study (PHTS) Database;** S.R. Auerbach,<sup>1</sup> M. Kukreja,<sup>2</sup> D. Gilbert,<sup>1</sup> H. Bastardi,<sup>3</sup> B. Feingold,<sup>4</sup> K. Knecht,<sup>5</sup> B.D. Kaufman,<sup>6</sup> R.N. Brown,<sup>2</sup> S.D. Miyamoto.<sup>1</sup> <sup>1</sup>Pediatrics, Division of Cardiology, University of Colorado School of Medicine, Aurora, CO; <sup>2</sup>Division of Cardiothoracic Surgery, University of Alabama at Birmingham, Birmingham, AL; <sup>3</sup>Pediatric Cardiology, Boston Children's Hospital, Boston, MA; <sup>4</sup>Pediatric Cardiology, Children, Pittsburgh, PA; <sup>5</sup>Pediatrics, University of Arkansas for Medical Sciences, Arkansas Children's Hospital, Little Rock, AR; <sup>6</sup>Pediatric Cardiology, The Children's Hospital of Philadelphia/University of Pennsylvania, Philadelphia, PA.

3:30 PM – 4:00 PM

COFFEE BREAK / VISIT EXHIBITS / VIEW POSTERS (516; 517AB)

4:00 PM – 5:30 PM

**CONCURRENT SESSION 13****MCS 4: VAD Clots - Beyond LDH (517CD)****CHAIRS:** Ulrich P. Jorde, MD and Stephen H. McKellar, MD, MSc

- 4:00 PM (76) Hemolysis in Patients Supported with Durable, Long-Term Left Ventricular Assist Device Therapy;** J.N. Katz,<sup>1</sup> B.C. Jensen,<sup>1</sup> P.P. Chang,<sup>1</sup> W.E. Stansfield,<sup>1</sup> H. Alhousaini,<sup>2</sup> S.L. Myers,<sup>3</sup> F.D. Pagani,<sup>4</sup> J.K. Kirklin.<sup>3</sup> <sup>1</sup>University of North Carolina at Chapel Hill, Chapel Hill, NC; <sup>2</sup>East Carolina University, Greenville, NC; <sup>3</sup>University of Alabama at Birmingham, Birmingham, AL; <sup>4</sup>University of Michigan, Ann Arbor, MI.
- 4:15 PM (77) Lactate Dehydrogenase Is Superior to Serum Free Hemoglobin as a Marker of Pump Thrombosis in Left Ventricular Assist Devices;** P. Shah,<sup>1</sup> V.M. Mehta,<sup>2</sup> J.A. Cowger,<sup>1</sup> J.W. Haft,<sup>3</sup> M.A. Romano,<sup>3</sup> K.D. Aaronson,<sup>1</sup> F.D. Pagani.<sup>3</sup> <sup>1</sup>Division of Cardiology, University of Michigan, Ann Arbor, MI; <sup>2</sup>College of Literature, Arts and Science, University of Michigan, Ann Arbor, MI; <sup>3</sup>Department of Cardiac Surgery, University of Michigan, Ann Arbor, MI.
- 4:30 PM (78) HeartMate II Explants Due to Hemolysis Show Acute on Chronic Lamellar Fibrin Layering at Stators;** S.M. Prasad,<sup>1</sup> A. Itoh,<sup>1</sup> S.M. Joseph,<sup>2</sup> G.A. Ewald,<sup>2</sup> S.C. Silvestry.<sup>1</sup> <sup>1</sup>Cardiothoracic Surgery, Washington University, St. Louis, MO; <sup>2</sup>Cardiology, Washington University, St. Louis, MO.
- 4:45 PM (79) A Novel Link between G6PD Deficiency and Hemolysis Events in Patients Supported with Continuous-Flow Left Ventricular Assist Devices;** H. Alhousaini,<sup>1</sup> J.N. Katz,<sup>2</sup> B.C. Jensen,<sup>2</sup> W. Stansfield,<sup>3</sup> B.C. Sheridan,<sup>3</sup> P.P. Chang.<sup>2</sup> <sup>1</sup>Department of Cardiovascular Sciences, East Carolina Heart Institute, Greenville, NC; <sup>2</sup>Department of Medicine, University of North Carolina at Chapel Hill, Chapel Hill, NC; <sup>3</sup>Department of Surgery, University of North Carolina at Chapel Hill, Chapel Hill, NC.
- 5:00 PM (80) Comparing Survival of HMII Patients with Elevated LDH: Implications for Medical and Surgical Management;** C.C. Ballew,<sup>1</sup> E.M. Benton,<sup>1</sup> D.S. Groves,<sup>2</sup> J.L.W. Kennedy,<sup>1</sup> G. Ailawadi,<sup>1</sup> J.A. Kern,<sup>1</sup> J.D. Bergin.<sup>1</sup> <sup>1</sup>Heart Center, University of Virginia Health System, Charlottesville, VA; <sup>2</sup>Anesthesia, University of Virginia Health System, Charlottesville, VA.
- 5:15 PM (81) Early Elevation in Pump Power with the HeartMate II Left Ventricular Assist Device Does Not Predict Late Adverse Events;** C. Salerno,<sup>1</sup> K.S. Sundareswaran,<sup>2</sup> T.P. Schleeter,<sup>1</sup> S.L. Moanie,<sup>1</sup> D.J. Farrar,<sup>2</sup> M.N. Walsh.<sup>1</sup> <sup>1</sup>St. Vincent Heart Center of Indiana, Indianapolis, IN; <sup>2</sup>Research and Scientific Affairs, Thoratec Corporation, Pleasanton, CA.

4:00 PM – 5:30 PM

## CONCURRENT SESSION 14

**Heart 4: Living with a Transplanted Heart – A Narrow Pathway in the Jungle (511)****CHAIRS:** Hannah A. Valantine, MD, MRCP, FACC and Francisco Gonzalez-Vilchez, MD, PhD**4:00 PM (82) *Pregnancy Outcomes in Heart Transplant Recipients with Exposure to Mycophenolic Acid Products*; L.A. Coscia,<sup>1</sup> C.H. McGroarty,<sup>1</sup> L. Ohler,<sup>2</sup> M.J. Moritz,<sup>3</sup> V.T. Armenti.<sup>1</sup> <sup>1</sup>National Transplantation Pregnancy Registry, Philadelphia, PA; <sup>2</sup>Marymount University, Arlington, VA; <sup>3</sup>Lehigh Valley Health Network, Allentown, PA.****4:15 PM (83) *Body Mass Index Impacts Immediate and Long-Term Survival of Heart Transplant Recipients*; Y. Ravi,<sup>1</sup> B.A. Whitson,<sup>1</sup> S. Emani,<sup>1</sup> S. Bansal,<sup>1</sup> A. Kilic,<sup>1</sup> J. Crestanello,<sup>1</sup> R. John,<sup>2</sup> R. Higgins,<sup>1</sup> C.B. Sai-Sudhakar.<sup>1</sup> <sup>1</sup>Surgery, The Ohio State University, Columbus, OH; <sup>2</sup>Surgery, University of Minnesota, Minneapolis, MN.****4:30 PM (84) *You Are What You Eat: Impact of Early Metabolic Syndrome on Long-Term Outcome after Heart Transplantation*; M. Groemmer, J. Linz, A.Z. Aliabadi, D. Dunkler, D. Wiedemann, G. Laufer, A.O. Zuckermann. Cardiac Surgery, Medical University of Vienna, Vienna, Austria.****4:45 PM (85) *Incidence of Malignancy on Tacrolimus Monotherapy Versus Combination Therapy: A Report from the TICTAC Trial*; D.A. Baran,<sup>1</sup> H. Vefali,<sup>1</sup> V. Costa,<sup>1</sup> C.Y. Guerrero-Miranda,<sup>1</sup> J.A. Weiss,<sup>1</sup> J. Pieretti,<sup>1</sup> C.G. Gidea,<sup>1</sup> M. Camacho,<sup>1</sup> M.J. Zucker.<sup>1</sup> <sup>1</sup>Transplant Center, Newark Beth Israel Medical Center, Newark, NJ; <sup>2</sup>Transplant Center, Newark Beth Israel Medical Center, Newark, NJ; <sup>3</sup>Transplant Center, Newark Beth Israel Medical Center, Newark, NJ.****5:00 PM (86) *Even Mild Renal Insufficiency Is a Risk for Mortality after Heart Transplant*; M. Kittleson, J. Patel, M. Rafiei, A. Osborne, G. Jamero, D.H. Chang, B. Azarbal, L. Czer, J. Kobashigawa. Cedars-Sinai Heart Institute, Los Angeles, CA.****5:15 PM (87) *Allomap Gene Expression Profiling In Lieu of Routine Endomyocardial Biopsy (EMB) at 6 Months Post Transplant*; A.M. Thomley, K.G. Robinson, S.K. Gulati, A.S. Edwards, S.M. Bernardo, E.R. Skipper, T.A. Frank. Cardiac Transplant Program, Carolinas Medical Center, Charlotte, NC.**

4:00 PM – 5:30 PM

## CONCURRENT SESSION 15

**Lung 2: Primary Graft Dysfunction (510)****CHAIRS:** James C. Lee, MD, Keith M. Wille, MD and Gregory I. Snell, MD**4:00 PM (88) *Lung Size Mismatch and Primary Graft Dysfunction after Bilateral Lung Transplantation*; M. Eberlein,<sup>1</sup> R.M. Reed,<sup>2</sup> S. Bolukbas,<sup>3</sup> J.B. Orens,<sup>4</sup> R.G. Brower,<sup>3</sup> C.A. Merlo,<sup>4</sup> L.B. Ware,<sup>5</sup> K.M. Wille,<sup>6</sup> A. Weinacker,<sup>7</sup> R. Shah,<sup>8</sup> J. Diamond,<sup>8</sup> S.M. Kawut,<sup>8</sup> J.D. Christie.<sup>8</sup> <sup>1</sup>University of Iowa Hospitals and Clinics, Iowa City; <sup>2</sup>University of Maryland, Baltimore; <sup>3</sup>HSK, Wiesbaden, Germany; <sup>4</sup>Johns Hopkins University, Baltimore; <sup>5</sup>Vanderbilt University, Nashville; <sup>6</sup>University of Alabama, Birmingham; <sup>7</sup>Stanford Hospital and Clinics, Stanford; <sup>8</sup>University of Pennsylvania, Philadelphia.****4:15 PM (89) *Apoptosis, Not Necrosis, during Ex-Vivo Lung Perfusion Is Correlated with Severe PGD*; K. Hashimoto, T. Saito, T.N. Machuca, V. Linacre, D. Nakajima, S. Azad, T.K. Waddell, M. Liu, M. Cypel, S. Keshavjee. Latner Thoracic Surgery Laboratories, University of Toronto, Toronto, ON, Canada.****4:30 PM (90) *Gene Set Enrichment Analysis of Bronchial Alveolar Lavage Fluid Identifies Key Innate Immune Pathways in Primary Graft Dysfunction after Lung Transplantation*; E. Cantu,<sup>1</sup> D.J. Lederer,<sup>2</sup> K.C. Meyer,<sup>3</sup> R.K. Milewski,<sup>1</sup> Y. Suzuki,<sup>1</sup> R.J. Shah,<sup>4,5</sup> J.M. Diamond,<sup>4,5</sup> N.J. Meyer,<sup>4,5</sup> J.W. Tobias,<sup>6</sup> D.A. Baldwin,<sup>7</sup> V.M. Van Deerlin,<sup>8</sup> K.M. Olthoff,<sup>1</sup> A. Shaked,<sup>1</sup> J.D. Christie.<sup>3,5</sup> <sup>1</sup>Surgery, University of Pennsylvania Perelman School of Medicine, Philadelphia, PA; <sup>2</sup>Medicine, Columbia University College of Physicians and Surgeons, New York, NY; <sup>3</sup>Medicine, University of Wisconsin School of Medicine and Public Health, Madison, WI; <sup>4</sup>Medicine, University of Pennsylvania Perelman School of Medicine, Philadelphia, PA; <sup>5</sup>Center for Clinical Epidemiology and Biostatistics, University of Pennsylvania Perelman School of Medicine, Philadelphia, PA; <sup>6</sup>Penn Molecular Profiling Facility, University of Pennsylvania Perelman School of Medicine, Philadelphia, PA; <sup>7</sup>Pathonomics LLC, Philadelphia, PA; <sup>8</sup>Pathology and Laboratory Medicine, University of Pennsylvania Perelman School of Medicine, Philadelphia, PA.****4:45 PM (91) *Surfactant Pretreatment Is Superior to Treatment after Reperfusion for Lung Ischemia-Reperfusion Injury*; N.P. van der Kaaij,<sup>1</sup> J. Kluijn,<sup>1</sup> M.A. Den Bakker,<sup>2</sup> B.N. Lambrecht,<sup>3</sup> B. Lachmann,<sup>4</sup> R.W.F. de Bruin,<sup>5</sup> J.J.J.C. Bogers.<sup>6</sup> <sup>1</sup>Cardio-Thoracic Surgery, UMC Utrecht, Utrecht, Netherlands; <sup>2</sup>Pathology, Erasmus MC, Rotterdam, Netherlands; <sup>3</sup>Pulmonary Medicine, University Hospital Gent, Gent, Belgium; <sup>4</sup>Anesthesia and Intensive Care Medicine, Charité, Campus Virchow-Klinikum, Humboldt-University, Berlin, Germany; <sup>5</sup>Surgery, Erasmus MC, Rotterdam, Netherlands; <sup>6</sup>Cardio-Thoracic Surgery, Erasmus MC, Rotterdam, Netherlands.****5:00 PM (92) *Plasma Free Hemoglobin Potentiates the Association between Reperfusion FiO2 and Primary Graft Dysfunction after Lung Transplantation*; L.B. Ware,<sup>1</sup> D.R. Janz,<sup>1</sup> J.M. Diamond,<sup>2</sup> D.J. Lederer,<sup>3</sup> S.M. Kawut,<sup>2</sup> S. Bhorade,<sup>4</sup> S.M. Palmer,<sup>5</sup> K.M. Wille,<sup>6</sup> A. Weinacker,<sup>7</sup> V. Lama,<sup>8</sup> M. Crespo,<sup>9</sup> J.B. Orens,<sup>10</sup> J.D. Christie MD and the Lung Transplant Outcomes Group.<sup>2</sup> <sup>1</sup>Vanderbilt University, Nashville; <sup>2</sup>University of Pennsylvania, Philadelphia; <sup>3</sup>Columbia University, New York; <sup>4</sup>University of Chicago, Chicago; <sup>5</sup>Duke University, Durham; <sup>6</sup>University of Alabama, Birmingham; <sup>7</sup>Stanford University, Palo Alto; <sup>8</sup>University of Michigan, Ann Arbor; <sup>9</sup>University of Pittsburgh, Pittsburgh; <sup>10</sup>Johns Hopkins University, Baltimore.**



**5:15 PM (93) *Clinical Risk Factors for Primary Graft Dysfunction after Lung Transplantation***; J.M. Diamond,<sup>1</sup> J.C. Lee,<sup>1</sup> S.M. Kawut,<sup>1</sup> R.J. Shah,<sup>1</sup> A.R. Localio,<sup>2</sup> S.L. Bellamy,<sup>2</sup> E. Cantu,<sup>4</sup> D.J. Lederer,<sup>3</sup> B.A. Kohl,<sup>5</sup> V.N. Lama,<sup>6</sup> S. Bhorade,<sup>7</sup> M. Crespo,<sup>8</sup> E. Demissie,<sup>1</sup> J. Sonett,<sup>9</sup> K. Wille,<sup>10</sup> J. Orens,<sup>11</sup> A.S. Shah,<sup>12</sup> A. Weinacker,<sup>13</sup> S.M. Arcasoy,<sup>3</sup> P.D. Shah,<sup>11</sup> D.S. Wilkes,<sup>14,17</sup> L.B. Ware,<sup>15</sup> S.M. Palmer,<sup>16</sup> J.D. Christie.<sup>1</sup> <sup>1</sup>Pulmonary, Allergy, and Critical Care Medicine, Perelman School of Medicine at the University of Pennsylvania, Philadelphia, PA; <sup>2</sup>Biostatistics, Perelman School of Medicine at the University of Pennsylvania, Philadelphia, PA; <sup>3</sup>Pulmonary, Allergy, and Critical Care Medicine, Columbia University College of Physicians and Surgeons, New York, NY; <sup>4</sup>Surgery, Perelman School of Medicine at the University of Pennsylvania, Philadelphia, PA; <sup>5</sup>Anesthesiology and Critical Care, Perelman School of Medicine at the University of Pennsylvania, Philadelphia, PA; <sup>6</sup>Pulmonary, Allergy, and Critical Care Medicine, University of Michigan, Ann Arbor, MI; <sup>7</sup>Pulmonary and Critical Care Medicine, University of Chicago, Chicago, IL; <sup>8</sup>Pulmonary, Allergy, and Critical Care, University of Pittsburgh, Pittsburgh, PA; <sup>9</sup>Surgery, Columbia University College of Physicians and Surgeons, New York, NY; <sup>10</sup>Pulmonary, Allergy, and Critical Care Medicine, University of Alabama at Birmingham, Birmingham, AL; <sup>11</sup>Pulmonary and Critical Care Medicine, Johns Hopkins University Hospital, Baltimore, MD; <sup>12</sup>Surgery, Johns Hopkins University Hospital, Baltimore, MD; <sup>13</sup>Pulmonary and Critical Care, Stanford University, Palo Alto, CA; <sup>14</sup>Pulmonary, Allergy, Critical Care, and Occupational Medicine, Indiana University School of Medicine, Indianapolis, IN; <sup>15</sup>Medicine and Pathology, Microbiology and Immunology, Vanderbilt University, Nashville, TN; <sup>16</sup>Pulmonary, Allergy, and Critical Care Medicine, Duke University, Durham, NC; <sup>17</sup>Indiana University Health Lung Transplant Program, Indianapolis, IN.

4:00 PM – 5:30 PM

## CONCURRENT SESSION 16

**NHSAH 1: Implications and Innovations Throughout the Lung Transplant Trajectory (512A-G)**

**CHAIRS:** Bronwyn J Levvey, RN Grad Dip Clin Epi and Nancy P. Blumenthal, CRNP, CCTC

- 4:00 PM (94) *Frailty Is Common in Lung Transplant Candidates and Associated with Poorer Health-Related Quality of Life***; J.P. Singer,<sup>1,2</sup> P.P. Katz,<sup>1</sup> M.Y. Dean,<sup>1</sup> J. Chen,<sup>1</sup> B. Su,<sup>1</sup> R. Kern,<sup>1</sup> L.E. Leard,<sup>1</sup> S.R. Hays,<sup>1</sup> J. Kukreja,<sup>3</sup> P.D. Blanc.<sup>1</sup> <sup>1</sup>Medicine, UC San Francisco, San Francisco; <sup>2</sup>Cardiovascular Research Institute, UC San Francisco, San Francisco; <sup>3</sup>Surgery, UC San Francisco, San Francisco.
- 4:15 PM (95) *Should Recipients Choose Their Donor? Experience of a New Consent Process in Lung Transplantation***; K.E. Morley, H.K. Muse, K.N. Wallace, G. Parry, S.C. Clark. Cardiopulmonary Transplantation, Freeman Hospital, Newcastle upon Tyne, Tyne and Wear, United Kingdom.
- 4:30 PM (96) *Nutrition in the CF Population: Impact on Wait-List and Post-Transplant Survival, a Single Center's Experience***; E. Mahoney,<sup>1</sup> R. Dunn,<sup>1</sup> S. Forsythe,<sup>2</sup> E. Lowery.<sup>2</sup> <sup>1</sup>Loyola University Medical Center, Maywood, IL; <sup>2</sup>Department of Medicine, Loyola University Medical Center, Maywood, IL.
- 4:45 PM (97) *Pattern and Predictors of Hospital Readmission after Lung Transplantation***; R. Zomak,<sup>1</sup> S. Whiteman,<sup>1</sup> L. Keddie,<sup>1</sup> K. Meyer,<sup>1</sup> A. Feinberg,<sup>1</sup> F. Speicher,<sup>1</sup> C. Bermudez,<sup>1</sup> J. Pilewski,<sup>1</sup> M. Alrawashdeh,<sup>2</sup> A. DeVito Dabbs.<sup>2</sup> <sup>1</sup>Cardiothoracic Transplant Program, UPMC, Pittsburgh, PA; <sup>2</sup>School of Nursing, University of Pittsburgh, Pittsburgh, PA.
- 5:00 PM (98) *Socioeconomic Disparities Associated with Medication Non-Adherence Following Lung Transplantation in Adult Recipients***; A.W. Castleberry,<sup>1</sup> P.J. Speicher,<sup>1</sup> M. Worni,<sup>1</sup> A.A. Osho,<sup>1</sup> L.D. Snyder,<sup>2</sup> K.L. Gandy,<sup>3</sup> R.S. Pietrobon,<sup>1</sup> R.D. Davis,<sup>4</sup> M.G. Hartwig.<sup>4</sup> <sup>1</sup>Division of General Surgery, Duke University Medical Center, Durham, NC; <sup>2</sup>Division of Pulmonary and Critical Care, Duke University Medical Center, Durham, NC; <sup>3</sup>Division of Pediatrics, Medical College of Wisconsin, Milwaukee, WI; <sup>4</sup>Division of Thoracic and Cardiovascular Surgery, Duke University Medical Center, Durham, NC.
- 5:15 PM (99) *Stress and Anxiety in Caregivers of Lung Transplant Patients: Effect of Mindfulness Based Stress Reduction***; J. Haines,<sup>1</sup> A. Blazek,<sup>1</sup> L. Hoffman,<sup>1</sup> J.Y. Choi,<sup>1</sup> S. Kathleen.<sup>2</sup> <sup>1</sup>Acute and Tertiary Care, University of Pittsburgh School of Nursing, Pittsburgh, PA; <sup>2</sup>Department of Nursing, Chatham University, Pittsburgh, PA.



4:00 PM – 5:30 PM

## CONCURRENT SESSION 17

**BSTR 1: New Frontiers in Cardiothoracic Organ Regeneration – From Cosmetic to Prosthetic (513ABC)****CHAIRS:** Sonja Schrepfer, MD, PhD and Shaf Keshavjee, MD

- 4:00 PM (100) Decellularizing Human Hearts: Characterizing Native Cardiac Matrix for Clinical Translation;** J.P. Guyette,<sup>1</sup> J.J. Song,<sup>1</sup> W. Chuang,<sup>1</sup> R. Ng,<sup>1</sup> J.M. Charest,<sup>1</sup> G.R. Gaudette,<sup>2</sup> J.P. Vacanti,<sup>1</sup> H.C. Ott.<sup>1</sup> <sup>1</sup>Center for Regenerative Medicine, Massachusetts General Hospital, Boston, MA; <sup>2</sup>Department of Biomedical Engineering, Worcester Polytechnic Institute, Worcester, MA.
- 4:15 PM (101) Discovery of mRNA Biomarkers Predicting Donor Lung Failure;** R. Zamel, T.N. Machuca, J.C. Yeung, R. Bonato, X.H. Bai, T.K. Waddell, M. Liu, M. Cypel, S. Keshavjee. Latner Thoracic Research Laboratories, University Health Network, Toronto, ON, Canada.
- 4:30 PM (102) Injectable Matrix Bioscaffolds Improve LV Function and Stimulate Cardiomyocyte Regeneration in Infarcted Hearts;** W.D. Boyd,<sup>1</sup> R.G. Matheny,<sup>2</sup> J.N. Young,<sup>1</sup> A.M. Fallon.<sup>2</sup> <sup>1</sup>Surgery, University of California Davis, Sacramento, CA; <sup>2</sup>Cormatrix Cardiovascular, Alpharetta, GA.
- 4:45 PM (103) Development of 3-Dimensional Prevascularized Scaffold-Free Contractile Cardiac Patch for Heart Regeneration;** R. Noguchi,<sup>1</sup> K. Nakayama,<sup>2</sup> M. Itoh,<sup>1</sup> K. Kamohara,<sup>1</sup> K. Furukawa,<sup>1</sup> J. Oyama,<sup>3</sup> K. Node,<sup>3</sup> S. Morita.<sup>1</sup> <sup>1</sup>Thoracic and Cardiovascular Surgery, Saga University, Saga, Japan; <sup>2</sup>Biomedical Engineering Course Advanced Technology, Saga University, Saga, Japan; <sup>3</sup>Cardiology, Saga University, Saga, Japan.
- 5:00 PM (104) Lung Injuries Induced by Gastric Acid Aspiration Are Attenuated by Exogenous Surfactant during Ex Vivo Recombination in Pigs;** T. Khalife, E. Sage, P. Dorfmueller, S. Eddahibi, E. Fadel. Laboratoire de Recherche Chirurgicale INSERM U999, Hopital Marie Lannelongue, Le Plessis Robinson, France.
- 5:15 PM (105) Protein Expression Profiling Predicts Graft Performance in Clinical Ex Vivo Lung Perfusion;** T.N. Machuca, M. Cypel, M.K. Hsin, R. Zamel, J.C. Yeung, M. Chen, T. Saito, Z. Guan, T.K. Waddell, M. Liu, S. Keshavjee. University of Toronto, Toronto, Canada.

4:00 PM – 5:30 PM

## CONCURRENT SESSION 18

**ID 1: From Fungus to Virus – The Microbiome Elicited (513DEF)****CHAIRS:** Lara Danziger-Isakov, MD, MPH and Me-Linh Luong, MD

- 4:00 PM (106) Utility of Bronchoalveolar Lavage Galactomannan in Diagnosis of Aspergillosis in Lung Transplant Recipients;** M.I. Birader,<sup>1</sup> M.D. Holmes,<sup>1</sup> S. Kidd,<sup>2</sup> C.L. Holmes-Liew.<sup>1</sup> <sup>1</sup>SA Lung Transplant Unit, Royal Adelaide Hospital, Adelaide, Australia; <sup>2</sup>Mycology Department, SA Pathology, Women's and Children's Hospital, North Adelaide, South Australia, Australia.
- 4:15 PM (107) Characteristics and Outcome of Influenza Infections in Lung Transplant Recipients: A Single Season Cohort Study;** M.M. Schuurmans,<sup>1</sup> C. Benden,<sup>1</sup> C. Jungo,<sup>1</sup> J. Boeni,<sup>2</sup> B. Annette.<sup>1</sup> <sup>1</sup>Division of Pulmonary Medicine, University Hospital, Zurich, Switzerland; <sup>2</sup>Institute of Medical Virology, University of Zurich, Zurich, Switzerland.
- 4:30 PM (108) Long-Term Outcomes of Lung Transplantation (LT) in Hepatitis C Positive (HCV+) Patients;** P. Garcha,<sup>1</sup> R. Fadul,<sup>1</sup> A. Kapoor,<sup>1</sup> O. Akindipe,<sup>1</sup> C. Lane,<sup>1</sup> A. Mehta,<sup>1</sup> T. Olbyrch,<sup>1</sup> H. Blazey,<sup>1</sup> D. Mason,<sup>2</sup> S. Murthy,<sup>2</sup> D. Johnston,<sup>2</sup> G. Pettersson,<sup>2</sup> K. McCurry,<sup>2</sup> M. Budev.<sup>1</sup> <sup>1</sup>Pulmonary & Critical Care Medicine, Cleveland Clinic, Cleveland, OH; <sup>2</sup>Thoracic & Cardiovascular Surgery, Cleveland Clinic, Cleveland, OH.
- 4:45 PM (109) Clostridium Difficile Infection Increases Mortality Risk in Lung Transplant Recipients;** J.T. Lee,<sup>1</sup> R.F. Kelly,<sup>2</sup> M.I. Hertz,<sup>3</sup> J.M. Dunitz,<sup>3</sup> S.J. Shumway.<sup>2</sup> <sup>1</sup>Department of Surgery, Division of Colon and Rectal Surgery, University of Minnesota, Minneapolis, MN; <sup>2</sup>Department of Surgery, Division of Cardiothoracic Surgery, University of Minnesota, Minneapolis, MN; <sup>3</sup>Department of Medicine, Division of Pulmonary, Allergy, Critical Care, and Sleep Medicine, University of Minnesota, Minneapolis, MN.
- 5:00 PM (110) Predictors of Chronic Lung Allograft Dysfunction (CLAD) Following Respiratory Viral Infection (RVI);** K. Halloran, J. Chang, A. Kapasi, J. Weinkauff, D. Lien, R. Nador. Medicine, University of Alberta, Edmonton, AB, Canada.
- 5:15 PM (111) Efficacy of BAL Galactomannan (GM) and Culture Based Pre-Emptive Antifungal Therapy (PET) in Lung Transplant Recipients (LTRs);** A. Bhaskaran,<sup>2</sup> L.G. Singer,<sup>1</sup> A. Yinka,<sup>2</sup> C. Chaparro,<sup>1</sup> C. Rotstein,<sup>2</sup> T. Mazzulli,<sup>1</sup> S. Keshavjee,<sup>1</sup> S. Husain.<sup>2</sup> <sup>1</sup>Toronto Lung Transplant Program, University of Toronto, Toronto, Canada; <sup>2</sup>University Health Network, University of Toronto, Toronto, Canada

4:30 PM – 6:30 PM

PH in LHD WORKSHOP (512H)

5:30 PM – 6:30 PM

GENERAL POSTER SESSION 2 (516)

(SEE PAGE 204 FOR LISTING OF POSTER PRESENTATIONS)

5:30 PM – 7:00 PM

COUNCIL CHAIRS' RECEPTION/MEETING (519A)

5:30 PM – 6:30 PM

## MINI ORAL SESSION 1

## Heart Post-Transplantation (513ABC)

**CHAIRS:** Debra L. Isaac, MD and Arezu Z. Alibadi, MD

**5:30 PM (112) Cardiac Allograft Vasculopathy after Heart and Heart-Lung Transplantations: Is There Any Protective Role from the Lung?;** J. Guihaire,<sup>1</sup> O. Mercier,<sup>2</sup> E. Flecher,<sup>1</sup> F. Leroy Ladurie,<sup>2</sup> C. Chabanne,<sup>1</sup> T. Langanay,<sup>1</sup> J.P. Verhoye,<sup>1</sup> E. Fadel,<sup>2</sup> P. Dartevelle,<sup>2</sup> A. Leguerrier.<sup>1</sup> <sup>1</sup>Thoracic and Cardiovascular Surgery, Pontchaillou Hospital, Rennes, France; <sup>2</sup>Thoracic, Vascular Surgery and Heart-Lung Transplantation, Marie Lannelongue Hospital, Le Plessis Robinson, France.

**5:35 PM (113) Proliferation Signal Inhibitors Reduce Severity of Cardiac Allograft Vasculopathy after Heart Transplantation;** J. Patel, M. Kittleson, M. Rafiei, A. Osborne, D.H. Chang, L. Czer, J. Kobashigawa. Cedars-Sinai Heart Institute, Los Angeles, CA.

**5:40 PM (114) Benefit of Tacrolimus/Mycophenolate To Reduce Cardiac Allograft Vasculopathy after Heart Transplantation;** J. Patel, M. Kittleson, M. Rafiei, A. Osborne, A. Aaronson, D.H. Chang, B. Azarbal, L. Czer, J. Moriguchi, J. Kobashigawa. Cedars-Sinai Heart Institute, Los Angeles, CA.

**5:45 PM (115) Role of Percutaneous Intervention in Treatment of Proximal Cardiac Allograft Vasculopathy as Compared to Diffuse Distal Disease;** S. Agarwal, N.S. Bajaj, A. Parashar, D. Modi, E.M. Tuzcu, R.C. Starling, G.H. Oliveira. Heart and Vascular Institute, Cleveland Clinic, Cleveland, OH.

**5:50 PM (116) Early Inflammatory Predictors of Cardiac Allograft Vasculopathy;** C.A. Labarrere,<sup>1</sup> J.R. Woods,<sup>2</sup> J.W. Hardin,<sup>3</sup> B.R. Jaeger,<sup>4</sup> M. Zembala,<sup>5</sup> M.C. Deng,<sup>6</sup> P.C. Kirlin,<sup>7</sup> D.E. Pitts.<sup>7</sup> <sup>1</sup>CBL Partners for Life, Noblesville, IN; <sup>2</sup>Methodist Research Institute, Indiana University Health, Indianapolis, IN; <sup>3</sup>Epidemiology and Biostatistics, University of South Carolina, Columbia, SC; <sup>4</sup>Dr. Stein und Kollegen, Mönchengladbach, Germany; <sup>5</sup>Silesian Center for Heart Diseases, Zabrze, Poland; <sup>6</sup>Ronald Reagan UCLA Medical Center, Los Angeles, CA; <sup>7</sup>St Vincent Heart Center of Indiana, Indianapolis, IN.

**5:55 PM (117) Influence of Cytomegalovirus (CMV) Infection in the Development of Cardiac Allograft Vasculopathy (CAV) in Heart Transplants Recipients (HT);** J.F. Delgado, A. García-Reyne, S. de Dios, F. López-Medrano, A. Jurado, J.M. Cortina, M.J. Ruiz-Cano, J. García-Tejada, M.A. Gómez-Sánchez, J.M. Aguado, P. Escribano, C. Lumbreras. Cardiology and Infectious Disease, 12 de Octubre University Hospital, Madrid, Spain.

**6:00 PM (118) Influence of Liver and Renal Impairments on Early Mortality in Heart Transplant Patients;** P. Lebray,<sup>1</sup> S. Varnous,<sup>2</sup> P. Leprince,<sup>2</sup> C.E. Luyt,<sup>3</sup> G. Rousseau,<sup>4</sup> A. Pascale,<sup>5</sup> D. Thabut,<sup>1</sup> V. Ratziu,<sup>1</sup> J.C. Vaillant,<sup>4</sup> J. Chastre,<sup>3</sup> A. Pavie.<sup>2</sup> <sup>1</sup>Hepatogastroenterology Unit, Paris VI-Pitie-Salpetriere Hospital, Paris, France; <sup>2</sup>Cardiothoracic Surgical Unit, Paris VI-Pitie-Salpetriere Hospital, Paris, France; <sup>3</sup>Anaesthesia Department, Paris VI-Pitie-Salpetriere Hospital, Paris, France; <sup>4</sup>Liver Transplantation Unit, Paris VI-Pitie-Salpetriere Hospital, Paris, France; <sup>5</sup>Hepatology Unit, Paris VI- Saint-Antoine Hospital, Paris, France.

**6:05 PM (119) Neopterin Predicts Poor Short- and Long-Term Outcomes in Heart Transplant Recipients;** O.P. Shevchenko,<sup>1</sup> O.V. Orlova,<sup>1</sup> B.L. Mironkov,<sup>1</sup> I.M. Iljinsky,<sup>1,2</sup> A.G. Kuprijanova,<sup>1,2</sup> A.J. Korner,<sup>1</sup> S.V. Gautier.<sup>1,2</sup> <sup>1</sup>Federal Research Center of Transplantology and Artificial Organs named after Academician V.I. Shumakov, Moscow, Russian Federation; <sup>2</sup>I.M. Sechenov First Moscow State Medical University, Moscow, Russian Federation.

**6:10 PM (120) Outcomes of Orthotopic Heart Transplantation with Extended Allograft Ischemic Time;** A. Polgar,<sup>1</sup> W.C. Yeen,<sup>5</sup> C. Griner,<sup>2</sup> A. Roy,<sup>2</sup> M. Guglin,<sup>3</sup> K. Downes,<sup>4</sup> C. Faber,<sup>2</sup> C. Caldeira.<sup>2</sup> <sup>1</sup>University of Tampa, Tampa; <sup>2</sup>Division of Cardiothoracic Surgery, Tampa General Hospital, Tampa; <sup>3</sup>Department of Cardiology, University of South Florida, Tampa; <sup>4</sup>School of Public Health, University of Maryland, Baltimore; <sup>5</sup>Department of Cardiothoracic Surgery, Minneapolis Heart Institute, Minneapolis.

**6:15 PM (121) Perioperative Levosimendan Therapy Improves Renal Function in Heart Transplant Recipients;** I. Knezevic,<sup>1</sup> G. Poglajen,<sup>1</sup> E. Hrovat,<sup>1</sup> A. Oman,<sup>1</sup> F. Haddad,<sup>2</sup> V. Bojan.<sup>1</sup> <sup>1</sup>Advanced Heart Failure and Transplantation Ctr, Ljubljana, Slovenia; <sup>2</sup>Stanford University School of Medicine, Stanford, CA.

**6:20 PM (122) Prognostic Implications of Donor Age in Outcomes of Heart Transplantation;** S. Mirabet,<sup>1</sup> L. Almenar,<sup>2</sup> M. Crespo-Leiro,<sup>3</sup> J. Segovia,<sup>4</sup> J. Delgado,<sup>5</sup> F. Pérez-Villa,<sup>6</sup> J.L. Lambert,<sup>7</sup> M. Sanz,<sup>8</sup> J. Muñoz,<sup>3</sup> E. Roig.<sup>1</sup> <sup>1</sup>Cardiology, Hospital Sant Pau, Barcelona, Spain; <sup>2</sup>Cardiology, Hospital La Fe, Valencia, Spain; <sup>3</sup>Cardiology, Hospital A Coruña, A Coruña, Spain; <sup>4</sup>Cardiology, Hospital Clínic, Barcelona, Spain; <sup>5</sup>Cardiology, Hospital General de Asturias, Oviedo, Spain; <sup>6</sup>Cardiology, Hospital Miguel Servet, Zaragoza, Spain.

**6:25 PM (123) Establishing a PRA Threshold To Treat Sensitized Patients Awaiting Heart Transplant in the Era of the Virtual Crossmatch;** J. Kobashigawa,<sup>1</sup> R. Tadwalkar,<sup>1</sup> M. Kittleson,<sup>1</sup> J. Patel,<sup>1</sup> J. Moriguchi,<sup>1</sup> M. Rafiei,<sup>1</sup> A. Osborne,<sup>1</sup> D. Chang,<sup>1</sup> L. Czer,<sup>1</sup> F. Esmailian,<sup>1</sup> N. Reinsmoen.<sup>2</sup> <sup>1</sup>Cedars-Sinai Heart Institute, Los Angeles, CA; <sup>2</sup>Cedars-Sinai Medical Center, Los Angeles.

5:30 PM – 6:30 PM

## MINI ORAL SESSION 2

**Mechanical Circulatory Support (513DEF)****CHAIRS:** Daniel J. Goldstein, MD and Stephanie Moore, MD, FACC

- 5:30 PM (124) A Novel Algorithm To Promote Native Aortic Valve Function Using the Next Generation Heartware MVAD;** N.K. Kapur,<sup>1</sup> V. Paruchuri,<sup>1</sup> M. Esposito,<sup>1</sup> D.P. Schraufnagel,<sup>1</sup> D. McSparren,<sup>1</sup> D. Civiello,<sup>1</sup> V. Todd-Elliott,<sup>1</sup> D. Tamez,<sup>2</sup> N.J. Nunez,<sup>2</sup> N. Voskoboynikov,<sup>2</sup> J. Graham,<sup>2</sup> D.T. Pham.<sup>1,1</sup> Surgical and Interventional Research Laboratory, Tufts Medical Center, Boston, MA; <sup>2</sup>Heartware Inc, Framingham, MA.
- 5:35 PM (125) Perforation of the Pneumatic Driveline in Patients Converted to a Portable Driver for the Total Artificial Heart;** K.B. Shah,<sup>1</sup> R.A. Volman,<sup>1</sup> S.C. Harton,<sup>1</sup> D.G. Tang,<sup>2</sup> V. Kasirajan.<sup>2</sup> <sup>1</sup>Division of Cardiology, Virginia Commonwealth University, Richmond, VA; <sup>2</sup>Division of Cardiothoracic Surgery, Virginia Commonwealth University, Richmond, VA.
- 5:40 PM (126) Aortic Valve Commissural Fusion during Continuous-Flow Left Ventricular Assist Device Support Is Associated with Continuous Valve Closure; a Correlation Study between Valve Histopathology and Clinical Patient Characteristics;** J. Martina,<sup>1</sup> M. Schipper,<sup>2</sup> N. de Jonge,<sup>3</sup> R. de Weger,<sup>4</sup> J. Lahpor,<sup>5</sup> A. Vink.<sup>6</sup> <sup>1</sup>Cardiothoracic Surgery, University Medical Center Utrecht, Utrecht, Netherlands; <sup>2</sup>Pathology, University Medical Center Utrecht, Utrecht, Netherlands; <sup>3</sup>Cardiology, Utrecht Medical Center Utrecht, Utrecht, Netherlands.
- 5:45 PM (127) Bi-Caval Dual Lumen Catheter for Venovenous Extracorporeal Membrane Oxygenation as a Bridge to Lung Transplantation for Cystic Fibrosis;** S. Nicolas,<sup>1</sup> S. Edouard,<sup>1</sup> P. Francois,<sup>1</sup> M. Delphine,<sup>1</sup> C. Charles,<sup>2</sup> C. Alain.<sup>1</sup> <sup>1</sup>Thoracic Surgery and Lung Transplantation Unit, Hôpital Foch, Suresnes, France; <sup>2</sup>ICU, Hôpital Foch, Suresnes, France.
- 5:50 PM (128) Comparative Analysis of von Willebrand Disease in Intensive Care Patients before Mechanical Circulatory Support;** C. Oezpeker, S. Ensminger, B. Bohms, D. Roefe, K. Hakim, J. Gummert, H. Milting. Clinic of Thoracic and Cardiovascular Surgery, Erich & Hanna Klessmann-Institute, Ruhr-University Bochum, Heart & Diabetescenter NRW, Bad Oeynhausen, Germany.
- 5:55 PM (129) Measurement of Left Ventricular Chamber Function in the Setting of Ventricular Assist Device Support;** S. Gupta,<sup>1,2</sup> K. Muthiah,<sup>1,2,3</sup> K. Woldendorp,<sup>1,2</sup> D. Robson,<sup>1</sup> P. Jansz,<sup>1</sup> C.S. Hayward.<sup>1,2,3</sup> <sup>1</sup>Heart Failure and Transplant Unit, St. Vincent's Hospital, Sydney, Australia; <sup>2</sup>Faculty of Medicine, The University of New South Wales, Sydney, Australia; <sup>3</sup>Victor Chang Cardiac Research Institute, Sydney, Australia.
- 6:00 PM (130) Concomitant Tricuspid Valve Repair in Patients Undergoing LVAD Placement Reduces Incidence of Acute Right Heart Failure;** L.E. Rodriguez,<sup>1</sup> B.A. Bruckner,<sup>1</sup> T. Motomura,<sup>1</sup> J.D. Estep,<sup>2</sup> B. Trachtenberg,<sup>2</sup> A. Bhimaraj,<sup>2</sup> R.P. Vivo,<sup>2</sup> E.E. Suarez,<sup>1</sup> B.A. Elias,<sup>3</sup> R.R. Bunge,<sup>1</sup> M. Loebe.<sup>1</sup> <sup>1</sup>Cardiovascular Surgery, The Methodist Hospital DeBakey Heart & Vascular Center, Houston, TX; <sup>2</sup>Cardiology, The Methodist Hospital DeBakey Heart & Vascular Center, Houston, TX; <sup>3</sup>Transplant Center, The Methodist Hospital DeBakey Heart & Vascular Center, Houston, TX.

- 6:05 PM (131) Hemolysis Is Strongly Associated with Mortality in LVAD Patients;** A. Ravichandran,<sup>1</sup> J. Parker,<sup>1</sup> S. Joseph,<sup>1</sup> N. Eric,<sup>1</sup> J. Schilling,<sup>1</sup> G. Ewald,<sup>1</sup> S. Silvestry.<sup>2</sup> <sup>1</sup>Cardiovascular Division, Internal Medicine, Washington University School of Medicine, Saint Louis, MO; <sup>2</sup>Department of Surgery, Washington University School of Medicine, Saint Louis, MO.
- 6:10 PM (132) HeartMate II Device Exchange: Single Center Experience;** T. Ota,<sup>1</sup> H. Yerebakan,<sup>1</sup> H. Takayama,<sup>1</sup> N. Uriel,<sup>2</sup> P. Colombo,<sup>2</sup> U. Jorde,<sup>2</sup> Y. Naka.<sup>1</sup> <sup>1</sup>Department of Surgery, Columbia University, New York, NY; <sup>2</sup>Division of Cardiology, Columbia University, New York, NY.
- 6:15 PM (133) Differential Response to Afterload in Axial and Centrifugal Continuous Flow Left Ventricular Assist Devices (CV-LVAD);** B.C. Lampert,<sup>1</sup> C. Eckert,<sup>1</sup> M.A. Shullo,<sup>2</sup> A. Scanlon,<sup>1</sup> S. Weaver,<sup>1</sup> J. Bhama,<sup>1</sup> C. Bermudez,<sup>1</sup> R. Kormos,<sup>1</sup> J.J. Teuteberg.<sup>1</sup> <sup>1</sup>Heart and Vascular Institute, University of Pittsburgh, Pittsburgh, PA; <sup>2</sup>Pharmacy and Therapeutics, University of Pittsburgh, Pittsburgh, PA.
- 6:20 PM (134) A Comparison between HeartMate II and HeartWare LVAD, a Single Center Experience;** M.J. Morshuis, C. Oezpeker, J. Gummert. Thoracic and Cardiovascular Surgery, Heart and Diabetic Center NRW, Bad Oeynhausen, North Rhine Westfalia, Germany.
- 6:25 PM (135) Minimal-Invasive LVAD Implantation, Is It Safe or Even Better?;** A.L. Meyer, J. Hahn, P. von Samson-Himmelstjerna, J. Garbade, M. Barten, F.W. Mohr, M. Strüber. Cardiac Surgery, Heart Center Leipzig, Leipzig, Germany.



5:30 PM – 6:30 PM

## MINI ORAL SESSION 3

## Lung Failure, Diagnosis and Therapy (514B)

**CHAIRS:** Edward Cantu, III, MD and Christiane Knoop, MD, PhD

- 5:30 PM (136) Donor Alcohol Abuse Increases the Risk for Graft Dysfunction in Lung Transplant Recipients;** E.M. Lowery, E. Kuhlmann, E. Mahoney, C. Wigfield, E.J. Kovacs. Medicine, Loyola University Medical Center, Maywood, IL.
- 5:35 PM (138) Candidates Listed for Both Single and Double Lung Do Not Have Improved Post-Transplant Survival with Double Lung Transplant;** N. Shariati, S.M. Studer, C. Migliore, S. Schultz, M. Hur, E. Johnson, M.J. Russo. Lung Center, Barnabas Health Heart and Lung Institute, Newark, NJ.
- 5:40 PM (139) Large-Airway Lymphocytic Bronchitis Predicts Bronchiolitis Obliterans Syndrome;** J.R. Greenland,<sup>1,4</sup> K.D. Jones,<sup>2</sup> S.R. Hays,<sup>1</sup> J.A. Golden,<sup>1</sup> A. Urisman,<sup>2</sup> N.P. Jewell,<sup>3</sup> G.H. Caughey,<sup>1,4</sup> N.N. Trivedi.<sup>1,4</sup> <sup>1</sup>Department of Medicine, University of California San Francisco, San Francisco, CA; <sup>2</sup>Department of Pathology, University of California San Francisco, San Francisco, CA; <sup>3</sup>Division of Biostatistics, University of California, Berkeley, CA; <sup>4</sup>Department of Medicine, Veterans Affairs Medical Center, San Francisco, CA.
- 5:45 PM (140) Impact of Lung Allocation Score on Transplantation Activity and Outcomes – Initial German Experience;** M. Greer,<sup>1</sup> J. Gottlieb,<sup>1</sup> U. Sommerwerck,<sup>2</sup> T. Deuse,<sup>3</sup> C. Witt,<sup>4</sup> C. Hagl,<sup>5</sup> M. Strueber,<sup>6</sup> J. Smits.<sup>7</sup> <sup>1</sup>Pulmonology, Hannover Medical School, Hannover, Germany; <sup>2</sup>Pulmonology, University Hospital Ruhrlandklinik, Essen, Germany; <sup>3</sup>Cardiac and Vascular Surgery, University Medical Center Hamburg-Eppendorf, Hamburg, Germany; <sup>4</sup>Pulmonology, Charité Universitätsmedizin, Berlin, Germany; <sup>5</sup>Cardiac Surgery, Klinikum der Universität München, Munich, Germany; <sup>6</sup>Cardiac Surgery, Herzzentrum Leipzig, Leipzig, Germany; <sup>7</sup>Eurotransplant International Foundation, Leiden, Netherlands.
- 5:50 PM (141) Bronchiolitis Obliterans Syndrome-Free Survival after Two Years in Patients with Higher Frequencies of Regulatory T Cells Early after Lung Transplantation;** J. Salman,<sup>1</sup> A.-K. Knoefel,<sup>1</sup> W. Sommer,<sup>1</sup> C. Kuehn,<sup>1</sup> M. Avsar,<sup>1</sup> J. Gottlieb,<sup>2</sup> A. Haverich,<sup>1</sup> G. Warnecke.<sup>1</sup> <sup>1</sup>Department of Cardiothoracic, Transplantation and Vascular Surgery, Hannover, Germany; <sup>2</sup>Department of Pneumology, Hannover, Germany.
- 5:55 PM (142) S100 Family Proteins in Human Chronic Lung Allograft Dysfunction: Potential Markers for Biologic Subtyping;** T. Saito,<sup>1</sup> M. Liu,<sup>1</sup> M. Binnie,<sup>2</sup> M. Sato,<sup>3</sup> S. Azad,<sup>1</sup> R. Zamel,<sup>1</sup> T.N. Machuca,<sup>1</sup> Y. Matsuda,<sup>1</sup> M. Cypel,<sup>1</sup> T.K. Waddell,<sup>1</sup> S. Keshavjee.<sup>1</sup> <sup>1</sup>Latner Thoracic Surgery Research Laboratories, University Health Network, University of Toronto, Toronto, ON, Canada; <sup>2</sup>Department of Respiriology, University of Toronto, Toronto, ON, Canada; <sup>3</sup>Department of Thoracic Surgery, Kyoto University, Kyoto, Japan.
- 6:00 PM (143) Bronchiolitis Obliterans Syndrome and Restrictive Allograft Syndrome: Do Specific Risk Factors Differ?;** S.E. Verleden, D. Rutten, E. Vandermeulen, A. Vaneylen, D.E. Van Raemdonck, L.J. Dupont, B.M. Vanaudenaerde, G.M. Verleden, R. Vos. KU Leuven, Leuven, Belgium.
- 6:05 PM (144) Gene Expression Profiling To Predict the Development of Bronchiolitis Obliterans Syndrome in Lung Transplant Recipients;** Z. Xu,<sup>1</sup> W. Zhang,<sup>2</sup> A. Sperling,<sup>1</sup> A. Chong,<sup>1</sup> M.L. Alegre,<sup>1</sup> E. Garrity,<sup>1</sup> S. Bhorade.<sup>1</sup> <sup>1</sup>Department of Medicine, University of Chicago, Chicago, IL; <sup>2</sup>Department of Pediatrics, UIC, Chicago, IL.
- 6:10 PM (145) Exhausted T Helper Cells in Lung Transplantation Portend Worse Outcome;** F.Y. Chao, C. Lockard, S.D. Force, F. Fernandez, A. Pickens, R. Bag, E.C. Lawrence, A.D. Kirk, D.C. Neujahr. Emory Transplant Center, Emory University, Atlanta, GA.
- 6:15 PM (146) Pregnancy after Lung Transplantation: A Single Center Experience;** M.V. Thakrar,<sup>1,2</sup> K. Morley,<sup>1</sup> J.L. Lordan,<sup>1</sup> G.J. Meachery,<sup>1</sup> A.J. Fisher,<sup>1</sup> G. Parry,<sup>1</sup> P.A. Corris.<sup>1</sup> <sup>1</sup>Pulmonary Transplant Unit, Freeman Hospital, Newcastle upon Tyne, United Kingdom; <sup>2</sup>Southern Alberta Lung Transplant Program, University of Calgary, Calgary, AB, Canada.
- 6:20 PM (147) Lobar Lung Transplantation for High Risk Patients – Lessons from the Initial Experience;** N. Shigemura,<sup>1</sup> J. D'Cunha,<sup>1</sup> A. Hackman,<sup>1</sup> A. Abou El Ela,<sup>1</sup> A. Shiose,<sup>1</sup> J. Bhamra,<sup>1</sup> C. Gries,<sup>2</sup> M. Crespo,<sup>2</sup> D. Zaltonis,<sup>1</sup> B. Johnson,<sup>2</sup> J. Pilewski,<sup>2</sup> C. Bermudez.<sup>1</sup> <sup>1</sup>Cardiothoracic Surgery, University of Pittsburgh Medical Center, Pittsburgh, PA; <sup>2</sup>Medicine, University of Pittsburgh Medical Center, Pittsburgh, PA.
- 6:25 PM (137) Disparities in Lung Transplantation Before and After Introduction of the Lung Allocation Score;** K.M. Wille,<sup>1</sup> K.F. Harrington,<sup>1</sup> J.A. de Andrade,<sup>1</sup> S. Vishin,<sup>1</sup> R.A. Oster,<sup>1</sup> R.A. Kaslow,<sup>2</sup> <sup>1</sup>Medicine, University of Alabama at Birmingham, Birmingham, AL; <sup>2</sup>Epidemiology, University of Alabama at Birmingham, Birmingham, AL.

5:30 PM – 6:30 PM

## MINI ORAL SESSION 4

## Pulmonary Hypertension (514C)

**CHAIRS:** Robert D. Levy, MD, FRCP and Veronica Franco, MD, MSPH

- 5:30 PM (148) Biomarkers of Idiopathic Pulmonary Arterial Hypertension (iPAH): Volatile Constituents of Expired Breath Condensates (EBC) as Markers of Disease Severity Using Gas Chromatography/Mass Spectroscopy (GC/MS);** R.P. Allen,<sup>1</sup> C.E. Davis,<sup>2</sup> A. Aksenov,<sup>2</sup> A. Pasamontes,<sup>2</sup> J.K. Mansoor,<sup>3</sup> W.F. Walby,<sup>4</sup> J. Figueroa,<sup>4</sup> E.S. Schelegle.<sup>4</sup> <sup>1</sup>Internal Medicine: Pulmonary/CCM, University of California, Davis, Davis, CA; <sup>2</sup>Engineering, University of California, Davis, Davis, CA; <sup>3</sup>Physical Therapy, University of The Pacific, Stockton, CA; <sup>4</sup>Veterinary Medicine: APC, University of California, Davis, Davis, CA.
- 5:35 PM (149) Hemodynamic Changes after Surgical MAZE: Pulmonary Hypertension Secondary to Stiff Left Atrial Syndrome?;** E.R. Fenstad,<sup>1</sup> E.L. Hardegree,<sup>2</sup> R.J. Le,<sup>1</sup> C.M. Witt,<sup>2</sup> S.H. Sheldon,<sup>1</sup> J.M. Stulak,<sup>3</sup> S.S. Kushwaha.<sup>1</sup> <sup>1</sup>Cardiovascular Diseases, Mayo Clinic, Rochester, MN; <sup>2</sup>Internal Medicine, Mayo Clinic, Rochester, MN; <sup>3</sup>Cardiovascular Surgery, Mayo Clinic, Rochester, MN.
- 5:40 PM (150) Pulmonary Venous Hypertension in End-Stage COPD and Preserved Systolic Left Ventricular Function: Vascular Lesions in Explanted Lungs after Transplantation;** K.H. Andersen,<sup>1</sup> C.B. Andersen,<sup>2</sup> J. Kjærgaard,<sup>1</sup> M.P. Iversen,<sup>1</sup> F. Gustafsson,<sup>1</sup> J. Carlsen.<sup>1</sup> <sup>1</sup>Cardiology, Pulmonary Vascular Program, Copenhagen University Hospital, Rigshospitalet, Copenhagen, Denmark; <sup>2</sup>Clinical Pathology, Copenhagen University Hospital, Rigshospitalet, Copenhagen, Denmark.
- 5:45 PM (151) Fluid Challenge To Identify Pulmonary Venous Hypertension;** I.M. Robbins, A.R. Hemnes, M.E. Pugh, J.H. Newman. Medicine, Vanderbilt Medical Center, Nashville, TN.
- 5:50 PM (152) Increased ADORA2B Expression Correlates with Mean Pulmonary Arterial Pressure in Idiopathic Pulmonary Fibrosis;** L.J. Garcia-Morales,<sup>1</sup> H. Karmouty-Quintana,<sup>2</sup> E. Melicoff,<sup>3</sup> N.Y. Chen,<sup>2</sup> B.A. Bruckner,<sup>1</sup> S. La Francesca,<sup>1</sup> B. Ramlawi,<sup>1</sup> H. Seethamraju,<sup>4</sup> M.R. Blackburn,<sup>2</sup> M. Loebe.<sup>1</sup> <sup>1</sup>Cardiovascular Surgery, Methodist DeBakey Heart & Vascular Center, Houston, TX; <sup>2</sup>Department of Biology and Molecular Biology, The University of Texas-Houston Medical School, Houston, TX; <sup>3</sup>Departments of Pediatrics, Baylor College of Medicine, Houston, TX; <sup>4</sup>Pulmonary & Critical Care Medicine, Methodist J.C. Walter Jr. Transplant Center, Houston, TX.
- 5:55 PM (153) The Relationship of Pulmonary Vascular Resistance and Pulmonary Arterial Compliance with Right Ventricular Function in Pulmonary Arterial Hypertension;** N.L. Sudini,<sup>1</sup> A.Y. Denault,<sup>1</sup> L. Rudski,<sup>1</sup> A. VonkNordengraff,<sup>3</sup> E. Fadel,<sup>1</sup> O. Mercier,<sup>1</sup> J. Huo,<sup>1</sup> J. Guihaire,<sup>1</sup> K. Kudelko,<sup>2</sup> R. Zamanian,<sup>2</sup> F. Haddad.<sup>1</sup> <sup>1</sup>Cardiovascular Medicine, Stanford University Medical Center, Stanford, CA; <sup>2</sup>Pulmonary & Critical Care Medicine, Stanford University Medical Center, Stanford, CA; <sup>3</sup>Pulmonary, VU University Medical Center, Amstredam, Netherlands.
- 6:00 PM (154) Quality of Life of Children with Pulmonary Hypertension;** J. Wray, H. Clisby, L. Walker, V. Kelly, I. Schulze-Neick, S. Moledina. Cardiorespiratory Department, Great Ormond Street Hospital for Children NHS Foundation Trust, London, United Kingdom.

- 6:05 PM (155) Intravenous Treprostinil Delivered by the Implantable Pump Lenus Pro®: A Innovative “Surgical” Approach to Management of PAH;** R. Steringer-Mascherbauer,<sup>1</sup> V. Eder,<sup>1</sup> C. Huber,<sup>1</sup> S. Wittrich,<sup>1</sup> I. Marecek,<sup>2</sup> H.J. Nesser.<sup>1</sup> <sup>1</sup>Cardiology, Public Hospital Elisabethinen, Linz, Austria; <sup>2</sup>AOP Orphan Pharmaceuticals AG, Vienna, Austria.
- 6:10 PM (156) Impact of Parenteral Treprostinil Dosing in Pulmonary Arterial Hypertension;** I.R. Preston,<sup>1</sup> H.W. Farber.<sup>2</sup> <sup>1</sup>Pulmonary, Critical Care and Sleep Medicine, Tufts Medical Center/Tufts University School of Medicine, Boston, MA; <sup>2</sup>Pulmonary Center, Boston Medical Center/Boston University School of Medicine, Boston, MA.
- 6:15 PM (157) Characteristics of PAH Patients Treated Initially with Parenteral Prostanoids Differ from Those Treated Initially with Oral Therapy Despite Matching for REVEAL Risk Score;** R.P. Frantz,<sup>1</sup> H.W. Farber,<sup>2</sup> D.P. Miller,<sup>3</sup> W.W. Benton,<sup>4</sup> M.D. McGoon.<sup>1</sup> <sup>1</sup>Division of Cardiovascular Diseases, College of Medicine, Mayo Clinic, Rochester, MN; <sup>2</sup>Boston University School of Medicine, Boston, MA; <sup>3</sup>ICON Late Phase & Outcomes Research, San Francisco, CA; <sup>4</sup>Actelion Pharmaceuticals US, Inc., South San Francisco, CA.
- 6:20 PM (158) Safety of a Mesenchymal-Like Adherent Stromal Cell (PLX-PAD) in a Human Model of Pulmonary Arterial Hypertension (PAH);** D.C. Chambers,<sup>1,2</sup> W. Hunt,<sup>3</sup> R. Naidoo,<sup>4</sup> D. Wall,<sup>3</sup> J. Choudhary,<sup>3</sup> D.L. Enever,<sup>1</sup> L. Samson,<sup>1</sup> S.T. Yerkovich,<sup>1,2</sup> I.L. Rapchuk,<sup>3</sup> I.J. Smith,<sup>3</sup> P.M.A. Hopkins,<sup>1,2</sup> F.D. Kermeen.<sup>1</sup> <sup>1</sup>Queensland Lung Transplant Service, The Prince Charles Hospital, Brisbane, Australia; <sup>2</sup>School of Medicine, The University of Queensland, Brisbane, Australia; <sup>3</sup>Department of Anaesthetics, The Prince Charles Hospital, Brisbane, Australia; <sup>4</sup>Department of Cardiothoracic Surgery, The Prince Charles Hospital, Brisbane, Australia.
- 6:25 PM (159) Cost-Effective Design of Pulmonary Arterial Hypertension Trials To Detect Changes in Right Ventricular Size and Function: 3D Echocardiography Versus Cardiovascular Magnetic Resonance;** K. Addetia, N.M. Bhawe, B.H. Freed, W. Tsang, M. Gomberg-Maitland, V. Mor-Avi, L. Palen, L. Weinert, K.T. Spencer, K. Dill, R.M. Lang, A.R. Patel. Cardiology, University of Chicago, Chicago, IL.

5:30 PM – 6:30 PM

## MINI ORAL SESSION 5

## Basic Science (512D)

**CHAIRS:** Esme Dijke, PhD and Tereza Martinu, MD

- 5:30 PM (160) Hydrogen Inhalation during Ex Vivo Lung Perfusion Ameliorates the Quality of Lung Grafts in Rats;** K. Noda, N. Shigemura, Y. Tanaka, C.A. Bermudez. Department of Cardiothoracic Surgery, University of Pittsburgh Medical Center, Pittsburgh, PA.
- 5:35 PM (161) Ex Vivo Lung Perfusion of Rejected Human Donor Lungs; Are Donor Lungs with Prolonged Cold Ischemic Time Re-Conditioned by EVLP?;** T. Okamoto,<sup>1,2</sup> D. Wheeler,<sup>1</sup> P. Shen,<sup>2</sup> S. Keshavamurthy,<sup>2</sup> A. Rafael,<sup>2</sup> K. McCurry.<sup>1,2</sup> <sup>1</sup>Pathobiology, Lener Research Institute, Cleveland Clinic, Cleveland, OH; <sup>2</sup>Thoracic and Cardiovascular Surgery, Cleveland Clinic, Cleveland, OH.
- 5:40 PM (162) Endothelin-1 and Big-Endothelin-1 as Potential Biomarkers in Clinical Ex Vivo Lung Perfusion;** T.N. Machuca, M. Cypel, Y. Zhao, J.C. Yeung, Y.-M. Chun, R. Zamel, M. Chen, M.K. Hsin, T. Saito, Z. Guan, H. Grasmann, M. dePerrot, T.K. Waddell, M. Liu, S. Keshavjee. University of Toronto, Toronto, ON, Canada.
- 5:45 PM (163) Pediatric Thymic Tissue as a Source of Regulatory T Cells for Cellular Therapy;** E. Dijke,<sup>1,2</sup> A. McMurchy,<sup>3</sup> M. Levings,<sup>3</sup> I. Larsen,<sup>1,2</sup> I. Rebeyka,<sup>1,2</sup> D. Ross,<sup>2,4</sup> L. West.<sup>1,2,4</sup> <sup>1</sup>Pediatrics, University of Alberta, Edmonton, AB, Canada; <sup>2</sup>Alberta Institute for Transplant Sciences, University of Alberta, Edmonton, AB, Canada; <sup>3</sup>Surgery, University of British Columbia, Vancouver, BC, Canada; <sup>4</sup>Surgery, University of Alberta, Edmonton, AB, Canada.
- 5:50 PM (164) Kidney-Induced Cardiac Allograft Tolerance across a Full MHC-Barrier in Miniature Swine;** S.G. Michel,<sup>1</sup> M.L.L. Madariaga,<sup>1</sup> M. Tasaki,<sup>1</sup> V. Villani,<sup>1</sup> G.M. LaMuraglia II,<sup>1</sup> E.A. Farkash,<sup>2</sup> J.S. Allan,<sup>1</sup> D.H. Sachs,<sup>1</sup> K. Yamada,<sup>1</sup> J.C. Madsen.<sup>1</sup> <sup>1</sup>Transplantation Biology Research Center, Massachusetts General Hospital, Harvard Medical School, Boston, MA; <sup>2</sup>Department of Pathology, Massachusetts General Hospital, Boston, MA.
- 5:55 PM (165) Transmyocardial Revascularization Enhances Mesenchymal Stem Cell Engraftment in Infarcted Hearts through SCF-c-Kit and SDF-1-CXCR4 Signaling Axes;** U. Shahzad,<sup>1,2</sup> G. Li,<sup>2</sup> T.M. Yau.<sup>1,2</sup> <sup>1</sup>Department of Cardiovascular Surgery, University of Toronto, Toronto, ON, Canada; <sup>2</sup>Division of Cardiovascular Surgery, Peter Munk Cardiac Centre, University Health Network, Toronto, ON, Canada.
- 6:00 PM (166) Hearts from Donations after Circulatory Death (DCD) Donors – Assessment in a Porcine Transplant Model Utilizing Transmedics Organ Care System for Organ Perfusion Preservation;** A. Iyer,<sup>1,2</sup> L. Gao,<sup>1</sup> A. Doyle,<sup>1</sup> G. Kumarasinghe,<sup>1,2</sup> A. Jabbour,<sup>1,2</sup> M. Hicks,<sup>1</sup> P. Jansz,<sup>2</sup> K. Dhital,<sup>2</sup> P. Macdonald.<sup>1,2</sup> <sup>1</sup>Heart Transplantation Lab, Victor Chang Cardiac Research Institute, Sydney, Australia; <sup>2</sup>Heart & Lung Transplant Program, St. Vincent's Hospital, Sydney, Australia.

- 6:05 PM (167) (Poster Display only) Treg Treatment Prevents Heart Allograft Vasculopathy in a Murine Mixed Chimerism Model;** N. Pilat,<sup>1</sup> H. Karin,<sup>1</sup> C. Schwarz,<sup>1</sup> R. Oberhuber,<sup>2</sup> C. Steger,<sup>3</sup> S.G. Tullius,<sup>4</sup> T. Wekerle.<sup>1</sup> <sup>1</sup>Department of Surgery, Medical University of Vienna, Vienna, Austria; <sup>2</sup>Department of Visceral, Transplant and Thoracic Surgery, Innsbruck Medical University, Innsbruck, Austria; <sup>3</sup>Institute of Pathology, Innsbruck Medical University, Innsbruck, Austria; <sup>4</sup>Division of Transplant Surgery, and Transplant Surgery Research Lab, Brigham and Women's Hospital, Harvard Medical School, Boston.
- 6:10 PM (168) Mesenchymal Stem Cells Attenuates Ischemia Reperfusion Injury after Orthotopic Lung Transplantation in a Mouse Model;** T. Watanabe,<sup>1</sup> Y. Okada,<sup>1</sup> N. Ishibashi,<sup>1</sup> Y. Hoshikawa,<sup>1</sup> M. Noda,<sup>1</sup> M. Kanehira,<sup>2</sup> S. Ohkouchi,<sup>2</sup> T. Kondo.<sup>1</sup> <sup>1</sup>Thoracic Surgery, Institute of Development, Aging and Cancer, Tohoku University, Sendai, Japan; <sup>2</sup>Respiratory Medicine, Tohoku University Graduate School of Medicine, Sendai, Japan.
- 6:15 PM (169) Up-Scaling Decellularization and Whole Organ Culture for Human Lung Regeneration;** S.E. Gilpin, J.P. Guyette, X. Ren, G. Gonzalez, L. Xiong, J.J. Song, J. Vacanti, H.C. Ott. Surgery, Massachusetts General Hospital, Center for Regenerative Medicine, Boston, MA.
- 6:20 PM (170) In Vivo Profiling of T Cell Responses by Omental Cells (OC) in Experimental Lung Transplantation (LTx);** M. Medina,<sup>1</sup> N. Huang,<sup>1</sup> P. Sethupathy,<sup>1</sup> E. Lowery,<sup>1</sup> A. Martin,<sup>2</sup> R. Love,<sup>2</sup> M. Iwashima,<sup>1</sup> C. Wigfield.<sup>1</sup> <sup>1</sup>Loyola University Medical Center, Maywood, IL; <sup>2</sup>Medical College of Wisconsin, Milwaukee, IL.
- 6:25 PM (171) Characterization of Decellularized Porcine Hearts as Scaffolds for Tissue-Engineering;** K. Methe,<sup>1</sup> N. Nayakwade,<sup>1</sup> H. Bäckdahl,<sup>2</sup> B.R. Johansson,<sup>3</sup> G. Premaratne,<sup>1</sup> V. Kuna Kumar,<sup>1</sup> P.B. Patil,<sup>1</sup> G. Dellgren,<sup>4</sup> S. Sumitran-Holgersson.<sup>1</sup> <sup>1</sup>Laboratory for Transplantation and Regenerative Medicine, Sahlgrenska Academy at Gothenburg University, Gothenburg, Sweden; <sup>2</sup>Dept. of Chemistry and Materials, SP Technical Research Institute of Sweden, Borås, Sweden; <sup>3</sup>The EM Unit, Medical Chemistry and Cell Biology, Sahlgrenska Academy at Gothenburg University, Gothenburg, Sweden; <sup>4</sup>Transplantation Surgery, Sahlgrenska University Hospital, Gothenburg, Sweden.

## FRIDAY, APRIL 26, 2013

6:00 AM – 6:30 PM

SPEAKER READY ROOM OPEN (515AB)

6:30 AM – 6:30 PM

REGISTRATION DESK OPEN

7:00 AM – 8:00 AM

## SUNRISE SYMPOSIUM 4

## VAD Optimization – Pump It Up (517CD)

**CHAIRS:** Michael Dandel MD, PhD and Duc Thinh Pham, MD**SESSION SUMMARY:** Use of echo, right heart catheterization and device setting to optimize VAD function. Case based discussion using graphics and echo to illustrate how to optimize speed, settings and role of clinical parameters including echo, RHC to optimize VAD function and patient staging.7:00 AM *What's the Spin on the Echo?* Phyllis Billia, MD PhD FRCP, University Health Network, Toronto, ON, Canada7:15 AM *Settings – Ramp It Up or Back It Off: When and How?* J. Eduardo Rame, MD MPhil, University of Pennsylvania, Philadelphia, PA, USA7:30 AM *Right Heart Catheterization Role in Optimizing Patients,* Jennifer Cowger, MD, MS, University of Michigan Cardiovascular Center, Ann Arbor, MI, USA

7:45 AM Discussion

7:00 AM – 8:00 AM

## SUNRISE SYMPOSIUM 5

## The “Omics” of Cardiac Transplantation (511)

**CHAIRS:** Howard J. Eisen, MD and David A. Baran, MD**SESSION SUMMARY:** To understand the mechanisms of rejection and immune system regulation after heart transplantation, molecular biology techniques have been used for a long time. Where do we stand now with respect to clinical practice? In this session speakers will provide an update of the current clinical applicability of gene-based and protein-based techniques.7:00 AM *Gene Expression Profiling and Circulating DNA: Ready for Clinical Practice?* Kiran K. Khush, MD, Stanford University, Stanford, CA, USA7:15 AM *Clinical Translation of Proteomic Studies in Cardiac Transplantation,* Bruce McManus, MD, PhD FRSC FCAHS, NCE CECR Centre of Excellence for Prevention of Organ Failure, Vancouver, BC, Canada7:30 AM *Using Omics to Modify Immune Suppression After Cardiac Transplantation,* Mario C. Deng, MD, UCLA, Los Angeles, CA, USA

7:45 AM Discussion

7:00 AM – 8:00 AM

## SUNRISE SYMPOSIUM 6

## Bronchoscopic Battles and Anastomotic Atrocities (510)

**CHAIRS:** Stephen C. Clark, FRCS and Lorrana E. Leard, MD**SESSION SUMMARY:** This sunrise session will focus on controversies regarding surveillance bronchoscopy, airway anastomotic complications and surgical techniques. The session will focus on causation, management and outcomes from both a surgical and medical perspective in a ‘quick fire debate’ format.7:00 AM *Current Status of Surveillance Bronchoscopy,* Maria M. Crespo, MD, University of Pittsburgh Medical Center, Pittsburgh, PA, USA7:10 AM **DEBATE: Airway Complications**

This is a quick-fire debate with the following topics:

1. Risk factors
2. Technique
3. Dehiscence
4. Stenosis
5. Air Leaks and Endobronchial Valve

**FORMAT:** Speaker 1 (3 mins), Speaker 2 (3 mins), Discussion (3 mins)**Speaker 1:** Dirk EM Van Raemdonck, MD, PhD, University Hospitals Leuven, Leuven, Belgium**Speaker 2:** Lonny Yarmus, DO, FCCP, Johns Hopkins University School of Medicine, Baltimore, MD, USA

7:00 AM – 8:00 AM

## SUNRISE SYMPOSIUM 7

## Proteins and Pathogenesis of PH (512A-G)

**CHAIRS:** James D West, PhD and Ioana R. Preston, MD**SESSION SUMMARY:** Remarkable progress continues to be made in our understanding of the pathobiology of pulmonary hypertension. This sunrise session will provide the audience with an update on three cutting-edge topics that are the subject of intense ongoing basic research efforts. The critical importance of regulatory micro RNA's in vascular remodeling is rapidly evolving with the prospect of potent therapeutic applications in the not too distant future. Technologic advances in proteomics and metabolomics are expected to lead to the discovery of novel molecular pathways. A role for sex hormones in pulmonary hypertension has long been suspected based on the recognized female predominance clinically. Recent investigations on the effects of estrogens, testosterone and their receptors in clinical and animal models of pulmonary hypertension provide new insights.7:00 AM *Role of Micro RNAs in the Pathogenesis of Pulmonary Hypertension,* Sebastien Bonnet, PhD, Laval University, Québec City, QC, Canada7:15 AM *Proteomics and Metabolomics in Pulmonary Hypertension,* Ioana R. Preston, MD, Tufts Medical Center, Boston, MA, USA7:30 AM *Abnormal Oestrogen Pathways in Pulmonary Hypertension,* James D. West, PhD, Vanderbilt University, Nashville, TN, USA

7:45 AM Discussion



7:00 AM – 8:00 AM

**SUNRISE SYMPOSIUM 8****Avatars and Advanced Care Planning (513ABC)****CHAIRS:** Michael G. Petty, PhD, RN, CCNS, ACNS-BC and Fabienne Dobbels, PhD**SESSION SUMMARY:** At the end of this session, the attendees will be able to discuss the challenges associated with managing patients who live at large distances from the implanting centers determine the best approaches to engage VAD patients in their care, and review the approaches to palliation in patients with the most advanced forms of disease.**7:00 AM** *Managing Patients from a Distance – Alternatives to Laying on Our Own Hands*, Annemarie Kaan, MCN RN CCTN, St Paul's Hospital, Vancouver, BC, Canada**7:15 AM** *The Responsibility Handoff: Empowering Patients*, Michelle L. Harkess, RN, MCN, St. Vincent's Hospital, Sydney, NSW, Australia**7:30 AM** *Palliative Care Considerations*, Sally J. Brush, MSN, FNP, Intermountain Medical Center, Salt Lake City, UT, USA**7:45 AM** Discussion

7:00 AM – 8:00 AM

**SUNRISE SYMPOSIUM 9****What's New in Xenotransplantation (514B)****CHAIRS:** David K.C. Cooper, MD, PhD, FRCS and Jeffrey Teuteberg, MD**SESSION SUMMARY:** This sunrise symposium will go over the latest advances of xenotransplantation and how they apply to heart and lung transplantation.**7:00 AM** *Immunobiology of Xenotransplantation*, Richard N. Pierson III, MD, University of Maryland, Baltimore, MD, USA**7:15 AM** Discussion**7:18 AM** *Current Status of Cardiac Xenotransplantation*, Christopher G A McGregor, UCL, London, UK and Mayo Clinic, Rochester, MN, USA**7:33 AM** Discussion**7:36 AM** *Lung Xenotransplantation*, Agnes M Azimzadeh, PhD, University of Maryland, Baltimore, MD, USA**7:51 AM** Discussion**7:54 AM** Panel Discussion

8:00 AM – 9:30 AM

**CONCURRENT SESSION 19****MCS 5: The Aftermath of VAD Implantation (517CD)****CHAIRS:** Takeshi Nakatani, MD, PhD and Salpy V. Pamboukian MD MSPH**8:00 AM (172)** *Incidence of Increases in Pump Power Utilization and Associated Clinical Outcomes in Patients Who Have Undergone HeartMate II Implantation*; R.J. Steffen, D. Nagpal, K. Miracle, K. Hoercher, N. Moazami. Department of Cardiothoracic Surgery, Cleveland Clinic Foundation, Cleveland, OH.**8:15 AM (173)** *HAS-BLED and CHA2DS2-VASc Scores as Predictors of Bleeding and Thrombotic Risk after HeartMate II Ventricular Assist Device Implantation*; R.J. Koene, S.N. Adaty, N. Naksuk, A.N. Rosenbaum, R. John, P.M. Eckman. Department of Medicine – Cardiovascular Division, University of Minnesota, Minneapolis, MN.**8:30 AM (174)** *Platelet GPIb Ectodomain Shedding – A New Biomarker for GI Bleeding in Continuous Flow VAD Recipients?*; T.A. Snyder,<sup>1</sup> J. Skaugen,<sup>1</sup> K.E. Nelson,<sup>1</sup> D.A. Horstmannshof,<sup>1</sup> D.W. Schmidtke,<sup>2</sup> J.W. Long.<sup>1,11</sup> Integris Advanced Cardiac Care, Integris Baptist Medical Center, Oklahoma City, OK; <sup>2</sup>School of Chemical, Biological and Materials Engineering, University of Oklahoma, Norman, OK.**8:45 AM (175)** *Comparative Analysis of von Willebrand Disease in Patients with Mechanical Circulatory Pulsatile and Non-Pulsatile Support*; C. Oezpeker, B. Bohms, D. Roefe, J. Boergemann, S. Ensminger, J. Gummert, H. Milting. Clinic of Thoracic and Cardiovascular Surgery, Erich & Hanna Klessmann-Institute, Ruhr-University Bochum, Heart & Diabetescenter NRW, Bad Oeynhausen, Germany.**9:00 AM (176)** *Preoperative CHA2DS2-VASC Score Predicts Neurologic Complications in Continuous-Flow (CF) Left Ventricular-Assist Device (LVAD) Patients*; E.N. Sorensen,<sup>1</sup> K. Rajagopal,<sup>3</sup> N.J. Hiiivala,<sup>1</sup> B.P. Griffith,<sup>3</sup> E.D. Feller.<sup>2</sup> <sup>1</sup>Clinical Engineering, University of Maryland Medical Center, Baltimore, MD; <sup>2</sup>Medicine, University of Maryland Medical Center, Baltimore, MD; <sup>3</sup>Surgery, University of Maryland Medical Center, Baltimore, MD.**9:15 AM (177)** *Prevalence and Prognostic Importance of Changes in Renal Function Following Mechanical Circulatory Support*; M.A. Brisco,<sup>1</sup> S.E. Kimmel,<sup>1</sup> S.G. Coca,<sup>2</sup> M.E. Putt,<sup>1</sup> M. Jessup,<sup>1</sup> W.H.W. Tang,<sup>3</sup> C.R. Parikh,<sup>2</sup> J.M. Testani.<sup>2,1</sup> <sup>1</sup>Cardiovascular Division, Department of Medicine, Perelman School of Medicine at the University of Pennsylvania, Philadelphia, PA; <sup>2</sup>Department of Medicine, Yale University School of Medicine, New Haven, CT; <sup>3</sup>Department of Medicine, Cleveland Clinic, Cleveland, OH.

8:00 AM – 9:30 AM

## CONCURRENT SESSION 20

**Heart 5: Advances in Interpretation of Cardiac Allograft Immune Activation (511)****CHAIRS:** Maryl Johnson, MD and James F. George, PhD

- 8:00 AM (178) Can C1q in Endomyocardial Biopsies (EMB) Predict AMR and Adverse Outcome?**; D.V. Miller, M.E.H. Hammond, G.L. Snow, M.P. Revelo, M.D. Everitt, J. Isaac, K.M. Molina, D. Budge, J. Stehlik, S.G. Drakos, R. Alharethi, E.M. Gilbert, A.G. Kfoury. UTAH Cardiac Transplant Program, Salt Lake City, UT.
- 8:15 AM (179) Validation of Humoral Immunity Profiles To Identify Heart Recipients at Risk for Development of Severe Infections: A Multicenter Prospective Study**; E. Sarmiento,<sup>1</sup> J. Fernandez-Yañez,<sup>1</sup> J. Palomo,<sup>1</sup> M. Gomez-Sanchez,<sup>2</sup> M. Crespo-Leiro,<sup>3</sup> M. Paniagua,<sup>3</sup> L. Almenar,<sup>4</sup> M. Cebrian,<sup>4</sup> G. Rabago,<sup>5</sup> B. Levy,<sup>5</sup> J. Segovia,<sup>6</sup> M. Gomez-Bueno,<sup>6</sup> J. Lopez,<sup>7</sup> L. García-Guereta,<sup>8</sup> S. Mirabet,<sup>9</sup> M. Jaramillo,<sup>1</sup> J. Navarro,<sup>1</sup> J. Rodriguez-Molina,<sup>1</sup> J. Carbone.<sup>1</sup> <sup>1</sup>Hospital General Universitario Gregorio Marañón, Madrid, Spain; <sup>2</sup>Hospital Universitario Doce de Octubre, Madrid, Spain; <sup>3</sup>Hospital Universitario Juan Canalejo, A Coruña, Spain; <sup>4</sup>Hospital Universitario La Fe, Valencia, Spain; <sup>5</sup>Clinica Universitaria de Navarra, Pamplona, Spain; <sup>6</sup>Hospital Universitario Puerta de Hierro, Madrid, Spain; <sup>7</sup>Hospital Clínico Universitario, Valladolid, Spain; <sup>8</sup>Hospital Universitario La Paz, Madrid, Spain; <sup>9</sup>Hospital de la Santa Creu y Sant Pau, Barcelona, Spain.
- 8:30 AM (180) Use of Cylex Immune Monitoring Score To Guide Immunosuppression after Heart Transplantation Reduces Infection Risk**; D. Geft, J. Patel, M. Kittleson, D. Chang, M. Rafiei, A. Osborne, A. Hage, L. Czer, F. Esmailian, J. Kobashigawa. Cedars-Sinai Heart Institute, Los Angeles, CA.
- 8:45 AM (181) Comparison of HLA & MICA Allosensitization Patterns among Patients Supported by Ventricular Assist Devices (VAD) and Patients with No Devices**; M. Askar,<sup>1</sup> E. Hsich,<sup>2</sup> P. Reville,<sup>1</sup> J. Daghestani,<sup>1</sup> A. Nowacki,<sup>3</sup> A. Zhang,<sup>1</sup> L. Klingman,<sup>1</sup> S. Bakdash,<sup>4</sup> W. Baldwin,<sup>5</sup> N. Smedira,<sup>6</sup> D. Taylor,<sup>2</sup> R. Starling,<sup>2</sup> G. Gonzalez-Stawinski.<sup>7</sup> <sup>1</sup>Allogen Laboratories, Cleveland Clinic, Cleveland, OH; <sup>2</sup>Cardiovascular Medicine, Cleveland Clinic, Cleveland, OH; <sup>3</sup>Department of Quantitative Health Sciences, Cleveland Clinic, Cleveland, OH; <sup>4</sup>Clinical Pathology, Cleveland Clinic, Cleveland, OH; <sup>5</sup>Immunology, Cleveland Clinic, Cleveland, OH; <sup>6</sup>Thoracic and Cardiovascular Surgery, Cleveland Clinic, Cleveland, OH; <sup>7</sup>Thoracic and Cardiovascular Surgery, Baylor University, Houston, TX.
- 9:00 AM (182) Cylex Scores May Predict Risk for Infection in the First Year Following Heart Transplantation**; J. Kobashigawa, M. Kittleson, M. Rafiei, A. Osborne, D.H. Chang, L. Czer, D. Ramzy, F. Esmailian, J. Patel. Cedars-Sinai Heart Institute, Los Angeles, CA.
- 9:15 AM (183) Immunohistochemical Counting of Mononuclear Infiltrates in Endomyocardial Biopsy Fragments: A New Method To Improve the Diagnosis of Rejection after Heart Transplantation**; E.A. Bocchi, L.A. Benvenuti, R. Tanigawa, S. Brandão, V.S. Issa, S. Ayub-Ferreira, F. Cruz, P. Pomerantzeff, R. Honorato, D.D. Lourenço-Filho, A.I. Fiorelli, P. Chizzola, G. Souza, F. Bacal. Heart Failure Clinics, Heart Institute (Incor) of São University Medical School, São Paulo, SP, Brazil.

8:00 AM – 9:30 AM

## CONCURRENT SESSION 21

**Lung 3: Clinical and Immune Monitoring (510)****CHAIRS:** Glen P Westall, MD and Vincent G Valentine, MD

- 8:00 AM (184) Pre-Transplant Antibodies to K 1Tubulin and Collagen V in Lung Transplantation: Correlation with Disease, Primary Graft Dysfunction, Donor Specific HLA Antibodies, and Chronic Rejection**; V. Tiriveedhi,<sup>1</sup> G. Baskaran,<sup>1</sup> N. Sarma,<sup>1</sup> M. Askar,<sup>2</sup> M. Budev,<sup>2</sup> A. Aloush,<sup>1</sup> R. Hachem,<sup>1</sup> E. Trulock,<sup>1</sup> B. Meyers,<sup>1</sup> G.A. Patterson,<sup>1</sup> T. Mohanakumar.<sup>1</sup> <sup>1</sup>Washington University School of Medicine, St. Louis, MO; <sup>2</sup>Cleveland Clinic, Cleveland, OH.
- 8:15 AM (185) Improved Survival with Perioperative Desensitization in Lung Transplant Patients with Donor Specific Antibodies (DSA)**; K. Tinkam,<sup>2</sup> S. Azad,<sup>1</sup> D. Barth,<sup>1</sup> M. Binnie,<sup>1</sup> C. Chaparro,<sup>1</sup> C.-W. Chow,<sup>1</sup> M. Cypel,<sup>3</sup> M. dePerrot,<sup>3</sup> A. Pierre,<sup>3</sup> T. Waddell,<sup>3</sup> K. Yasufuku,<sup>3</sup> S. Keshavjee,<sup>3</sup> L.G. Singer.<sup>1</sup> <sup>1</sup>Department of Medicine, University Health Network, Toronto, Canada; <sup>2</sup>Laboratory Medicine Program HLA Lab, University Health Network, Toronto, Canada; <sup>3</sup>Department of Surgery, University Health Network, Toronto, Canada.
- 8:30 AM (186) Distinct Lymphocyte Subsets Infiltrate the Small and Large Airway Epithelium after Lung Transplantation**; S.T. Yerkovich,<sup>1,2</sup> A. Fiene,<sup>1</sup> K. Sinclair,<sup>1</sup> M. Tan,<sup>1</sup> L. Samson,<sup>1</sup> P.M.A. Hopkins,<sup>1,2</sup> D.C. Chambers.<sup>1,2</sup> <sup>1</sup>Queensland Lung Transplant Service, The Prince Charles Hospital, Brisbane, QLD, Australia; <sup>2</sup>School of Medicine, The University of Queensland, Brisbane, Qld, Australia.
- 8:45 AM (187) Increased Frequency of Class II HLA-DQ Donor-Specific Antibodies Is Associated with Mixed Cellular and Humoral Rejection in Lung Transplantation**; A. Zeevi, M. Marrari, K. Spichty, M. Morrell, C. Gries, J. McDyer, J. Pilewski, D. Zaldonis, J. Bhama, N. Shigemura, S. Yousem, R. Duquesnoy, J. D'Cunha, C. Bermudez. University of Pittsburgh, Pittsburgh, PA.
- 9:00 AM (188) HLA Antibodies after Lung Transplantation: Early Results of the HALT Study**; R.R. Hachem,<sup>1</sup> M. Kamoun,<sup>2</sup> M. Budev,<sup>3</sup> M. Askar,<sup>3</sup> A. Vivek,<sup>2</sup> D.J. Levine,<sup>4</sup> M.S. Pollack,<sup>4</sup> G. Dhillon,<sup>5</sup> K. Schechtman,<sup>1</sup> L.E. Lorriana,<sup>6</sup> L.A. Baxter-Lowe,<sup>6</sup> T. Mohanakumar,<sup>1</sup> D. Tyan,<sup>5</sup> R.D. Yusen.<sup>1</sup> <sup>1</sup>Washington University School of Medicine, St. Louis, MO; <sup>2</sup>University of Pennsylvania School of Medicine, Philadelphia, PA; <sup>3</sup>Cleveland Clinic Foundation, Cleveland, OH; <sup>4</sup>University of Texas Health Science Center, San Antonio, TX; <sup>5</sup>Stanford University School of Medicine, Palo Alto, CA; <sup>6</sup>University of California San Francisco, San Francisco, CA.
- 9:15 AM (189) Antibodies to Lung Self-Antigens (K 1 Tubulin or Collagen V) Lead to Epitope Spreading, Loss of Tolerance and Rejection of CTLA4/RR1 Induced Tolerant Murine Lung Allograft**; V. Subramanian,<sup>1</sup> S. Yamamoto,<sup>1</sup> N. Benschoff,<sup>1</sup> D. Kreisel,<sup>1</sup> A.E. Gelman,<sup>1</sup> T. Mohanakumar.<sup>1,2</sup> <sup>1</sup>Surgery, Washington University School of Medicine, St. Louis, MO; <sup>2</sup>Pathology and Immunology, Washington University School of Medicine, St. Louis, MO.

8:00 AM – 9:30 AM

## CONCURRENT SESSION 22

## PH 2: Right Ventricular Matters (512A-G)

**CHAIRS:** Steven M Kawut, MD, MS and Adaani E. Frost, MD

- 8:00 AM (190) Right Ventricular Systolic Strain Predicts Outcomes in Pulmonary Hypertension: A Prospective Evaluation;** N.M. Fine, L. Chen, R.P. Frantz, P.A. Pellikka, G.C. Kane. Division of Cardiovascular Disease, Department of Medicine, Mayo Clinic, Rochester, MN.
- 8:15 AM (191) Predictive Value of Right Ventricular Function for Transplant-Free Survival with Pulmonary Arterial Hypertension;** M. Dandel, D. Kemper, C. Knosalla, H.B. Lehmkuhl, R. Hetzer. Deutsches Herzzentrum Berlin, Berlin, Germany.
- 8:30 AM (192) Indices of Right Ventricular Contractility in a Model of Chronic Pulmonary Hypertension;** J. Guihaire,<sup>1</sup> F. Haddad,<sup>1</sup> O. Mercier,<sup>1</sup> D. Boulate,<sup>1</sup> B. Decante,<sup>1</sup> P. Herve,<sup>1</sup> P. Darteville,<sup>1</sup> M. Humbert,<sup>2</sup> E. Fadel.<sup>1,2</sup> <sup>1</sup>Laboratory of Surgical Research, Inserm U999, Marie Lannelongue Hospital, University of South Paris, Le Plessis Robinson, France; <sup>2</sup>Service de Pneumologie, Inserm U999, Hôpital Bicêtre, University of South Paris, Le Kremlin-Bicêtre, France.
- 8:45 AM (193) Role of Angiogenesis in the Right Ventricle Remodeling in Response to Pulmonary Hypertension;** P.E. Noly,<sup>1,2</sup> F. Haddad,<sup>1,2</sup> O. Mercier,<sup>1,2</sup> P. Dorfmueller,<sup>1,2</sup> B. Decante,<sup>1,2</sup> P. Darteville,<sup>1,2</sup> E. Fadel.<sup>1,2</sup> <sup>1</sup>Surgical Research Lab, Centre Chirurgical Marie Lannelongue, Le Plessis Robinson, France; <sup>2</sup>INSERM U999, Le Plessis Robinson, France.
- 9:00 AM (194) Right Ventricular Support for Pulmonary Arterial Hypertension: An Acute Feasibility Study in Sheep;** T. Verbelen,<sup>1</sup> J. Verhoeven,<sup>1</sup> M. Ghoda,<sup>1</sup> I. Van Tichelen,<sup>1</sup> M. Delcroix,<sup>2</sup> F. Rega,<sup>1</sup> B. Meyns.<sup>1</sup> <sup>1</sup>Experimental Cardiac Surgery, KULeuven, Leuven, Belgium; <sup>2</sup>Pneumology, University Hospitals Leuven, Leuven, Belgium.
- 9:15 AM (195) Right Ventricular Dyssynchrony Predicts Clinical Worsening in Idiopathic Pulmonary Arterial Hypertension;** R. Badagliacca, M. Reali, R. Poscia, B. Pezuto, S. Papa, C. Gambardella, A. Nona, M. Nocioni, M. Mezzapesa, S. Sciomer, F. Fedele, C.D. Vizza. Department of Cardiovascular and Respiratory Disease, Sapienza University, Rome, Italy.

8:00 AM – 9:30 AM

## CONCURRENT SESSION 23

## NNSAH 2: MCS and Heart Transplantation – Assessment, Outcomes and Interventions (513ABC)

**CHAIRS:** Connie White-Williams, PhD, RN, FAAN and Berni L. Coleman, Ph.D, ACNP-BC, FAAN

- 8:00 AM (196) Modification of the Psychosocial Assessment of Candidates for Transplantation (PACT) Improves Risk Classification and Prediction of Hospital Readmission of MCS Patients;** M.C. Maltby,<sup>1</sup> M.P. Flattery,<sup>2</sup> B.A. Burns,<sup>1</sup> K.B. Shah.<sup>3</sup> <sup>1</sup>Department of Care Coordination, Virginia Commonwealth University Health System, Richmond, VA; <sup>2</sup>Pauley Heart Center, Virginia Commonwealth University Health System, Richmond, VA; <sup>3</sup>Division of Cardiology, Virginia Commonwealth University, Richmond, VA.

- 8:15 AM (197) The Stanford Integrated Psychosocial Assessment for Transplantation (SIPAT): A New Scale for the Prediction of Psychosocial and Medical Outcomes in Organ Transplant Candidates;** J.R. Maldonado,<sup>1</sup> Y. Sher,<sup>1</sup> S. Lolak,<sup>1</sup> D. Skibola,<sup>1</sup> C. Sullivan,<sup>1</sup> K. Standridge,<sup>2</sup> E. David.<sup>3</sup> <sup>1</sup>Psychiatry and Behavioral Sciences, Stanford University School of Medicine, Stanford, CA; <sup>2</sup>Associate Director, Transplant, ALD & VAD Program, Stanford Hospital and Clinics, Stanford, CA; <sup>3</sup>Social Services, Stanford Hospital and Clinics, Stanford, CA.

- 8:30 AM (198) Driveline Exit Site in Long-Term LVAD's – Patient Choice or Surgeon's Decision;** N. Wrightson, S. Schueler, T. Butt, N. Robinson Smith, A. Siddique, F. Özalp, T. Pillay, G.A. MacGowan. Mechanical Circulatory Support Service for Advanced Heart Failure, The Newcastle Hospitals NHS Foundation Trust/ Freeman Hospital, Newcastle upon Tyne, Tyne and Wear, United Kingdom.

- 8:45 AM (199) Cardiac Rehabilitation after Heart Transplantation Reduces Development of Cardiac Allograft Vasculopathy;** M. Thottam, J. Patel, M. Kittleson, M. Rafiei, A. Osborne, A. Velleca, L. Pipponnier, D.H. Chang, L. Czer, M. Hamilton, J. Kobashigawa. Cedars-Sinai Heart Institute, Los Angeles, CA.

- 9:00 AM (200) It's Not the Bad Guys. A Differentiated View on Post HTX Adherence: Medication, Mental Health, Hygienic Behavior;** K. Tigges-Limmer,<sup>1</sup> Y. Brocks,<sup>1</sup> D. Grisse,<sup>1</sup> A. Zittermann,<sup>1</sup> G. Schmid-Ott,<sup>2</sup> U. Schulz,<sup>1</sup> J. Brakhage,<sup>1</sup> A. Benkler,<sup>2</sup> J.F. Gummert.<sup>1</sup> <sup>1</sup>Department for Thoracic and Cardiovascular Surgery, HDZ-NRW, Ruhr-University Bochum, Bad Oeynhausen, Germany; <sup>2</sup>Department of Psychosomatic Medicine, Berolina Hospital, Loehne, Germany.

- 9:15 AM (201) Use and Helpfulness of Interventions 5 and 10 Years after Heart Transplantation;** C. White-Williams,<sup>1</sup> P. Fazeli,<sup>1</sup> K.L. Grady,<sup>2</sup> B. Rybarczyk.<sup>3</sup> <sup>1</sup>Nursing, University of Alabama at Birmingham, Birmingham, AL; <sup>2</sup>Division of Cardiac Surgery, Northwestern Memorial Hospital, Chicago, IL; <sup>3</sup>Psychology, Virginia Commonwealth University, Richmond, VA.

8:00 AM – 9:30 AM

## CONCURRENT SESSION 24

## BST2: Exploring and Modifying the Immune Response – Cells, Antibodies, and Tolerance (514B)

**CHAIRS:** Kimberly Gandy, MD, PhD and Marilia I. Cascalho

- 8:00 AM (202) WITHDRAWN**

- 8:15 AM (203) T Cell-Deficiency Exacerbates Diacetyl-Induced Obliterative Bronchiolitis;** T. Martinu,<sup>1</sup> F.L. Kelly,<sup>1</sup> J. Sun,<sup>1</sup> H.L. Zhang,<sup>1</sup> R.F. Beasley,<sup>1</sup> E.N. Potts-Kant,<sup>1</sup> G.P. Flake,<sup>2</sup> D.L. Morgan,<sup>2</sup> W.M. Foster,<sup>1</sup> S.M. Palmer.<sup>1</sup> <sup>1</sup>Medicine, Duke University, Durham, NC; <sup>2</sup>Toxicology, NIEHS, RTP, NC.

- 8:30 AM (204) Attenuation of Transplant Arteriosclerosis by Oral Feeding of MHC Encoding Chitosan-DNA Nanoparticles Is Mediated by Humoral Immunity;** C. Heim,<sup>1</sup> K. Goldmann,<sup>2</sup> S. Eckl,<sup>1</sup> B. Spriewald,<sup>2</sup> S. Ensminger.<sup>1</sup> <sup>1</sup>Department of Cardiac Surgery, University of Erlangen-Nurnberg, Erlangen, Germany; <sup>2</sup>Department of Medicine 5, University of Erlangen-Nurnberg, Erlangen, Germany.

- 8:45 AM (205) An Innovative Approach to Selectively Inhibit Mesenchymal Cells Isolated from BOS Patients;** E. Cova,<sup>2</sup> M. Colombo,<sup>3</sup> M. Morosini,<sup>2</sup> S. Inghilleri,<sup>2</sup> S. Miserere,<sup>2</sup> S. Magni,<sup>2</sup>

D. Prosperi,<sup>3</sup> F. Meloni.<sup>1,1</sup> Department Molecular Medicine, University of Pavia and IRCCS Ss Matteo Foundation, Pavia, Italy; <sup>2</sup>Department of Molecular Medicine, IRCCS San Matteo Foundation, Pavia, Italy; <sup>3</sup>Department of Biotechnology and Biosciences, University of Milano Bicocca, Milan, Italy.

**9:00 AM (206) *The Selective JAK1/3 Inhibitor R507 Prevents Acute Rejection and Chronic Obliteration of Transplanted Rat Tracheas***; T. Deuse,<sup>1</sup> X. Hua,<sup>1</sup> M. Stubbendorff,<sup>1</sup> V. Taylor,<sup>2</sup>

Y. Chen,<sup>2</sup> G. Park,<sup>2</sup> H. Reichenspurner,<sup>1</sup> R.C. Robbins,<sup>3</sup> S. Schrepfer.<sup>1,3</sup> <sup>1</sup>TSI-Lab, Cardiovascular Surgery, University Heart Center Hamburg, Hamburg, Germany; <sup>2</sup>Rigel Pharmaceuticals, San Francisco; <sup>3</sup>CT Surgery, Stanford University School of Medicine, Stanford.

**9:15 AM (207) *Inhaled Immunosuppression Using the Novel JAK1/3 Inhibitor R507***; T. Deuse,<sup>1</sup> X. Hua,<sup>1</sup> M. Stubbendorff,<sup>1</sup> V. Taylor,<sup>2</sup> Y. Chen,<sup>2</sup> G. Park,<sup>2</sup> H. Reichenspurner,<sup>1</sup> R.C. Robbins,<sup>3</sup> S. Schrepfer.<sup>1,3</sup> <sup>1</sup>TSI-Lab, Cardiovascular Surgery, University Heart Center, Hamburg, Germany; <sup>2</sup>Rigel, San Francisco; <sup>3</sup>CT Surgery, Stanford University School of Medicine, Stanford.

**8:00 AM – 9:30 AM**

## SYMPOSIUM 25

**JHLT at ISHLT: “The Year in a Capsule” (513DEF)**

**CHAIRS:** Patricia Uber, PhD and Jayan Parameshwar, MD

**SESSION SUMMARY:** The Junior Faculty Trainee Council and the Journal of Heart and Lung Transplantation are sponsoring a novel session this year to bring the JHLT to the ISHLT. This session will highlight the most exciting publications in the JHLT over the past year, followed by a discussion by one of the senior editorial consultants of the journal to relate the presented articles to the greater body of published literature and to suggest how they advance our understanding in the field.

**8:00 AM *Highlights of Heart Transplantation and Mechanical Circulatory Support***, Keyur B. Shah, MD, Virginia Commonwealth University, Richmond, VA, USA

**8:15 AM *Discussant:*** Mark S. Slaughter, MD, University Cardiothoracic Surgical Assoc, Louisville, KY, USA

**8:20 AM *Highlights of Lung Transplantation***, Hanneke Kwakkel-van Erp, MD, PhD, University Medical Center Utrecht, Utrecht, The Netherlands

**8:35 AM *Discussant:*** Allan R. Glanville, MD, FRACP, Sydney, Australia

**8:40 AM *Highlights of Pulmonary Hypertension***, Christina Migliore, MD, Newark Beth Israel Medical Center, Newark, NJ, USA

**8:55 AM *Discussant:*** Paul A. Corris, MB, FRCP, Newcastle upon Tyne, UK

**9:00 AM *Highlights of Issues Related to Children***, Yishay Orr, FRACS, PhD, Children’s Hospital at Westmead, Lane Cove, Australia

**9:15 AM *Discussant:*** Lori J. West, MD, DPhil, University of Alberta, Edmonton, Canada

**9:20 AM** General Q & A

**9:00 AM – 2:00 PM**

EXHIBIT HALL OPEN (517AB)

**9:30 AM – 6:30 PM**

POSTER HALL OPEN (516)

**9:30 AM – 10:00 AM**

ANNUAL BUSINESS MEETING (517CD)

COFFEE BREAK / VISIT EXHIBITS / VIEW POSTERS (516; 517AB)

**10:00 AM – NOON**

## PLENARY SESSION

**How to Succeed When the Right Ventricle Fails (517CD)**

**CHAIRS:** Prof. Paul A. Corris, FRCP and Sharon A. Hunt, MD

**SESSION SUMMARY:** The right ventricle is often held accountable for morbidity and mortality in patients with advanced heart and/or lung disease. Moreover the right ventricle is frequently blamed for poor outcomes seen in patients receiving left ventricular assist device or heart transplantation. This session will provide the participant with a better understanding of right ventricular structure, function and physiology; how to evaluate right ventricular function in health and disease; and importantly management of right ventricular failure both through medical and surgical/device options.

**10:00 AM *Right Ventricular Structure and Function in Health and Disease***, Andrew N. Redington, MD, FRCP(C), FRCP(UK), The Hospital for Sick Children, Toronto, ON, Canada

**10:25 AM *Clinical Assessment and Imaging***, David Langleben, MD, FRCP, Jewish General Hospital, McGill University, Montréal, Quebec, Canada

**10:45 AM *The Failing Systemic Right Ventricle***, Daniel Bernstein, MD, Stanford University, Stanford, CA, USA

**11:05 AM *Medical Management***, John Granton, MD, UHN, University of Toronto, Toronto, ON, Canada

**11:25 AM *Surgical Approaches, Devices, and Transplant***, Martin Strueber, MD, Heart Center Leipzig, University Leipzig, Leipzig, Germany

**11:45 AM *FEATURED ABSTRACT: (208) Left Ventricular Assist Device in Right Ventricular Failure***; P. Parwani, B.M.P. Gowd, R. Nahar, C. Statz, D. O’Sullivan, N. Chomick, J. Radojevic, J. Gluck, J. Hammond, D. Wencker. Cardiology, Hartford Hospital, Hartford, CT



**NOON – 2:00 PM**

LUNCH BREAK

VISIT EXHIBITS / VIEW POSTERS (516; 517AB)

**12:10 PM – 12:55 PM**

MECHANICAL CIRCULATORY SUPPORT COUNCIL MEETING (513ABC)

PULMONARY HYPERTENSION COUNCIL MEETING (513DEF)

PEDIATRIC TRANSPLANTATION COUNCIL MEETING (514B)

NURSING, HEALTH SCIENCE, ALLIED HEALTH COUNCIL MEETING (514C)

INFECTIOUS DISEASES COUNCIL MEETING (512D)

**1:05 PM – 1:50 PM**

HEART FAILURE AND TRANSPLANT MEDICINE COUNCIL MEETING

(513ABC)

PULMONARY TRANSPLANTATION COUNCIL MEETING (513DEF)

PEDIATRIC HEART FAILURE COUNCIL MEETING (514B)

PATHOLOGY COUNCIL MEETING (514C)

PHARMACY AND PHARMACOLOGY COUNCIL MEETING (512D)

**2:00 PM – 3:30 PM****ISHLT AND AST JOINT SESSION I****Pretransplant Circulating Antibodies: Making Sense of Sensitization (513DEF)****CHAIRS:** David O. Taylor, MD (ISHLT President) and Roslyn B. Mannon, MD (AST President)

**SESSION SUMMARY:** Anti-donor antibodies remain an obstacle to successful thoracic transplantation. The combined expertise of ISHLT and the American Transplant Society come to bear on this timely topic in two separate sessions. The first explores the detection, interpretation and potential treatments of these antibodies prior to transplantation. The second explores the development of antibody-mediated rejection after thoracic transplantation and importantly includes the perspective of the non-thoracic transplant community.

**2:00 PM Antibody Detection and the Use of the C1q Assay,**

Dolly B. Tyan, PhD, D(ABHI), Stanford University School of Medicine, Palo Alto, CA, USA

**2:20 PM Pretransplant Antibodies in Clinical Practice: Are They All Bad, When to Treat and Use of the Virtual Crossmatch,**

A.G. Kfoury, MD, FACC, Intermountain Heart Institute (UTAH Cardiac Transplant Program), Salt Lake City, Utah, USA

**2:40 PM Desensitization Therapies in Patients Awaiting Kidney**

Transplantation, Ashley A Vo, PharmD, Cedars-Sinai Medical Center, Los Angeles, CA, USA

**3:00 PM The Approach to Desensitization Therapies for Urgent Status and Mechanical Assisted Patients Awaiting Thoracic Transplantation,**

Marisa G. Crespo-Leiro, MD, Hospital Universitario A Coruña, La Coruña, Spain

**3:20 PM Moderated Panel Discussion****2:00 PM – 3:30 PM****CONCURRENT SESSION 25****MCS 6: Infectious Issues and Pump Failure (517CD)****CHAIRS:** Tobias Deuse, MD and Shahid Husain, MD MS**2:00 PM (209) Driveline Infections and Sepsis in Patients Receiving the HVAD System as a Left Ventricular Assist Device;**R. John,<sup>1</sup> K.D. Aaronson,<sup>2</sup> W.E. Pae,<sup>3</sup> M.A. Acker,<sup>4</sup> D.R. Hathaway,<sup>5</sup> K. Najarian,<sup>5</sup> M.S. Slaughter,<sup>6</sup> <sup>1</sup>Division of Cardiothoracic Surgery, University of Minnesota, Minneapolis, MN; <sup>2</sup>University of Michigan, Ann Arbor, MI; <sup>3</sup>Penn State Hershey Medical Center, Hershey, PA; <sup>4</sup>University of Pennsylvania, Philadelphia, PA; <sup>5</sup>HeartWare, Inc., Framingham, MA; <sup>6</sup>University of Louisville, Louisville, KY.**2:15 PM (210) Driveline Infections in a Large Cohort of Continuous Flow Left Ventricular Assist Device (LVAD) Recipients: The Impact of Pseudomonas on Deep Driveline Involvement;**C.E. Koval,<sup>1</sup> L. Thuita,<sup>2</sup> N. Moazami,<sup>3</sup> M. Mountis,<sup>3</sup> E. Blackstone,<sup>3</sup> <sup>1</sup>Infectious Disease, Cleveland Clinic Foundation, Cleveland, OH; <sup>2</sup>Quantitative Health Sciences, Lerner College of Medicine, Cleveland, OH; <sup>3</sup>Thoracic and Cardiovascular Surgery, Cleveland Clinic Foundation, Cleveland, OH; <sup>4</sup>Cardiovascular Medicine, Cleveland Clinic Foundation, Cleveland, OH.**2:30 PM (211) Infectious Complications and Outcomes in Children Supported with Left Ventricular Assist Devices;**A.G. Cabrera,<sup>1</sup> M.S. Khan,<sup>2</sup> D.L.S. Morales,<sup>3</sup> D.W. Chen,<sup>2</sup> B.S. Moffett,<sup>4</sup> J.F. Price,<sup>1</sup> W.J. Dreyer,<sup>1</sup> S.W. Denfield,<sup>1</sup> A. Jeewa,<sup>1</sup> C.D. Fraser, Jr.,<sup>2</sup> J.G. Vallejo,<sup>5</sup> <sup>1</sup>Department of Pediatrics, Section of Pediatric Cardiology, Texas Children's Hospital, Baylor College of Medicine, Houston, TX; <sup>2</sup>Michael E. DeBakey Department of Surgery, Division of Congenital Heart Surgery, Texas Children's Hospital, Baylor College of Medicine, Houston, TX; <sup>3</sup>Pediatric Cardiothoracic Surgery, Cincinnati Children's Hospital Medical Center, Cincinnati, OH; <sup>4</sup>Pharmacy, Texas Children's Hospital, Houston, TX; <sup>5</sup>Department of Pediatrics, Section of Infectious Disease, Texas Children's Hospital, Baylor College of Medicine, Houston, TX.**2:45 PM (212) Thrombotic Complications Increase after Percutaneous Site/Pocket Infection in Patients with Left Ventricular Assist Devices: An INTERMACS Analysis;**M.R. Shah,<sup>1</sup> D.C. Naftel,<sup>2</sup> M.A. Miller,<sup>1</sup> J.T. Baldwin,<sup>1</sup> E.D. Feller,<sup>3</sup> S.S. Desai,<sup>4</sup> R. John,<sup>5</sup> R.L. Kormos,<sup>6</sup> W.L. Holman,<sup>2</sup> <sup>1</sup>National Heart, Lung, and Blood Institute, Bethesda, MD; <sup>2</sup>University of Alabama at Birmingham, Birmingham, AL; <sup>3</sup>University of Maryland Medical Center, Baltimore, MD; <sup>4</sup>Inova Fairfax Hospital, Falls Church, VA; <sup>5</sup>University of Minnesota, Minneapolis, MN; <sup>6</sup>University of Pittsburgh Medical Center, Pittsburgh, PA.**3:00 PM (213) Incidence and Characterization of Percutaneous Lead Damage in the Heartmate II Left Ventricular Assist Device;**D. Kalavrouziotis,<sup>1</sup> A. Massiello,<sup>2</sup> M.Z. Tong,<sup>1</sup> R.C. Starling,<sup>3</sup> R. Fryc,<sup>4</sup> G. Heatley,<sup>4</sup> D.J. Farrar,<sup>4</sup> N. Moazami,<sup>1</sup> <sup>1</sup>Department of Thoracic and Cardiovascular Surgery, Cleveland Clinic, Cleveland, OH; <sup>2</sup>Department of Biomedical Engineering, Lerner Research Institute, Cleveland Clinic, Cleveland, OH; <sup>3</sup>Department of Cardiovascular Medicine, Cleveland Clinic, Cleveland, OH; <sup>4</sup>Thoratec Corporation, Pleasanton, CA.**3:15 PM (214) Predisposition to Infection and Bleeding in Mechanical Assist Devices (LVADs) Recipients after Dental Procedures: A Single Center Experience;**

K.C. McCants, J.B. McCants, P.S. Combs, P. Raheja, M.S. Slaughter, E. Birks, Advanced Heart Failure and Transplant, University of Louisville &amp; Jewish Hospital, Louisville, KY.

2:00 PM – 3:30 PM

## CONCURRENT SESSION 26

**Heart 6: Are All Antibodies Equal? Predicting, Managing and Treating the Risk for AMR (511)****CHAIRS:** Nancy L. Reinsmoen, PhD and Adriana Zeevi, PhD

- 2:00 PM (215) *The Development and Impact of De Novo Circulating Antibodies in Non-Sensitized Patients after Heart Transplantation***; J. Patel, M. Kittleson, M. Rafiei, A. Osborne, D. Chang, L. Czer, N. Reinsmoen, A. Trento, J. Kobashigawa. Cedars-Sinai Heart Institute, Los Angeles, CA.
- 2:15 PM (216) *Type and Extent of HLA Mismatch and Antibody-Mediated Rejection in Heart Transplantation***; A. Saidi, G. Snow, K.D. Brunisholz, E. Hammond, S. Drakos, C.H. Selzman, E. Gilbert, O. Wever-Pinzon, R. Alharethi, D. Miller, J. Nativi-Nicolau, B. Reid, D. Budge, P. Revelo, A.G. Kfoury, J. Stehlik. UTAH Cardiac Transplant Program, Salt Lake City, UT.
- 2:30 PM (217) *Virtual Crossmatch Predicts Compatibility for Heart Transplantation with Favorable Outcomes in Sensitized Patients***; D.O. Crowe,<sup>1</sup> S.C. Fossey,<sup>1</sup> S. Maltais,<sup>2</sup> M.A. Wigger.<sup>3</sup>  
<sup>1</sup>Transplant Immunology, DCI Laboratory, Nashville, TN; <sup>2</sup>Cardiac Surgery, Vanderbilt University Medical Center, Nashville, TN; <sup>3</sup>Heart Transplantation, Vanderbilt University Medical Center, Nashville, TN.
- 2:45 PM (218) *No Harm, No Foul? The Prospective Treatment of Sensitized Heart Transplant Recipients with Plasmapheresis and IVIG-Five Year Follow-Up***; M.W. Weston,<sup>1,4</sup> M. Lopez-Cepero,<sup>2</sup> T. Jarmi,<sup>3,5</sup> <sup>1</sup>Cardiology, Tampa General Hospital, Tampa, FL; <sup>2</sup>Immunology, Lifelink Immunology Laboratory, Tampa, FL; <sup>3</sup>Nephrology, Tampa General Hospital, Tampa, FL; <sup>4</sup>Cardiology, University of South Florida College of Medicine, Tampa, FL; <sup>5</sup>Nephrology, University of South Florida College of Medicine, Tampa, FL.
- 3:00 PM (219) *Predictive Value of HLA Antibody Characteristics in Progression of Subclinical Antibody Mediated Rejection in Heart Transplant Recipients***; M. Askar,<sup>1</sup> E.R. Rodriguez,<sup>1</sup> P. Reville,<sup>1</sup> J. Gatto,<sup>2</sup> J. Schold,<sup>1</sup> J. Daghestani,<sup>1</sup> A. Zhang,<sup>1</sup> L. Klingman,<sup>1</sup> E. Hsich,<sup>1</sup> R. Starling,<sup>1</sup> N. Smedira,<sup>1</sup> N. Moazami,<sup>1</sup> D. Taylor,<sup>1</sup> C. Tan.<sup>1</sup> <sup>1</sup>Cleveland Clinic, Cleveland, OH; <sup>2</sup>The Ohio State University, Columbus, OH.
- 3:15 PM (220) *Pre-Transplant Circulating Antibodies Predict Antibody-Mediated Rejection Using the New ISHLT Grading Scale***; M. Kittleson, J. Patel, M. Rafiei, A. Osborne, D. Chang, D. Ramzy, L. Czer, N. Reinsmoen, J. Kobashigawa. Cedars-Sinai Heart Institute, Los Angeles, CA.

2:00 PM – 3:30 PM

## CONCURRENT SESSION 27

**Lung 4: Immunosuppression and Therapeutics (510)****CHAIRS:** Roger D Yusen, MD, MPH and Geert M. Verleden, MD, PhD

- 2:00 PM (221) *To Induce or Not To Induce: A 21st Century Evaluation of Lung Transplant Immunosuppression***; B.A. Whitson,<sup>1</sup> A. Lehman,<sup>1</sup> A. Wehr,<sup>1</sup> D. Hayes, Jr.,<sup>2</sup> S. Kirkby,<sup>1,2</sup> A. Pope-Harman,<sup>1</sup> A. Kilic,<sup>1</sup> R.S.D. Higgins.<sup>1</sup> <sup>1</sup>The Ohio State University Wexner Medical Center, Columbus, OH; <sup>2</sup>Nationwide Children's Hospital, Columbus, OH.
- 2:15 PM (222) *A Prospective Pilot-Study of Azithromycin for Lymphocytic Airway Inflammation after Lung Transplantation***; R. Vos,<sup>1</sup> S.E. Verleden,<sup>1</sup> D. Ruttens,<sup>1</sup> A. Vaneylen,<sup>1</sup> E. Vandermeulen,<sup>1</sup> D.E. Van Raemdonck,<sup>1</sup> J. Yserbyt,<sup>1</sup> L.J. Dupont,<sup>1</sup> E.K. Verbeke,<sup>2</sup> G.M. Verleden,<sup>1</sup> B.M. Vanaudenaerde.<sup>1</sup> <sup>1</sup>Lung Transplant Unit, KU/UZLeuven, Leuven, Belgium; <sup>2</sup>Histopathology, KU/UZLeuven, Leuven, Belgium.
- 2:30 PM (223) *Use of Sirolimus in Lung Transplantation: A Single Center Experience***; L.J. Stuckey,<sup>1</sup> C.E. Bartos,<sup>2</sup> H.A. McCullough,<sup>2</sup> R.D. Florn,<sup>2</sup> V.N. Lama,<sup>3</sup> J. Lin,<sup>4</sup> K.M. Chan.<sup>3</sup> <sup>1</sup>Department of Pharmacy Services, University of Michigan Health System, Ann Arbor; <sup>2</sup>Transplant Center, University of Michigan Health System, Ann Arbor; <sup>3</sup>Department of Internal Medicine, Division of Pulmonary & Critical Care Medicine, University of Michigan Health System, Ann Arbor; <sup>4</sup>Section of Thoracic Surgery, University of Michigan Health System, Ann Arbor.
- 2:45 PM (224) *Proteasome Inhibitor Therapy for Antibody-Mediated Lung Transplant Rejection***; J.A. Iuppa,<sup>1</sup> K.B. Bain,<sup>1</sup> C.A. Witt,<sup>2</sup> E.P. Trulock,<sup>2</sup> D.E. Byers,<sup>2</sup> R.R. Hachem.<sup>2</sup> <sup>1</sup>Pharmacy Department, Barnes-Jewish Hospital, St. Louis, MO; <sup>2</sup>Division of Pulmonary and Critical Care Medicine, Washington University – School of Medicine, St. Louis, MO.
- 3:00 PM (225) *World Wide Experience with Induction in Lung Transplantation for Cystic Fibrosis: Is Induction Necessary?***; C.A. Beaty,<sup>1</sup> T.J. George,<sup>1</sup> A. Kilic,<sup>1</sup> A.S. Shah,<sup>1</sup> C.A. Merlo.<sup>2</sup> <sup>1</sup>Division of Cardiac Surgery, Johns Hopkins Medical Institutions, Baltimore, MD; <sup>2</sup>Division of Pulmonology, Johns Hopkins Medical Institutions, Baltimore, MD.
- 3:15 PM (226) *Chronic Renal Failure in Lung Transplant Recipients Is Predicted by Tacrolimus Toxicity Events***; B.D. Fox,<sup>1,2</sup> D. Rozengarten,<sup>1</sup> Y. Raviv,<sup>1,2</sup> S. Yitzhakian,<sup>1</sup> M.R. Kramer.<sup>1,2</sup> <sup>1</sup>Pulmonology, Rabin Medical Center, Petach Tikva, Israel; <sup>2</sup>Medicine, Tel Aviv University, Tel Aviv, Israel.

2:00 PM – 3:30 PM

## CONCURRENT SESSION 28

## MCS 7: Changes in Physiology During Support (512A-G)

**CHAIRS:** Jennifer Cowger, MD, MS and Jack G. Copeland, MD

- 2:00 PM (227) Dynamic BMI Changes in Patients Implanted with Continuous Flow Left Ventricular Assist Devices: Evidence for Reversibility of Cardiac Cachexia and Impact on Survival;** D.M. Kobrin,<sup>1</sup> J.P. Donnelly,<sup>1</sup> A.L. Acker,<sup>1</sup> J.L. Howard,<sup>1</sup> C.M. Zalewski,<sup>1</sup> S.L. Walsh,<sup>1</sup> C.E. Hill,<sup>1</sup> M.L. O'Hara,<sup>1</sup> J.F. Marble,<sup>2</sup> P. Atluri,<sup>1</sup> J.W. Wald,<sup>2</sup> L.R. Goldberg,<sup>2</sup> Y.J. Woo,<sup>1</sup> M.A. Acker,<sup>1</sup> J.E. Rame,<sup>2</sup>  
<sup>1</sup>Cardiac Surgery, Hospital of the University of Pennsylvania, Philadelphia, PA; <sup>2</sup>Heart Failure and Cardiac Transplantation, Hospital of the University of Pennsylvania, Philadelphia, PA.
- 2:15 PM (228) Maximal Exercise Response Is Reduced in Patients with the Total Artificial Heart;** J.M. Canada,<sup>1</sup> E.J. Paulus,<sup>1</sup> J.M. Mizell,<sup>1</sup> R.K. Evans,<sup>2</sup> D.G. Tang,<sup>3</sup> V. Kasirajan,<sup>3</sup> K.B. Shah,<sup>4</sup>  
<sup>1</sup>Cardiopulmonary Rehabilitation, VCU Medical Center, Richmond, VA; <sup>2</sup>Health & Human Performance, Virginia Commonwealth University, Richmond, VA; <sup>3</sup>Division of Cardiothoracic Surgery, VCU Medical Center, Richmond, VA; <sup>4</sup>Division of Cardiology, VCU Medical Center, Richmond, VA.
- 2:30 PM (229) Blood Pressure Measurement in Patients with Continuous-Flow Left Ventricular Assist Devices;** K.D. Woldendorp,<sup>1,2</sup> S. Gupta,<sup>1,2</sup> P. Markey,<sup>1,2</sup> D. Robson,<sup>1</sup> K. Dhital,<sup>1,2</sup> C.S. Hayward,<sup>1,2,3</sup>  
<sup>1</sup>Heart Failure and Transplant Unit, St Vincent's Hospital, Sydney, Australia; <sup>2</sup>Faculty of Medicine, The University of New South Wales, Sydney, Australia; <sup>3</sup>Victor Chang Cardiac Research Institute, Sydney, Australia.
- 2:45 PM (230) Slight Exercise in Ambulatory LVAD Patients Leads to a Severe Compromise of Hemodynamic Parameters;** D. Camboni,<sup>1</sup> T. Lange,<sup>2</sup> D. Lunz,<sup>3</sup> L. Rupprecht,<sup>1</sup> M. Hilker,<sup>1</sup> S. Hirt,<sup>1</sup> C. Schmid,<sup>1</sup>  
<sup>1</sup>Cardiothoracic Surgery, University Medical Center, Regensburg, Germany; <sup>2</sup>Internal Medicine, University Medical Center, Regensburg, Germany; <sup>3</sup>Anesthesiology, University Medical Center, Regensburg, Germany.
- 3:00 PM (231) Differences in Exercise Capacity Among Left Ventricular Assist Device Recipients Correlate More with Resting Filling Pressures Than Systolic Function;** J. Vader,<sup>1</sup> H. Craddock,<sup>1</sup> G. Ewald,<sup>1</sup> R. Rasalingam,<sup>1</sup>  
<sup>1</sup>Cardiovascular Division, Washington University, St Louis, MO.
- 3:15 PM (232) Chronotropic Incompetence May Impact Exercise Capacity in Patients Supported by Left Ventricular Assist Device;** A.R. Garan,<sup>1</sup> N. Nahumi,<sup>1</sup> J. Han,<sup>1</sup> P. Colombo,<sup>1</sup> M. Yuzefpolskaya,<sup>1</sup> R. Te-Frey,<sup>2</sup> H. Takayama,<sup>2</sup> Y. Naka,<sup>2</sup> N. Uriel,<sup>1</sup> U.P. Jorde,<sup>1</sup>  
<sup>1</sup>Cardiology, Columbia University Medical Center, New York, NY; <sup>2</sup>Cardiothoracic Surgery, Columbia University Medical Center, New York, NY.

2:00 PM – 3:30 PM

## CONCURRENT SESSION 29

## Donor Management 2: Rethinking the Cardiac Donor (513ABC)

**CHAIRS:** David A. D'Allesandro, MD and Ashish S. Shah, MD

- 2:00 PM (233) Do Donor Characteristics Matter? Prediction of Graft Utilization and Recipient Outcomes after Heart Transplantation;** K.K. Khush,<sup>1</sup> R. Menza,<sup>2</sup> J. Nguyen,<sup>3</sup> J.G. Zaroff,<sup>4</sup> B.A. Goldstein,<sup>1</sup>  
<sup>1</sup>Stanford University, Palo Alto, CA; <sup>2</sup>Victoria University, Wellington, New Zealand; <sup>3</sup>California Transplant Donor Network, Oakland, CA; <sup>4</sup>Kaiser Northern California Division of Research, Oakland, CA.
- 2:15 PM (234) Does Cardiopulmonary Arrest and Resuscitation of Heart Donors Portend Inferior Outcomes in Heart Transplantation Recipients?;** M.A. Quader,<sup>1</sup> L.G. Wolfe,<sup>1</sup> V. Kasirajan,<sup>1</sup>  
<sup>1</sup>Cardiothoracic Surgery, Virginia Commonwealth University, Richmond, VA.
- 2:30 PM (235) Donor Pulmonary Status Impacts Survival in Cardiac Transplant Recipients;** J.L. Madden,<sup>1</sup> B.C. Baird,<sup>1</sup> J. Stehlik,<sup>2</sup> S.G. Drakos,<sup>2</sup> S.H. McKellar,<sup>1</sup> J.N. Nativi,<sup>2</sup> C.H. Selzman,<sup>1</sup>  
<sup>1</sup>Cardiothoracic Surgery, University of Utah Hospitals & Clinics, Salt Lake City, UT; <sup>2</sup>Cardiology, University of Utah Hospitals & Clinics, Salt Lake City, UT.
- 2:45 PM (236) Right Ventricular Distension in Donor Hearts Following Cardiocirculatory Death: Implications for Post-Transplant Function;** C.W. White,<sup>1</sup> A. Ali,<sup>2</sup> D. Hasanally,<sup>3</sup> F. Wang,<sup>4</sup> B. Xiang,<sup>4</sup> P. Mundt,<sup>1</sup> S. Large,<sup>2</sup> A. Ravandi,<sup>3</sup> T.W. Lee,<sup>1</sup> R.C. Arora,<sup>1</sup> G. Tian,<sup>4</sup> D.H. Freed,<sup>1</sup>  
<sup>1</sup>Cardiac Sciences Program, University of Manitoba, Winnipeg, Canada; <sup>2</sup>Cardiothoracic Surgery, Papworth Hospital, Cambridge, United Kingdom; <sup>3</sup>Institute of Cardiovascular Sciences, St. Boniface Hospital, Winnipeg, Canada; <sup>4</sup>National Research Council Institute for Biomedical Sciences, Winnipeg, Canada.
- 3:00 PM (237) Ex Vivo Heart Preservation: Impact of an Acellular Hemoglobin-Based Oxygen Carrier on Myocardial Function and Energy Metabolism;** C.W. White,<sup>1</sup> B. Xiang,<sup>2</sup> P. Mundt,<sup>1</sup> R.C. Arora,<sup>1</sup> G. Tian,<sup>2</sup> D.H. Freed,<sup>1</sup>  
<sup>1</sup>Cardiac Sciences Program, University of Manitoba, Winnipeg, MB, Canada; <sup>2</sup>National Research Council Institute for Biomedical Sciences, Winnipeg, MB, Canada.
- 3:15 PM (238) The PROCEED II International Heart Transplant Trial with the Organ Care System Technology (OCS);** F. Esmailian,<sup>1</sup> J.A. Kobashigawa,<sup>1</sup> Y. Naka,<sup>2</sup> D. Mancini,<sup>2</sup> E. Soltesz,<sup>3</sup> E. Hsieh,<sup>4</sup> M. Camacho,<sup>5</sup> D. Baran,<sup>6</sup> J. Madsen,<sup>7</sup> P. LePrince,<sup>8</sup> M. Deng,<sup>9</sup> A. Ardehali,<sup>10</sup>  
<sup>1</sup>Cedars-Sinai Heart Institute, Cedars-Sinai Medical Center, Los Angeles, CA; <sup>2</sup>Department of Surgery, New York Presbyterian Hospital/Columbia University Medical Center, New York, NY; <sup>3</sup>Department of Thoracic & Cardiovascular Surgery, Cleveland Clinic, Cleveland, OH; <sup>4</sup>Department of Cardiovascular Medicine, Cleveland Clinic, Cleveland, OH; <sup>5</sup>Department of Cardiothoracic Surgery, Barnabas Health Heart Center at Newark Beth Israel Medical Center, Newark, NJ; <sup>6</sup>Department of Heart Failure and Transplant, Barnabas Health Heart Center at Newark Beth Israel Medical Center, Newark, NJ; <sup>7</sup>Department of Surgery, Cardiac Surgery, Massachusetts General Hospital, Boston, MA; <sup>8</sup>Department of Surgery, Groupe Hospitalier Pitié-Salpêtrière, Paris, France; <sup>9</sup>Department of Cardiothoracic Medicine, David Geffen School of Medicine at UCLA Medical Center, Los Angeles, CA; <sup>10</sup>Department of Surgery, Division of Cardiothoracic Surgery, David Geffen School of Medicine at UCLA Medicine, Los Angeles, CA.

2:00 PM – 3:30 PM

## CONCURRENT SESSION 30

**Heart 7: Heart Failure – What's New in Translational Science (514B)****CHAIRS:** Ray E. Hershberger, MD and Maria Frigerio, MD

- 2:00 PM (239) Clinical Effects of CD34+ Cell Transplantation in Non-Ischemic Dilated Cardiomyopathy Correlate with Myocardial Cell Engraftment;** B. Vrtovec,<sup>1</sup> G. Poglajen,<sup>1</sup> L. Lezaic,<sup>1</sup> M. Sever,<sup>1</sup> F. Haddad,<sup>2</sup> J.C. Wu.<sup>2</sup> <sup>1</sup>Advanced Heart Failure and Transplantation Ctr, Ljubljana, Slovenia; <sup>2</sup>Stanford University School of Medicine, Stanford, CA.
- 2:15 PM (240) Changes in Circulating Progenitor Cells are Associated with Functional Capacity in Heart Failure Patients: A Longitudinal Study;** A.C. Alba,<sup>1</sup> S. Lalonde,<sup>1</sup> S.D. Walter,<sup>2</sup> G.H. Guyatt,<sup>2</sup> H.J. Ross.<sup>1</sup> <sup>1</sup>Heart Failure and Transplantation, Toronto General Hospital, University Health Network, Toronto, ON, Canada; <sup>2</sup>Clinical Epidemiology and Biostatistics, McMaster University, Hamilton, ON, Canada.
- 2:30 PM (241) Post-Transcriptional Regulation of alpha-1-Antichymotrypsin by miR-137 in Chronic Heart Failure and Mechanical Support;** S.I. Lok,<sup>1</sup> A. van Mil,<sup>1</sup> N. Bovenschen,<sup>1</sup> P. van der Weide,<sup>1</sup> J. van Kuik,<sup>1</sup> D.F. van Wichen,<sup>1</sup> T. Peeters,<sup>1</sup> E. Siera,<sup>1</sup> B. Winkens,<sup>2</sup> J.P.G. Sluijter,<sup>1</sup> P.A.F. Doevendans,<sup>1</sup> P.A. da Costa Martins,<sup>2</sup> N. de Jonge,<sup>1</sup> R.A. de Weger.<sup>1</sup> <sup>1</sup>UMC-U, Utrecht, Netherlands; <sup>2</sup>University of Maastricht, Maastricht, Netherlands.
- 2:45 PM (242) Defects in Free Fatty Acid Oxidation and Glucose Oxidation Coexist in the Failing Heart;** H.N. Sabbah, R.C. Gupta, S. Rastogi, M. Wang, K. Zhang. Medicine, Henry Ford Hospital, Detroit, MI.
- 3:00 PM (243) miRNA Modulation of Adiponectin Receptor<sup>2</sup> in Myocardium of Patients with End-Stage Heart Failure;** A. Beiras-Fernandez,<sup>1</sup> C. Ledderose,<sup>2</sup> F. Weis,<sup>2</sup> A. Beiras,<sup>3</sup> S. Kreth.<sup>2</sup> <sup>1</sup>Cardiothoracic and Vascular Surgery, JW Goethe University, Frankfurt, Germany; <sup>2</sup>Anesthesiology, LM-University Hospital, Munich, Germany; <sup>3</sup>University of Santiago, Santiago, Spain.
- 3:15 PM (244) Expression of Cardiolipin Biosynthesis and Remodeling Enzymes in Adult Heart Failure;** J.E. Grudis,<sup>1</sup> K.C. Chatfield,<sup>2</sup> G.C. Sparagna,<sup>4</sup> J. Hijmans,<sup>3</sup> R.D. Sobus,<sup>3</sup> S.D. Miyamoto,<sup>2,1</sup> B.L. Stauffer.<sup>3,4</sup> <sup>1</sup>School of Medicine, University of Colorado, Aurora, CO; <sup>2</sup>Department of Pediatric Cardiology, Children's Hospital Colorado, Aurora, CO; <sup>3</sup>Department of Medicine, University of Colorado Denver, Aurora, CO; <sup>4</sup>Department of Integrative Physiology, University of Colorado Boulder, Boulder, CO.

3:30 PM – 4:00 PM

COFFEE BREAK / VISIT EXHIBITS / VIEW POSTERS (516; 517AB)



4:00 PM – 5:30 PM

## ISHLT AND AST JOINT SESSION II

**Antibody-Mediated Rejection: State of the "Current" Art (513DEF)****CHAIRS:** Lori J. West, MD, DPhil, FRCPC (ISHLT) and Cynthia J. Gries, MD MSc (AST)

**SESSION SUMMARY:** Anti-donor antibodies remain an obstacle to successful thoracic transplantation. The combined expertise of ISHLT and the American Transplant Society come to bear on this timely topic in two separate sessions. The first explores the detection, interpretation and potential treatments of these antibodies prior to transplantation. The second explores the development of antibody-mediated rejection after thoracic transplantation and importantly includes the perspective of the non-thoracic transplant community.

- 4:00 PM Antibodies After Thoracic Transplantation: The Clinical Meaning and When to Intervene,** John D. Smith, FRCPath, Royal Brompton & Harefield NHS Foundation Trust, Harefield, Middlesex, UK
- 4:20 PM Common Pathology Findings of AMR Across Solid Organ Transplantation,** Michael Mengel, MD, University of Alberta, Edmonton, Canada
- 4:40 PM Prophylactic Therapies in Sensitized Patients After Kidney Transplantation,** Millie Samaniego, MD, FACP, FASN, University of Michigan, Ann Arbor, MI, USA
- 5:00 PM Treatment Strategies in AMR in Thoracic Transplantation,** Jon Kobashigawa, MD, Cedars-Sinai Heart Institute, Los Angeles, CA, USA
- 5:20 PM Moderated Panel Discussion**



4:00 PM – 5:30 PM

## CONCURRENT SESSION 31

**MCS 8: The Cost for Quality of Life after VAD (517CD)****CHAIRS:** Annemarie Kaan, MCN RN CCTN and Stuart D. Russell, MD

**4:00 PM (245) Comparison of Costs, Readmissions and Days out of Hospital at One Year between Heart Transplantation and Continuous Flow LVAD;** D.J. Goldstein, A. Sileo, L. Baker, J. Nguyen, P. Cotter. Cardiothoracic and Vascular Surgery, Montefiore Medical Center, Bronx, NY.

**4:15 PM (246) Hit the Road: A Multicenter Evaluation of Driving with LVADs;** S. Emami,<sup>1</sup>F.D. Pagani,<sup>2</sup>P.M. Eckman,<sup>3</sup>R.A. Gordon,<sup>4</sup>M.A. Brisco,<sup>5</sup>C.T. Klodell, Jr.,<sup>6</sup>S.A. Mandras,<sup>7</sup>A.K. Hasan,<sup>1</sup>C.B. Sai-Sudhakar,<sup>8</sup>B.C. Sun.<sup>9</sup><sup>1</sup>Division of Cardiology, The Ohio State University, Columbus, OH; <sup>2</sup>Cardiac Surgery, University of Michigan, Ann Arbor, MI; <sup>3</sup>Cardiology Division, University of Minnesota, Minneapolis, MN; <sup>4</sup>Division of Cardiology, Northwestern University, Chicago, IL; <sup>5</sup>Division of Cardiology, University of Pennsylvania, Philadelphia, PA; <sup>6</sup>Thoracic and Cardiovascular Surgery, University of Florida, Gainesville, FL; <sup>7</sup>Division of Cardiology, Ochsner Health System, New Orleans, FL; <sup>8</sup>Division of Cardiothoracic Surgery, The Ohio State University, Columbus, OH; <sup>9</sup>Cardiac Surgery, Minneapolis Heart Institute, Minneapolis, MN.

**4:30 PM (247) Cost of 1-Year LVAD Destination Therapy in Chronic Heart Failure; a Comparison with Heart Transplantation;** B. Meyns,<sup>1</sup>S. Jacobs,<sup>1</sup>K. Van den Bossche,<sup>1</sup>J. Verhoeven,<sup>1</sup>R.R. Bostic,<sup>3</sup>J. Vanhaecke,<sup>2</sup>J. Van Cleemput,<sup>2</sup>W. Droogne.<sup>2</sup><sup>1</sup>Department Cardiac Surgery, KULeuven, Leuven, Belgium; <sup>2</sup>Department Cardiology, KULeuven, Leuven, Belgium; <sup>3</sup>Thoratec Inc, Pleasanton.

**4:45 PM (248) Hospital Readmissions in Left Ventricular Assist Device (LVAD) Recipients: Analysis of Bridge to Transplant (BTT) and Destination Therapy (DT);** M. Bradner,<sup>1</sup>B.A. Whitson,<sup>2</sup>P. Eckman,<sup>1</sup>A. Lacey,<sup>1</sup>M. Colvin-Adams,<sup>1</sup>K.K. Liao,<sup>1</sup>R. John.<sup>1</sup><sup>1</sup>The University of Minnesota, Minneapolis, MN; <sup>2</sup>The Ohio State University Wexner Medical Center, Columbus, OH.

**5:00 PM (249) Reasons for Left Ventricular Assist Device Patient Denial: Insights into Possible Misconceptions about Mechanical Circulatory Support;** S.P. McCandless, K. Brunisholz, A. McCormick, C.H. Selzman, B.B. Reid, J. Stehlik, R. Alharethi, R.A. Merchel, D. Budge, S. Stoker, E.S. Davis, A.K. Carter, W.T. Caine, A.G. Kfoury. UTAH Cardiac Transplant Program, Salt Lake City, UT.

**5:15 PM (250) Impact of Mechanical Support on Quality of Life Measures over Time;** J.J. Teuteberg,<sup>1</sup>N. Kunz,<sup>1</sup>C. Allen,<sup>1</sup>K. Lockard,<sup>1</sup>M. Simon,<sup>1</sup>J.K. Bhama,<sup>1</sup>C. Bermudez,<sup>1</sup>M.L. McNulty,<sup>2</sup>R.L. Kormos,<sup>1</sup>M.A. Dew.<sup>2</sup><sup>1</sup>Heart and Vascular Institute, University of Pittsburgh, Pittsburgh, PA; <sup>2</sup>School of Medicine, University of Pittsburgh, Pittsburgh, PA.

4:00 PM – 5:30 PM

## CONCURRENT SESSION 32

**Heart 8: Mechanisms and Markers of Acute Rejection – Within and Without Biopsy Sampling (511)****CHAIRS:** Mario C. Deng, MD and Annalisa Angelini, MD

**4:00 PM (251) Fibrin on Endomyocardial Biopsy: A Significant Predictor of Cardiovascular Mortality beyond pAMR Score;** D. Budge, E.H. Hammond, G. Snow, D.V. Miller, P. Revelo, J. Stehlik, M. Everitt, K. Molina, R. Alharethi, S.G. Drakos, E.M. Gilbert, J. Nativi, A.G. Kfoury. UTAH Cardiac Transplant Program, Salt Lake City, UT.

**4:15 PM (252) Quilty Revisited: Association with pAMR and Worse Outcomes Post Heart Transplantation;** M.P. Revelo, M.E.H. Hammond, G.L. Snow, D.V. Miller, D. Budge, M.D. Everitt, J. Stehlik, R. Alharethi, E.M. Gilbert, C. Selzman, J.N. Nativi, A.G. Kfoury. UTAH Cardiac Transplant Program, Salt Lake City, UT.

**4:30 PM (253) Quantification of Circulating Donor Specific Cell Free DNA Is an Exquisitely Sensitive Non-Invasive Indicator of Injury to the Donor Heart;** P. Hidestrand,<sup>3</sup>M. Hidestrand,<sup>1</sup>K. Stamm,<sup>1</sup>A. Tomita-Mitchell,<sup>3</sup>A. Oliphant,<sup>3</sup>M. Goetsch,<sup>1</sup>H.-L. Liang,<sup>1</sup>G. Stendahl,<sup>2</sup>A. Pelech,<sup>3</sup>P. Simpson,<sup>1</sup>S. Berger,<sup>3</sup>W. Benson,<sup>2</sup>J. Tweddel,<sup>1</sup>S. Zangwill,<sup>4</sup>M. Mitchell.<sup>1</sup><sup>1</sup>Surgery, Medical College of Wisconsin, Milwaukee, WI; <sup>2</sup>Children's Hospital of Wisconsin, Milwaukee, WI; <sup>3</sup>Ariosa Diagnostics, San Jose, CA; <sup>4</sup>Pediatrics, Medical College of Wisconsin, Milwaukee, WI.

**4:45 PM (254) Epigenetic Analysis of the TSDR of FOXP3 Demonstrates That Natural Treg Infiltrate the Cardiac Allograft Already before an Acute Rejection Episode;** K. Boer,<sup>1</sup>A.M.A. Peeters,<sup>1</sup>A.P.W.M. Maat,<sup>2</sup>K. Caliskan,<sup>3</sup>A.H.M.M. Balk,<sup>3</sup>W. Weimar,<sup>1</sup>C.C. Baan.<sup>1</sup><sup>1</sup>Internal Medicine – Transplantation, Erasmus University Medical Center, Rotterdam, Netherlands; <sup>2</sup>Thoracic Surgery, Erasmus University Medical Center, Rotterdam, Netherlands; <sup>3</sup>Cardiology, Erasmus University Medical Center, Rotterdam, Netherlands.

**5:00 PM (255) Racial Disparities after Heart Transplant: Evidence from IMAGE;** K.K. Khush,<sup>1</sup>M.X. Pham,<sup>1</sup>J.J. Teuteberg,<sup>2</sup>A.G. Kfoury,<sup>3</sup>R.C. Starling,<sup>4</sup>M.C. Deng,<sup>5</sup>T.P. Cappola,<sup>6</sup>A. Kao,<sup>7</sup>A.S. Anderson,<sup>8</sup>W.G. Cotts,<sup>9</sup>G.A. Ewald,<sup>10</sup>D.A. Baran,<sup>11</sup>R.C. Bogaev,<sup>12</sup>M. Hlatky,<sup>1</sup>B. Elashoff,<sup>13</sup>D. Hiller,<sup>13</sup>J. Yee,<sup>13</sup>H.A. Valantine.<sup>1</sup><sup>1</sup>Stanford University, Palo Alto, CA; <sup>2</sup>University of Pittsburgh Medical Center, Pittsburgh, PA; <sup>3</sup>Intermountain Medical Center, Salt Lake City, UT; <sup>4</sup>Cleveland Clinic, Cleveland, OH; <sup>5</sup>University of California at Los Angeles, Los Angeles, CA; <sup>6</sup>Hospital of the University of Pennsylvania, Philadelphia, PA; <sup>7</sup>Med-America Heart Institute, St Luke's Hospital, Kansas City; <sup>8</sup>University of Chicago Medical Center, Chicago, IL; <sup>9</sup>Northwestern University, Chicago, IL; <sup>10</sup>Washington University School of Medicine, St. Louis; <sup>11</sup>Newark Beth Israel Medical Center, Newark, NJ; <sup>12</sup>Texas Heart Institute, Houston, TX; <sup>13</sup>XDx, Brisbane, CA.

**5:15 PM (256) Clinical and Prognostic Correlates of pAMR Grading in Patients with Suspect Antibody Mediated Rejection;** L. Borgese,<sup>1</sup>M. Fanizza,<sup>1</sup>L. Potena,<sup>1</sup>O. Leone,<sup>2</sup>A. Bontadini,<sup>3</sup>S. Iannelli,<sup>3</sup>F. Fruet,<sup>3</sup>P. Prestinenzi,<sup>1</sup>V. Manfredini,<sup>1</sup>G. Magnani,<sup>1</sup>F. Grigioni,<sup>1</sup>A. Branzi.<sup>1</sup><sup>1</sup>Cardiovascular Department, University of Bologna, Bologna, Italy; <sup>2</sup>Pathology Department, Academic Hospital S.Orsola-Malpighi, Bologna, Italy; <sup>3</sup>Immunogenetics Laboratory, Academic Hospital S. Orsola-Malpighi, Bologna, Italy.

4:00 PM – 5:30 PM

## CONCURRENT SESSION 33

## Lung 5: BOS – An Update (510)

**CHAIRS:** Kevin M. Chan, MD and Charles Poirier, MD FRCP(C)

**4:00 PM (257) Uteroglobin Protective Role in CLAD, from Proteomic to In Vitro Biological Activity;** D. Capuano,<sup>1</sup> E. Cova,<sup>2</sup> S. Miserere,<sup>2</sup> D. Piloni,<sup>2</sup> M. Porzio,<sup>2</sup> T. Oggionni,<sup>2</sup> F. Meloni,<sup>1,2</sup> <sup>1</sup>Department of Molecular Medicine, University of Pavia, Pavia, Pavia, Italy; <sup>2</sup>Department of Respiratory Diseases, Policlinico San Matteo Foundation, Pavia, Pavia, Italy.

**4:15 PM (258) New Insights in Bronchiolitis Obliterans Syndrome after Lung Transplantation Using (micro-JCT);** S.E. Verleden,<sup>1</sup> D. Vasilescu,<sup>2</sup> S. Willems,<sup>1</sup> D. Ruttens,<sup>1</sup> E. Vandermeulen,<sup>1</sup> A. Vaneylen,<sup>1</sup> D.E. Van Raemdonck,<sup>1</sup> R. Vos,<sup>1</sup> J.E. McDonough,<sup>2</sup> E.K. Verbeken,<sup>1</sup> J. Verschaeckelen,<sup>1</sup> B. Rondelet,<sup>3</sup> C. Knoop,<sup>3</sup> J. Cooper,<sup>3</sup> M.L. Decraemer,<sup>1</sup> J.C. Hogg,<sup>2</sup> G.M. Verleden,<sup>1</sup> B.M. Vanaudenaerde,<sup>1</sup> <sup>1</sup>KU Leuven, Leuven, Belgium; <sup>2</sup>capture Centre, Vancouver, Canada; <sup>3</sup>Erasmus University Hospital, Brussel, Belgium; <sup>3</sup>University of Pennsylvania, PA.

**4:30 PM (259) Overexpression of IL-1 Receptor Antagonist Attenuates Obliterative Bronchiolitis in Murine Tracheal Transplant Model;** V.Y. Sacher,<sup>1</sup> R.C. Levitt,<sup>2</sup> P. Ruiz,<sup>1</sup> Y. Wei,<sup>1</sup> S. Gupta,<sup>3</sup> R.I. Vazquez-Padron,<sup>1</sup> S.M. Pham,<sup>1</sup> <sup>1</sup>Surgery, University of Miami, Miami, FL; <sup>2</sup>Anesthesiology, University of Miami, Miami, FL; <sup>3</sup>Microbiology and Immunology, University of Miami, Miami, FL.

**4:45 PM (260) Transbronchial Brush (TBB) Detection of Activated T Cells Identifies Patients at Risk of Progressive Bronchiolitis Obliterans Syndrome (BOS);** D.C. Chambers,<sup>1,2</sup> A. Fiene,<sup>1</sup> K. Sinclair,<sup>1</sup> L. Samson,<sup>1</sup> M.E. Tan,<sup>1</sup> T. Sladden,<sup>1</sup> P.M.A. Hopkins,<sup>1,2</sup> S.T. Yerkovich,<sup>1,2</sup> <sup>1</sup>Queensland Lung Transplant Service, The Prince Charles Hospital, Brisbane, QLD, Australia; <sup>2</sup>School of Medicine, The University of Queensland, Brisbane, Qld, Australia.

**5:00 PM (261) Chronic Rejection Lesions Are Decreased in IL-17 KO Mice after Orthotopic Lung Transplantation;** A. Vaneylen,<sup>1</sup> E. Verbeken,<sup>1</sup> E. Vandermeulen,<sup>1</sup> J. Somers,<sup>2</sup> S.E. Verleden,<sup>1</sup> D. Ruttens,<sup>1</sup> R. Vos,<sup>3</sup> D.E. Van Raemdonck,<sup>2</sup> W. Jungraithmayr,<sup>3</sup> B.M. Vanaudenaerde,<sup>1</sup> G.M. Verleden,<sup>3</sup> <sup>1</sup>Lab of Pneumology, KU Leuven, Leuven, Belgium; <sup>2</sup>Lab of Experimental Thoracic Surgery, KU Leuven, Leuven, Belgium; <sup>3</sup>Lung Transplant Unit, University Hospital, Leuven, Belgium; <sup>3</sup>Division of Thoracic Surgery, University Hospital, Zurich, Switzerland.

**5:15 PM (262) Diagnosis of Restrictive Allograft Syndrome (RAS) without Using Total Lung Capacity;** M. Sato,<sup>1</sup> T. Saito,<sup>2</sup> T.K. Waddell,<sup>2</sup> L.G. Singer,<sup>2</sup> S. Keshavjee,<sup>2</sup> <sup>1</sup>Department of Thoracic Surgery, Kyoto University Hospital, Kyoto, Kyoto, Japan; <sup>2</sup>The Toronto Lung Transplant Program, University Health Network, University of Toronto, Toronto, ON, Canada.

4:00 PM – 5:30 PM

## CONCURRENT SESSION 34

## PH 3: Right Ventricular Assessment and Function (512A-G)

**CHAIRS:** Raymond L. Benza, MD and Dana McGlothlin, MD

**4:00 PM (263) Radionuclide Angiographic Assessment of Right Ventricular Ejection Fraction Is Prognostic in Pulmonary Arterial Hypertension;** P.Y. Courand,<sup>1</sup> V. Cottin,<sup>1,2,3</sup> G. Pina-Jomir,<sup>1</sup> M. Bertocchi,<sup>4</sup> C. Khouatra,<sup>1</sup> J. Traclet,<sup>1</sup> A.-S. Blanchet,<sup>5</sup> A. Dib,<sup>1</sup> S. Turquier,<sup>1</sup> J.-C. Glérant,<sup>1</sup> G. Dérumeaux,<sup>1,2,6</sup> M. Humbert,<sup>7,8,9</sup> G. Simonneau,<sup>7,8,9</sup> J.-F. Mornex,<sup>1,2,3</sup> C. Scheiber,<sup>1,2</sup> J.-F. Cordier,<sup>1,2,3</sup> <sup>1</sup>Hospices Civils de Lyon, Lyon, France; <sup>2</sup>Université Lyon 1, Lyon, France; <sup>3</sup>UMR753, INRA, Lyon, France; <sup>4</sup>CH Annecy, Annecy, France; <sup>5</sup>CH St Joseph St Luc, Lyon, France; <sup>6</sup>CARMEN, Inserm, Lyon, France; <sup>7</sup>Assistance Public Hôpitaux de Paris, Le Kremlin-Bicêtre, France; <sup>8</sup>Université Paris Sud, Paris, France; <sup>9</sup>U999, Inserm, Paris, France.

**4:15 PM (264) Hypoxia Inducible Factor-1 Driven Vascular Endothelial Growth Factor and Stromal Derived Factor-1 Signaling Are Maintained in the Hypertrophied Right Ventricle in Congenital Heart Disease: Implications for Pulmonary Hypertension;** P. Dromparis,<sup>1</sup> G. Sutendra,<sup>2</sup> R. Paulin,<sup>2</sup> J. Zhao,<sup>1</sup> J. Sandha,<sup>1</sup> I.M. Rebeyka,<sup>1</sup> D.B. Ross,<sup>1</sup> E.D. Michelakis,<sup>2</sup> J. Nagendran,<sup>1</sup> <sup>1</sup>Surgery (Cardiac Surgery), University of Alberta, Edmonton, AB, Canada; <sup>2</sup>Medicine (Cardiology), University of Alberta, Edmonton, AB, Canada.

**4:30 PM (265) A 'Virtual' Echocardiographic Score for Predicting the Hemodynamic Profile in Pulmonary Hypertension;** A. Vaidya,<sup>1</sup> A.R. Opatowsky,<sup>2</sup> P.R. Forfia,<sup>1</sup> <sup>1</sup>Department of Medicine, Division of Cardiology, University of Pennsylvania School of Medicine, Philadelphia, PA; <sup>2</sup>Department of Cardiology, Children's Hospital Boston, Boston, MA.

**4:45 PM (266) Effects of Parenteral Treprostinil on Functional Capacity, Hemodynamics and Right Heart Function in Patients Referred to LTx with Pulmonary Fibrosis & Significant PH;** R. Saggari,<sup>1</sup> A. Fields,<sup>2</sup> D. Khanna,<sup>3</sup> F. Paul,<sup>2</sup> R. Saggari,<sup>3</sup> <sup>1</sup>Heart-Lung Institute, St. Joseph Hospital & Medical Center, Phoenix, AZ; <sup>2</sup>Division of Cardiology, University of Pennsylvania, Philadelphia, PA; <sup>3</sup>Division of Rheumatology, University of Michigan, Ann Arbor, MI; <sup>3</sup>Division of Cardiology, University of Pennsylvania, Philadelphia, PA; <sup>3</sup>Division of Pulmonary & Critical Care, David Geffen School of Medicine, UCLA, Los Angeles, CA.

**5:00 PM (267) Right Ventricular Outflow Tract Velocity Time Integral Is the Strongest Echo-Doppler Predictor of Right Ventricular Fibrosis in Patients with Pulmonary Arterial Hypertension;** S.K.R. Soma, D. Raghuvver, S. Prabhakar, R. Biederman, A. Raina. Cardiovascular Institute, Allegheny General Hospital, Pittsburgh, PA.

**5:15 PM (268) Can Late Gadolinium Enhancement Predict Adverse Clinical Events in Pulmonary Arterial Hypertension?;** S.R. Soma, D. Raghuvver, S. Prabhakar, M. Doyle, D. Vido, R. Benza, S. Murali, A. Raina, R. Biederman. Allegheny General Hospital, Pittsburgh, PA.

4:00 PM – 5:30 PM

## CONCURRENT SESSION 35

**PEDS 2: Mechanical Circulatory Support in Children (513ABC)****CHAIRS:** Daphne T. Hsu, MD and David N. Rosenthal, MD

**4:00 PM (269) Improving Outcomes in Children Requiring Mechanical Bridge-To-Transplantation (BTT) in the Current Era;** R.R. Davies, S. Haldeman, C. Pizarro, Nemours Cardiac Center, Nemours/Al duPont Hospital for Children, Wilmington, DE.

**4:15 PM (270) Neurological Outcomes Associated with Use of the Berlin Heart EXCOR® Pediatrics;** L.C. Jordan,<sup>1</sup>T. Humpl,<sup>2</sup>O. Reinhartz,<sup>3</sup>S. Pruthi,<sup>4</sup>C. Tjossem,<sup>7</sup>R. Ichord,<sup>5</sup>D.N. Rosenthal,<sup>6</sup><sup>1</sup>Neurology, Vanderbilt University, Nashville, TN; <sup>2</sup>Critical Care Medicine, University of Toronto, Toronto, ON, Canada; <sup>3</sup>Cardiothoracic Surgery, Stanford University, Stanford, CA; <sup>4</sup>Radiology, Vanderbilt University, Nashville, TN; <sup>5</sup>Neurology, University of Pennsylvania, Philadelphia, PA; <sup>6</sup>Pediatrics, Stanford University, Stanford, CA; <sup>7</sup>Berlin Heart, The Woodlands, TX.

**4:30 PM (271) Effect of VAD Use on HLA Sensitization and Risk of Rejection Post-Heart Transplant in US Children with Dilated Cardiomyopathy;** C.S. Almond, K.P. Daly, T.P. Singh, G. Piercey, K. Gauvreau. Cardiology, Boston Children's Hospital, Boston, MA.

**4:45 PM (272) Pediatric VAD Utilization in Dilated Cardiomyopathy: Does Higher VAD Utilization Lead to Better Waitlist Outcomes?;** C.J. VanderPluym, T.P. Singh, K. Gauvreau, E. Blume, B. Millian, F. Fynn-Thompson, K. Daly, C. Almond. Cardiology, Boston Children's Hospital, Boston, MA.

**5:00 PM (273) Evaluation of the Infant Jarvik Ventricular Assist Device in a Chronic Juvenile Sheep Model;** A.C. Watkins,<sup>1</sup>X. Wei,<sup>1</sup>P.G. Sanchez,<sup>1</sup>Y. Liu,<sup>1</sup>G.J. Bittle,<sup>1</sup>T. Li,<sup>1</sup>A. Narin,<sup>1</sup>M. Repetto,<sup>1</sup>E. Faria,<sup>1</sup>S. Li,<sup>2</sup>R. Jarvik,<sup>3</sup>Z. Wu,<sup>1</sup>B.P. Griffith.<sup>1</sup><sup>1</sup>Division of Cardiac Surgery, University of Maryland, School of Medicine, Baltimore, MD; <sup>2</sup>Division of Cardiology, University of Maryland Medical Center, Baltimore, MD; <sup>3</sup>Jarvik Heart Inc, New York, NY.

**5:15 PM (274) Worldwide Use of SynCardia Total Artificial Heart in Adolescents: A 25-Year Experience;** D.L. Morales, F. Zafar, A. Lorts, T.D. Ryan, C. Chin, J.A. Towbin, J.L. Jefferies. Heart Institute, Cincinnati Children's Hospital, University of Cincinnati School of Medicine, Cincinnati, OH.

4:00 PM – 5:30 PM

## CONCURRENT SESSION 36

**PHARM 1: Innovative Pharmacotherapeutic Approaches to Thoracic Transplant and Mechanically Assisted Patients (514B)****CHAIRS:** Michael A. Shullo, PharmD and Katrina Ford, BPharm

**4:00 PM (275) Therapeutic Peptide-Modified Gold Nanoparticles for the Treatment of Acute Lung Injury;** D. Lee,<sup>1,2</sup>J. Zhao,<sup>2</sup>H. Kim,<sup>2,3</sup>H. Yang,<sup>2</sup>M. Liu,<sup>2,3</sup><sup>1</sup>Institute of Medical Science, University of Toronto, Toronto, ON, Canada; <sup>2</sup>Latner Thoracic Surgery Research Laboratories, University Health Network, Toronto, ON, Canada; <sup>3</sup>Department of Physiology, University of Toronto, Toronto, ON, Canada.

**4:15 PM (276) Oral Ribavirin Is a Cost-Effective Alternative to Intravenous Ribavirin for Respiratory Syncytial Virus (RSV) Infection after Lung Transplantation (LTx);** F.S. Burrows,<sup>1</sup>L.M. Carlos,<sup>1</sup>D. Marriott,<sup>2</sup>A. Havryk,<sup>3</sup>M. Plit,<sup>3</sup>A.R. Glanville,<sup>3</sup><sup>1</sup>Pharmacy Department, St Vincent's Hospital, Sydney, Australia; <sup>2</sup>Department of Microbiology and Clinical Infectious Diseases, St Vincent's Hospital, Sydney, Australia; <sup>3</sup>Lung Transplant Unit, St Vincent's Hospital, Sydney, Australia.

**4:30 PM (277) Endothelin Receptor Blocker Medication during Mechanical Circulatory Support Does Not Influence Myocardial Fibrosis in Ventricular Assist Device Patients;** H. Milting, U. Schulz, A. Kassner, C. Oezpeker, S. Ensminger, K. Hakim, J. Gummert. Clinic of Thoracic and Cardiovascular Surgery, Erich & Hanna Klessmann-Institute, Ruhr University Bochum, Heart & Diabetescenter NRW, Bad Oeynhausen, Germany.

**4:45 PM (278) Treatment of Secondary Pulmonary Hypertension with Bosentan after Left Ventricular Assist Device Implantation;** S.J. LaRue,<sup>1</sup>R. Garcia-Cortes,<sup>1</sup>S. Ray,<sup>1</sup>A. Ravichandran,<sup>1</sup>G.A. Ewald,<sup>1</sup>L.-W. Wang,<sup>2</sup>J. Schilling.<sup>1</sup><sup>1</sup>Internal Medicine, Cardiology Division, Washington University School of Medicine, Saint Louis, MO; <sup>2</sup>Cardiothoracic Surgery, Indiana University Health, Indianapolis, IN.

**5:00 PM (279) Comparing Bortezomib to Traditional Therapies for Antibody-Mediated Rejection (AMR): Out with the Old?;** T. Khuu,<sup>2</sup>R.K. Cheng,<sup>1</sup>M. Cadeiras,<sup>1</sup>M. Allareddy,<sup>1</sup>A. Baas,<sup>1</sup>D. Cruz,<sup>1</sup>E. Depasquale,<sup>1</sup>A. Hickey,<sup>1</sup>B. Kubak,<sup>1</sup>A. Nsair,<sup>1</sup>C. Holt,<sup>3</sup>M.C. Fishbein,<sup>4</sup>M.H. Kwon,<sup>3</sup>A. Ardehali,<sup>3</sup>R.J. Shemin,<sup>3</sup>E.F. Reed,<sup>5</sup>M.C. Deng.<sup>1</sup><sup>1</sup>Medicine, Ronald Reagan UCLA Medical Center, Los Angeles, CA; <sup>2</sup>Heart & Lung Transplant, Ronald Reagan UCLA Medical Center, Los Angeles, CA; <sup>3</sup>Surgery, Ronald Reagan UCLA Medical Center, Los Angeles, CA; <sup>4</sup>Pathology and Lab Med, Ronald Reagan UCLA Medical Center, Los Angeles, CA; <sup>5</sup>Pathology-Immunogenetics Center, Ronald Reagan UCLA Medical Center, Los Angeles, CA.

**5:15 PM (280) Population Pharmacokinetics and Bayesian Estimation of Mycophenolic Acid Exposure in Heart Transplant Recipients: Comparison of Two Approaches;** R. Youdarene,<sup>1</sup>J.B. Woillard,<sup>1,2</sup>A. Prémaud,<sup>2</sup>A. Rousseau,<sup>2</sup>J. Debord,<sup>1</sup>M. Neely,<sup>3</sup>G. Sinnanasse-Raymond,<sup>4</sup>P. Marquet,<sup>1,2</sup>F. Saint-Marcoux.<sup>1,2</sup><sup>1</sup>Pharmacology and Toxicology, University Hospital, Limoges, France; <sup>2</sup>INSERM UMR-S850, University, Limoges, France; <sup>3</sup>Laboratory of Applied Pharmacokinetics, University of Southern California Keck School of Medicine, Los Angeles, CA; <sup>4</sup>ROCHE S.A.S., Boulogne-Billancourt, France.

5:30 PM – 6:30 PM

## MINI ORAL SESSION 6

**Heart Failure, Diagnosis and Therapy (513ABC)****CHAIRS:** Maria Rosa Costanzo, MD, FACC, FAHA and Robert C. Bourge, MD

- 5:30 PM (281) Long-Term Outcomes of Orthotopic Heart Transplantation in Patients with Cardiac Amyloidosis: Differential Survival by Amyloid Type;** H. Yerebakan,<sup>1</sup> A. Castano,<sup>2</sup> T. Ota,<sup>1</sup> I. George,<sup>1</sup> L. Hwang,<sup>1</sup> S. Jones,<sup>1</sup> C. Ryus,<sup>1</sup> S. Naroji,<sup>1</sup> J. Alvarez,<sup>2</sup> Y. Naka,<sup>1</sup> H. Takayama,<sup>1</sup> M. Maurer.<sup>2</sup> <sup>1</sup>Division of Cardiothoracic Surgery, Columbia University Medical Center, New York, NY; <sup>2</sup>Division of Cardiology, Columbia University Medical Center, New York, NY.
- 5:35 PM (282) CRT before Transplant or VAD? The Role of CRT in Stage D Heart Failure;** S. Liu,<sup>1</sup> K. Nanthakumar,<sup>2</sup> D. Cameron,<sup>2</sup> V. Rao,<sup>3</sup> H.J. Ross,<sup>2</sup> D.H. Delgado,<sup>2</sup> P. Billia,<sup>2</sup> S. Balmain,<sup>2</sup> M.A. McDonald.<sup>2</sup> <sup>1</sup>Department of Medicine, University Health Network, Toronto, ON, Canada; <sup>2</sup>Division of Cardiology, University Health Network, Toronto, ON, Canada; <sup>3</sup>Division of Cardiovascular Surgery, University Health Network, Toronto, ON, Canada.
- 5:40 PM (283) Outcomes in Patients with Ischemic Cardiomyopathy (ICM) Post-Heart Transplant (HT) by Era;** E.C. DePasquale,<sup>1</sup> R.K. Cheng,<sup>1</sup> A. Ardehali,<sup>2</sup> A. Baas,<sup>1</sup> M. Cadeiras,<sup>1</sup> D. Cruz,<sup>1</sup> T. Khuu,<sup>1</sup> A. Nsair,<sup>1</sup> M.C. Deng.<sup>1</sup> <sup>1</sup>Medicine, Division of Cardiology, UCLA Medical Center, Los Angeles, CA; <sup>2</sup>Cardiothoracic Surgery, UCLA Medical Center, Los Angeles, CA.
- 5:45 PM (284) The Added Value of Exercise Variables in Addition to Clinical Predictors To Predict Prognosis in Heart Failure;** M.W. Adamson,<sup>1</sup> A.C. Alba,<sup>2</sup> S.D. Lalonde,<sup>2</sup> W.S. Chan,<sup>2</sup> D.H. Delgado,<sup>2</sup> H.J. Ross.<sup>2</sup> <sup>1</sup>Faculty of Medicine, University of Toronto, Toronto, ON, Canada; <sup>2</sup>Division of Cardiology and Heart Transplant, Toronto General Hospital, Toronto, ON, Canada.
- 5:50 PM (285) INTERMACS Level at the Time of Transplant Assessment Predicts Overall Mortality and Probability of Advanced Therapy;** A.C. Alba, T. Wu, V. Rao, D.H. Delgado, H.J. Ross. Toronto General Hospital, University Health Network, Toronto, Canada.
- 5:55 PM (286) Racial Disparities in Patients Bridged to Heart Transplantation with a Ventricular Assist Device;** C.A. Beaty,<sup>1</sup> T.J. George,<sup>1</sup> A. Kilic,<sup>1</sup> R.J. Tedford,<sup>2</sup> S.D. Russell,<sup>2</sup> A.S. Shah.<sup>1</sup> <sup>1</sup>Division of Cardiac Surgery, Johns Hopkins Medical Institutions, Baltimore, MD; <sup>2</sup>Division of Cardiology, Johns Hopkins Medical Institutions, Baltimore, MD.
- 6:00 PM (287) Increased Negative Impact of Anti-Angiotensin Type 1 Receptor Antibodies Together with De Novo Donor HLA Specific Antibodies on Graft Outcome in Heart Transplant Recipients;** N.L. Reinsmoen, C.H. Lai, J. Mirocha, K. Cao, G.D. Ong, M. Naim, Q. Wang, S. Riega, M. Rafiej, J. Patel, J. Kobashigawa. Cedars-Sinai Medical Center, Los Angeles, CA.

- 6:05 PM (288) Utility of Gene Expression Profiling Test (GEP) Score Instability To Predict Future Clinical Outcomes in Heart Transplant: Results from the CARGO 2 European-Based Multicenter Trial;** M.G. Crespo-Leiro,<sup>1</sup> J. Stypmann,<sup>2</sup> A. Zuckermann,<sup>3</sup> C. Bara,<sup>4</sup> H. Ross,<sup>5</sup> J. Parameshwar,<sup>6</sup> M. Zakliczynski,<sup>7</sup> R. Fiocchi,<sup>8</sup> D. Hoefer,<sup>9</sup> N. Hiemann,<sup>10</sup> P. Leprince,<sup>11</sup> M.C. Deng,<sup>12</sup> D. Hiller,<sup>13</sup> J.P. Yee,<sup>13</sup> J. Vanhaecke.<sup>14</sup> <sup>1</sup>Unidad de Insuficiencia Cardiaca Avanzada y Trasplante Cardiaco, Hospital Universitario A Coruña, La Coruña, Spain; <sup>2</sup>Department of Cardiovascular Medicine, Division of Cardiology, University Hospital Münster, Münster, Germany; <sup>3</sup>Department of Cardiac Surgery, Medical University of Vienna, Vienna, Austria; <sup>4</sup>Department of Cardiovascular, Thoracic, and Transplant Surgery, Hannover Medical School, Hannover, Germany; <sup>5</sup>Division of Cardiology and Heart Transplantation, Toronto General Hospital, Toronto, Canada; <sup>6</sup>Papworth Hospital, Papworth Everard, Cambridge, United Kingdom; <sup>7</sup>Department of Cardiac Surgery & Transplantation, Silesian Center for Heart Disease, Zabrze, Poland; <sup>8</sup>Cardiovascular Department-Transplant Section, Ospedali Riuniti di Bergamo, Bergamo, Italy; <sup>9</sup>Department of Cardiac Surgery, Innsbruck Medical University, Innsbruck, Austria; <sup>10</sup>Department of Cardiothoracic and Vascular Surgery, Deutsches Herzzentrum, Berlin, Germany; <sup>11</sup>Department of Cardiothoracic Surgery, Groupe Hospitalier Pitié-Salpêtrière, Paris, France; <sup>12</sup>Department of Medicine-Division of Cardiology, UCLA Medical Center; <sup>13</sup>XDx Inc., Brisbane, CA; <sup>14</sup>Cardiovascular Diseases, University Hospitals Leuven, Department of Cardiovascular Sciences, KU Leuven, Belgium.
- 6:10 PM (289) Reduced HLA Class II Antibody Response to Proteasome Inhibition;** T. Khuu,<sup>2</sup> M. Cadeiras,<sup>1</sup> N. Wisniewski,<sup>1</sup> M. Allareddy,<sup>1</sup> A. Baas,<sup>1</sup> R.K. Cheng,<sup>1</sup> D. Cruz,<sup>1</sup> E. Depasquale,<sup>1</sup> A. Hickey,<sup>1</sup> B. Kubak,<sup>1</sup> A. Nsair,<sup>1</sup> R. Rajalingam,<sup>1</sup> W. Khuu,<sup>1</sup> A. Ren,<sup>1</sup> C. Holt,<sup>3</sup> M.C. Fishbein,<sup>4</sup> M.H. Kwon,<sup>3</sup> A. Ardehali,<sup>3</sup> R.J. Shemin,<sup>3</sup> E.F. Reed,<sup>5</sup> M.C. Deng.<sup>1</sup> <sup>1</sup>Medicine, Ronald Reagan UCLA Medical Center, Los Angeles, CA; <sup>2</sup>Heart & Lung Transplant, Ronald Reagan UCLA Medical Center, Los Angeles, CA; <sup>3</sup>Surgery, Ronald Reagan UCLA Medical Center, Los Angeles, CA; <sup>4</sup>Pathology and Lab Med, Ronald Reagan UCLA Medical Center, Los Angeles, CA; <sup>5</sup>Pathology-Immunogenetics Center, Ronald Reagan UCLA Medical Center, Los Angeles, CA.
- 6:15 PM (290) Beyond TICTAC: “Real World” Consecutive Patient Cohort Survival;** D.A. Baran, C.Y. Guerrero-Miranda, J.A. Weiss, J. Pieretti, C.G. Gidea, M. Camacho, M.J. Zucker. Transplant Center, Newark Beth Israel Medical Center, Newark, NJ.
- 6:20 PM (291) Long-Term Renoprotective Effect of Sirolimus-Based Calcineurin Inhibitor-Free Immunosuppression after Cardiac Transplantation;** J.O. Choi,<sup>1</sup> T. Riaz,<sup>1</sup> B.A. Boilson,<sup>1</sup> J.A. Schirger,<sup>1</sup> N.L. Pereira,<sup>1</sup> A.L. Clavell,<sup>1</sup> R.P. Frantz,<sup>1</sup> R.C. Daly,<sup>2</sup> B.S. Edwards,<sup>1</sup> S.J. Park,<sup>2</sup> R.J. Rodeheffer,<sup>1</sup> S.S. Kushwaha.<sup>1</sup> <sup>1</sup>Departments of Cardiovascular Diseases, Mayo Clinic, Rochester, MN; <sup>2</sup>Cardiothoracic Surgery, Mayo Clinic, Rochester, MN.
- 6:25 PM (292) The Virtual Crossmatch at Children’s Hospital of Wisconsin – Outcomes for Predicted Positive Crossmatches;** S. Zangwill,<sup>1</sup> S. Berger,<sup>1</sup> T. Shah,<sup>1</sup> J. Schiller,<sup>2</sup> T. Ellis,<sup>3</sup> G. Stendahl,<sup>4</sup> A. Cole,<sup>1</sup> M. Mitchell,<sup>1</sup> R. Woods,<sup>1</sup> J. Tweddell.<sup>1</sup> <sup>1</sup>Medical College of Wisconsin, Milwaukee, WI; <sup>2</sup>Blood Center of Wisconsin, Milwaukee, WI; <sup>3</sup>University of Wisconsin, Madison, WI; <sup>4</sup>Children’s Hospital of Wisconsin, Milwaukee, WI.



5:30 PM – 6:30 PM

## MINI ORAL SESSION 7

## Mechanical Circulatory Support (513DEF)

CHAIRS: Gonzalo V. Gonzalez-Stawinski, MD and Nicolaas de Jonge, MD, PhD

**5:30 PM (293) Dynamics of Galectin-3 Levels Following Left Ventricular Assist Device Implantation; E.J. Coromilas,<sup>1</sup> D. Moore,<sup>1</sup> T.S. Kato,<sup>1</sup> C. Wu,<sup>1</sup> H. Takayama,<sup>2</sup> Y. Naka,<sup>2</sup> D. Mancini,<sup>1</sup> P.C. Schulze.<sup>1</sup>**  
<sup>1</sup>Division of Cardiology, Columbia University, New York, NY; <sup>2</sup>Division of Cardiothoracic Surgery, Columbia University, New York, NY.

**5:35 PM (294) Changes in Left Ventricular Ejection Fraction Following Implantation of Left Ventricular Assist Device as Destination Therapy; S.M. Dunlay,<sup>1</sup> S.J. Park,<sup>2</sup> K. Chandrasekaran,<sup>3</sup> J.O. Choi,<sup>2</sup> N.L. Pereira,<sup>1</sup> L.D. Joyce,<sup>2</sup> R.C. Daly,<sup>2</sup> J.M. Stulak,<sup>2</sup> S.S. Kushwaha.<sup>1</sup>**  
<sup>1</sup>Internal Medicine/ Cardiology, Mayo Clinic, Rochester, MN; <sup>2</sup>Cardiothoracic Surgery, Mayo Clinic, Rochester, MN; <sup>3</sup>Cardiology/Internal Medicine, Mayo Clinic, Scottsdale, AZ.

**5:40 PM (295) Preoperative Moderate to Severe Tricuspid Regurgitation Does Not Affect Outcomes Following Placement of Continuous Flow LVADs; J.O. Robertson,<sup>1</sup> S. Okada,<sup>1</sup> S.M. Joseph,<sup>2</sup> A. Itoh,<sup>1</sup> G.A. Ewald,<sup>2</sup> R.J. Damiano,<sup>1</sup> S. Prasad,<sup>1</sup> S.C. Silvestry.<sup>1</sup>**  
<sup>1</sup>Surgery (Division of Cardiothoracic Surgery), Washington University, St. Louis, MO; <sup>2</sup>Medicine (Division of Cardiology), Washington University, St. Louis, MO.

**5:45 PM (296) Meeting INR Targets for the Left Ventricular Assist Device Patient; S.A. Schaefer, A.A. Schmitt, J. Bjelkengren, S. Lewey, B. McLaughlin, D. Sato, S. Puhlman, S. Pyo, R. Oberst, E.A. Lawrence, P.D. Hester, C. Sparks, P.J. Kaley, S. Blevins, D.D. Sandler, T.B. Icenogle.** Inland Northwest Thoracic Organ Transplant Program, Providence Sacred Heart Medical Center, Spokane, WA.

**5:50 PM (297) LVAD-Associated Coagulopathy: Contribution of Phosphatidylserine (PS-) Cellular Microparticles to the Risk of Hemorrhage and Thrombosis in Patients with Non-Pulsatile Left Ventricular Assist Devices; A. Nascimbene,<sup>1</sup> J. George,<sup>1</sup> V. Vjian,<sup>2</sup> J.-F. Dong,<sup>2</sup> R. Delgado.<sup>1</sup>**  
<sup>1</sup>Cardiology, Texas Heart Institute, Baylor College of Medicine, Houston, TX; <sup>2</sup>Thrombosis Research Department, Baylor College of Medicine, Houston, TX.

**5:55 PM (298) The Role of Echocardiography in Patients with Intravascular Hemolysis Due to Suspected Continuous-Flow Left Ventricular Assist Device Thrombus; N.M. Fine,<sup>1</sup> S.S. Kushwaha,<sup>1</sup> T. Hasin,<sup>1</sup> Y. Topilsky,<sup>1</sup> R.C. Daly,<sup>2</sup> L.D. Joyce,<sup>2</sup> J.A. Schirger,<sup>1</sup> B.S. Edwards,<sup>1</sup> S.J. Park.<sup>2</sup>**  
<sup>1</sup>Division of Cardiovascular Diseases, Department of Medicine, Mayo Clinic, Rochester, MN; <sup>2</sup>Division of Cardiovascular Surgery, Department of Surgery, Mayo Clinic, Rochester, MN.

**6:00 PM (299) Hybrid ECMO Using AvalonElite DLC for Circulatory Support Guarantees Adequate Heart/Brain Oxygen Supply; J. Zhao,<sup>1,2</sup> D. Wang,<sup>1</sup> X. Zhou,<sup>1</sup> C. Ballard-Croft,<sup>1</sup> K. Rosenstein,<sup>1</sup> J. Zwischenberger.<sup>1</sup>**  
<sup>1</sup>Cardiothoracic Surgery, University of Kentucky, Lexington, KY; <sup>2</sup>Cardiopulmonary Bypass, Fuwai Cardiovascular Hospital, Beijing, China.

**6:05 PM (300) Long-Term Results with Total Artificial Heart: Is It Prime Time for Destination Therapy?; G. Torregrossa,<sup>1</sup> G. Gerosa,<sup>1</sup> V. Tarzia,<sup>1</sup> V. Vida,<sup>1</sup> D. Duveau,<sup>2</sup> F. Arabia,<sup>3</sup> P. Leprince,<sup>4</sup> V. Kasirajan,<sup>5</sup> F. Beyersdorf,<sup>6</sup> A. Loforte,<sup>7</sup> F. Musumeci,<sup>7</sup> R. Hetzer,<sup>8</sup> T. Krabatsch,<sup>9</sup> J. Gummer,<sup>9</sup> M. Morshuis,<sup>9</sup> J. Copeland.<sup>10</sup>**  
<sup>1</sup>Cardiac Surgery, University of Padua, Padua, Italy; <sup>2</sup>Department of Thoracic and Cardiovascular Surgery, Institut du Thorax, Nantes, France; <sup>3</sup>Division of Cardiothoracic Surgery, Department of Surgery, Mayo Clinic, Phoenix, AZ; <sup>4</sup>Service de Chirurgie Thoracique et Cardiovasculaire, Université Pierre et Marie Curie – Hospital LaPitié, Paris, France; <sup>5</sup>Division of Cardiothoracic Surgery, Virginia Commonwealth University Health System, Richmond, VA; <sup>6</sup>Department of Cardiovascular Surgery, University Hospital Medical Center, Freiburg, Germany; <sup>7</sup>Department of Cardiology and Cardiovascular Surgery, Azienda Ospedaliera S. Camillo-Forlanini, Rome, Italy; <sup>8</sup>Deutsches Herzzentrum Berlin, Berlin, Germany; <sup>9</sup>Herz- und Diabeteszentrum NRW, Universitätsklinikum der Ruhr-Universität Bochum, Bad Oeynhausen, Germany; <sup>10</sup>Cardiothoracic Unit Department of Surgery, University Medical Center, Tucson.

**6:10 PM (301) Longitudinal Investigation of the Effect of Centrifugal Continuous Flow LVADs on Blood Haemostatic Parameters; K. Muthiah,<sup>1,2,4</sup> D. Connor,<sup>2,3</sup> K. Ly,<sup>2,3</sup> D. Rutgers,<sup>1</sup> D. Robson,<sup>1</sup> P.S. Macdonald,<sup>1,2,4</sup> K. Dhital,<sup>1,2</sup> P. Jansz,<sup>1</sup> J. Joseph,<sup>2,3</sup> C.S. Hayward.<sup>1,2,4</sup>**  
<sup>1</sup>Heart Failure and Transplant Unit, St. Vincent's Hospital, Sydney, Australia; <sup>2</sup>University of New South Wales, Sydney, Australia; <sup>3</sup>Department of Haematology, St. Vincent's Hospital, Sydney, Australia; <sup>4</sup>Victor Chang Cardiac Research Institute, Sydney, Australia.

**6:15 PM (302) Continuous-Flow Left Ventricular Assist Device Versus Heart Transplantation: A European Perspective; E. Ammirati, F.G. Oliva, T. Colombo, C.F. Russo, M. Cipriani, A. Garascia, A. Verde, F. Macera, R. Paino, L. Martinelli, M. Frigerio.** Cardiothoracic and Vascular Department, Niguarda Ca' Granda Hospital, Milan, Italy.

**6:20 PM (303) The Characteristics and Outcomes of Advanced Heart Failure Patients with Hemodynamic Parameters Predictive of Right Ventricular Failure; R.J. Mentz, M.A. Daneshmand, A.D. DeVore, C.A. Milano, J.G. Rogers, C.B. Patel.** Duke University Medical Center, Durham, NC.

**6:25 PM (304) WITHDRAWN**

5:30 PM – 6:30 PM

## MINI ORAL SESSION 8

**Lung Failure, Heart Donor Management and Lung Donor Management (514B)****CHAIRS:** Florian M. Wagner, MD and David P. Mason, MD

- 5:30 PM (305) Adaptation over a Wide Range of Donor Graft Lung Size Discrepancies in Living-Donor Lobar Lung Transplantation;** F. Chen, A. Ohsumi, H. Motoyama, K. Hijiya, T. Kondo, T. Yamada, M. Sato, A. Aoyama, T. Bando, H. Date. Thoracic Surgery, Kyoto University, Kyoto, Japan.
- 5:35 PM (306) Frailty and Early Mortality after Lung Transplantation: Preliminary Results;** D.J. Lederer, J.R. Sonett, N.A. Philip, M. Larkin, E.R. Peterson, A. Desai, S. Sanyal, L. Shah, H.A. Robbins, K. Raza, G. Reilly, F. D'Ovidio, M. Bacchetta, S.M. Arcasoy. Columbia University Medical Center, New York, NY.
- 5:40 PM (307) Using 5-Year Survival Model Does Not Change LAS Estimate of Transplant Benefit;** M. Valapour,<sup>1,2</sup> B. Heubner,<sup>1</sup> M. Skeans,<sup>1</sup> A. Israni,<sup>1</sup> M. Hertz.<sup>1,2</sup> <sup>1</sup>Minneapolis Medical Research Foundation, Scientific Registry of Transplant Recipients (SRTR), Minneapolis, MN; <sup>2</sup>University of Minnesota, Minneapolis, MN.
- 5:45 PM (308) The Impact of Severe Pulmonary Arterial Hypertension on Single Lung Transplantation in Patients with Chronic Obstructive Pulmonary Disease and Idiopathic Pulmonary Fibrosis: An Analysis of the UNOS Database;** Z.N. Kon, G.J. Bittle, C.F. Evans, P.B. Wehman, B.P. Griffith. University of Maryland School of Medicine, Baltimore, MD.
- 5:50 PM (309) Survival after Lung Transplantation is Linked with a Genetic Polymorphism in Caveolin-1;** E. Vandermeulen,<sup>1</sup> D. Ruttens,<sup>1</sup> E. Wauters,<sup>2</sup> S.E. Verleden,<sup>1</sup> A. Vaneylen,<sup>1</sup> J. Somers,<sup>1</sup> D.E. Van Raemdonck,<sup>1</sup> D. Lambrechts,<sup>2</sup> G.M. Verleden,<sup>1</sup> R. Vos,<sup>1</sup> T.S. Nawrot,<sup>3,4</sup> B.M. Vanaudenaerde.<sup>1</sup> <sup>1</sup>The Leuven Lung Transplant Group, Katholieke Universiteit Leuven, Leuven, Belgium; <sup>2</sup>Laboratory of Translational Genetics, Katholieke Universiteit Leuven, Vesalius Research Center, Leuven, Belgium; <sup>3</sup>Centre for Environmental Sciences, Hasselt University, Diepenbeek, Belgium; <sup>4</sup>Department of Public Health, Katholieke Universiteit Leuven, Leuven, Belgium.
- 5:55 PM (310) Origin of Fibroblasts in Rejected Airway: Experiment with Orthotopic Tracheal Allotransplantation Model Using Transgenic GFP Mice;** C. Konoeda,<sup>1</sup> D. Koinuma,<sup>2</sup> Y. Morishita,<sup>2</sup> K. Kitano,<sup>1</sup> K. Nagayama,<sup>1</sup> M. Anraku,<sup>1</sup> K. Kakimi,<sup>3</sup> K. Miyazono,<sup>2</sup> J. Nakajima,<sup>1</sup> T. Murakawa.<sup>1</sup> <sup>1</sup>Department of Thoracic Surgery, Graduate School of Medicine, The University of Tokyo, Bunkyo, Tokyo, Japan; <sup>2</sup>Molecular Pathology, Graduate School of Medicine, The University of Tokyo, Bunkyo, Tokyo, Japan; <sup>3</sup>Immunotherapeutics (Medinet), Graduate School of Medicine, The University of Tokyo, Bunkyo, Tokyo, Japan.
- 6:00 PM (311) Pharmacologically Induced Hypothermia with WIN55, 212-2 and Extracorporeal Life Support after Cardiac Arrest as a Preservation Strategy for Heart Transplantation;** A. Rungatscher,<sup>1</sup> S. Hallstroem,<sup>2</sup> D. Linardi,<sup>1</sup> A. Giacomazzi,<sup>1</sup> M. Tessari,<sup>1</sup> A. Mazzucco,<sup>1</sup> G. Faggian.<sup>1</sup> <sup>1</sup>Department of Surgery, Division of Cardiac Surgery, University of Verona, Verona, Italy; <sup>2</sup>Institute of Physiological Chemistry, Medical University of Graz, Graz, Austria.

- 6:05 PM (312) Impact of Heart Donor "Inotrope" Support on 30-Day Graft Outcomes in Heart Transplantation;** H. Copeland,<sup>1</sup> T. Inui,<sup>1</sup> J. Berumen,<sup>3</sup> A. Razzouk,<sup>2</sup> L. Bailey,<sup>2</sup> D. Chang,<sup>1</sup> J.G. Copeland.<sup>1</sup> <sup>1</sup>Surgery, University of California San Diego, San Diego, CA; <sup>2</sup>Surgery, Loma Linda University, Loma Linda, CA; <sup>3</sup>Surgery, Stanford, Palo Alto, CA.
- 6:10 PM (313) Outcome after Lung Transplantation Is Comparable between DCD and DBD;** D. Van Raemdonck,<sup>1</sup> B. Vanaudenaerde,<sup>2</sup> S. Verleden,<sup>2</sup> D. Ruttens,<sup>2</sup> R. Vos,<sup>3</sup> L. Dupont,<sup>3</sup> M. Delcroix,<sup>3</sup> W. Wuyts,<sup>3</sup> J. Yserbyt,<sup>3</sup> A. Neyrinck,<sup>4</sup> W. Coosemans,<sup>1</sup> H. Decaluwé,<sup>1</sup> P. De Leyn,<sup>1</sup> P. Nafteux,<sup>1</sup> H. Van Veen,<sup>1</sup> G.M. Verleden.<sup>3</sup> <sup>1</sup>Thoracic Surgery, University Hospitals Leuven, Leuven, Belgium; <sup>2</sup>Clinical and Experimental Medicine, KU Leuven, Leuven, Belgium; <sup>3</sup>Pneumology, University Hospitals Leuven, Leuven, Belgium; <sup>4</sup>Anaesthesiology, University Hospitals Leuven, Leuven, Belgium.
- 6:15 PM (314) Donor-Recipient Size Mismatch in Lung Transplantation Does Not Negatively Impact Survival: An Review of the UNOS Database;** G.J. Bittle, Z.N. Kon, P.G. Sanchez, A.C. Watkins, B.P. Griffith. Cardiac Surgery, University of Maryland School of Medicine, Baltimore, MD.
- 6:20 PM (315) The Importance of Repeated Measurements To Assess Transplant Suitability in Clinical Ex Vivo Lung Perfusion (EVLP);** A. Slama,<sup>1</sup> A. Scheed,<sup>1</sup> K. Hötzenecker,<sup>1</sup> G. Lang,<sup>1</sup> B. Urbanek,<sup>2</sup> W. Schmid,<sup>2</sup> F.-J. Nierscher,<sup>2</sup> W. Klepetko,<sup>1</sup> C. Aigner.<sup>1</sup> <sup>1</sup>Thoracic Surgery, Medical University of Vienna, Vienna, Austria; <sup>2</sup>Cardiothoracic and Vascular Anaesthesia and Intensive Care, Medical University of Vienna, Vienna, Austria.
- 6:25 PM (316) Centers for Disease Control 'High-Risk' Donors and Thoracic Organ Transplantation: Expanding the Donor Pool;** G.J. Arnaoutakis,<sup>1</sup> N.R. Sodha,<sup>1</sup> R.J. Tedford,<sup>3</sup> C.A. Merlo,<sup>2</sup> C.A. Milano,<sup>4</sup> A.S. Shah.<sup>1</sup> <sup>1</sup>Division of Cardiac Surgery, The Johns Hopkins Medical Institutions, Baltimore; <sup>2</sup>Pulmonary and Critical Care Medicine, The Johns Hopkins Medical Institutions, Baltimore; <sup>3</sup>Division of Cardiology, The Johns Hopkins Medical Institutions, Baltimore; <sup>4</sup>Division of Cardiac Surgery, Duke University Medical Center, Durham, ND.

5:30 PM – 6:30 PM

## MINI ORAL SESSION 9

## Nursing, Health Science and Allied Health (514C)

**CHAIRS:** Christiane Kugler, PhD and Samantha J. Anthony, PhD MSW

**5:30 PM (317) Patients Expectations and Experiences of Rehabilitation after Lung Transplantation;** L.M. Fuller,<sup>1</sup> B. Button,<sup>1</sup> B. Tarrant,<sup>1</sup> G.I. Snell,<sup>2</sup> A.E. Holland,<sup>1</sup> C.R. Battistuzzo,<sup>3</sup> <sup>1</sup>Physiotherapy Department, The Alfred Hospital, Melbourne, Victoria, Australia; <sup>2</sup>Lung Transplantation Services, The Alfred, Melbourne, Victoria, Australia; <sup>3</sup>Faculty of Health Sciences, Physiotherapy School, University of Melbourne, Melbourne, Victoria, Australia.

**5:35 PM (318) Preliminary Results: Both High and Low Literacy Lung Transplant Patients Have Difficulty Adhering to and Interpreting Home Spirometry;** C.J. Gries, M.A. Dew, A.J. DeVito Dabbs, J.M. Pilewski, S.J. Patterson, D.B. White. University of Pittsburgh Medical Center, Pittsburgh, PA.

**5:40 PM (319) Neurodevelopment Outcomes Following Heart Transplant;** R.D. Deliva,<sup>1,2</sup> S. Sollazzo,<sup>1,3</sup> A. Graham,<sup>4</sup> M. Harkness,<sup>3,4</sup> C. Manlihot,<sup>3</sup> A.I. Dipchand,<sup>1,3</sup> <sup>1</sup>Department of Physiotherapy, Hospital for Sick Children, Toronto, ON, Canada; <sup>2</sup>SickKids Transplant and Regenerative Medicine Centre, Hospital for Sick Children, Toronto, ON, Canada; <sup>3</sup>Labatt Family Heart Centre, Hospital for Sick Children, Toronto, Canada; <sup>4</sup>Department of Occupational Therapy, Hospital for Sick Children, Toronto, ON, Canada.

**5:45 PM (320) Does Educational Level and Insurance Impact Mid-Term Survival after Left Ventricular Assist Device Implantation?;** P.S. Combs,<sup>1</sup> M.A. Sobieski,<sup>2</sup> J.R. Trivedi,<sup>2</sup> E.F. Creamer,<sup>1</sup> K.C. McCants,<sup>3</sup> E.J. Birks,<sup>3</sup> R.R. Singh,<sup>2</sup> M.S. Slaughter,<sup>2</sup> <sup>1</sup>Ventricular Assist Device Program, Jewish Hospital, Louisville; <sup>2</sup>Division of Thoracic and Cardiovascular Surgery, University of Louisville, Louisville; <sup>3</sup>Division of Cardiovascular Medicine, University of Louisville, Louisville.

**5:50 PM (321) Health Status and Emotional Distress in Patients with a Left Ventricular Assist Device and Their Partners: A Comparative Study;** C. Brouwers,<sup>1</sup> J. Denollet,<sup>1</sup> K. Caliskan,<sup>2</sup> N. de Jonge,<sup>3</sup> Q. Young,<sup>4</sup> J. Kealy,<sup>4</sup> A. Kaan,<sup>4</sup> C. Cannon,<sup>4</sup> S.S. Pedersen,<sup>1</sup> <sup>1</sup>Department of Medical and Clinical Psychology, Tilburg University, Tilburg, Noord-Brabant, Netherlands; <sup>2</sup>Thoraxcenter, Erasmus Medical Center, Rotterdam, Zuid-Holland, Netherlands; <sup>3</sup>Division Heart and Lung, University Medical Center Utrecht, Utrecht, Netherlands; <sup>4</sup>Heart Center, St. Paul's Hospital, Vancouver, Canada.

**5:55 PM (322) Innovative Roles To Support Advanced Heart Failure & Transplant Program Growth;** K.E. Nelson, H.C. Wright, E.C. Melrose, D.P. Nelson, W.H. Perry, T.A. Snyder, D.A. Horstmanshof, J.W. Long. Integris Advanced Cardiac Care, Integris Baptist Medical Center, Oklahoma City, OK.

**6:00 PM (323) Exploring Palliative Planning for Device Patients: A Need for Patient Defined Criteria for Discontinuation of Support;** A.M. Knapstein,<sup>1</sup> C. Wienczek,<sup>2</sup> P.J. Coyne,<sup>2</sup> S.C. Harton,<sup>1</sup> R.A. Volman,<sup>1</sup> D. Norieka,<sup>2</sup> E. Del Fabbro,<sup>2</sup> M.S. Smallfield,<sup>1</sup> K.B. Shah,<sup>1</sup> <sup>1</sup>Division of Cardiology, Virginia Commonwealth University, Richmond; <sup>2</sup>Division of Hematology, Oncology and Palliative Care, Virginia Commonwealth University, Richmond.

**6:05 PM (324) Analysis of Informed Consent for Heart Transplantation or Left Ventricular Assist Device Implantation;** J. MacIver,<sup>1</sup> H.J. Ross,<sup>1</sup> V. Rao,<sup>1</sup> M. McKneally,<sup>2</sup> <sup>1</sup>Peter Munk Cardiac Centre and Multiorgan Transplant Program, University Health Network, Toronto, ON, Canada; <sup>2</sup>Department of Surgery, University of Toronto, Toronto, ON, Canada.

**6:10 PM (325) Using Heart Failure Instruments To Determine When To Refer Heart Failure Patients to Palliative Care;** J. MacIver,<sup>1</sup> M. Timmons,<sup>2</sup> A.C. Alba,<sup>1</sup> A. Tibbles,<sup>1</sup> S. Greenwood,<sup>1</sup> H.J. Ross,<sup>1</sup> <sup>1</sup>Peter Munk Cardiac Center, University Health Network, Toronto, ON, Canada; <sup>2</sup>Faculty of Medicine, University of Toronto, Toronto, ON, Canada.

**6:15 PM (326) Effect of Symptom Clusters on Quality of Life in Patients with Heart Failure;** J. Salver,<sup>1</sup> M.P. Flattery,<sup>2</sup> D.E. Lyon,<sup>3</sup> <sup>1</sup>Adult Health & Nursing Systems, Virginia Commonwealth University School of Nursing, Richmond, VA; <sup>2</sup>Heart Failure/Heart Transplant Program; Pauley Heart Center, Virginia Commonwealth University Health System, Richmond, VA; <sup>3</sup>Family & Community Health, Virginia Commonwealth University School of Nursing, Richmond, VA.

**6:20 PM (327) Differential Impacts of Implantable Ventricular Assist Device on Quality of Life and Depression in Patients with Heart Failure and Their Caregivers;** N. Kato,<sup>1</sup> K. Kinugawa,<sup>2</sup> M. Endo,<sup>3</sup> Y. Kagami,<sup>3</sup> T. Imamura,<sup>1</sup> H. Muraoka,<sup>1</sup> S. Minatsuki,<sup>1</sup> T. Inaba,<sup>1</sup> H. Maki,<sup>1</sup> T. Shiga,<sup>1</sup> M. Hatano,<sup>1</sup> A. Yao,<sup>1</sup> S. Kyo,<sup>2</sup> I. Komuro,<sup>1</sup> M. Ono,<sup>4</sup> <sup>1</sup>Dept of Cardiovascular Medicine, The University of Tokyo Graduate School of Medicine, Tokyo, Japan; <sup>2</sup>Dept of Therapeutic Strategy for Heart Failure, The University of Tokyo Graduate School of Medicine, Tokyo, Japan; <sup>3</sup>Dept of Organ Transplantation, The University of Tokyo Hospital, Tokyo, Japan; <sup>4</sup>Dept of Cardiothoracic Surgery, The University of Tokyo Graduate School of Medicine, Tokyo, Japan.

**6:25 PM (328) Prevalence of Psychological Distress and Stress Moderators in UK Transplant Candidates;** Z.G. Malpus, A. Horan, N. Yonan. Heart and Lung Transplant Unit, University Hospital South Manchester, Wythenshawe, Manchester, United Kingdom.

5:30 PM – 6:30 PM

## MINI ORAL SESSION 10

## Pediatrics and Infectious Diseases (512D)

**CHAIRS:** Robert J Boucek, MD, MS, and Margaret Hannan MD FRCP FRCPath

- 5:30 PM (329) Bridge to Pediatric Heart Transplantation Using Mechanical Circulatory Support: An Analysis of the UNOS Database;** B. Wehman, G. Bittle, Z.N. Kon, M. Gibber, C. Evans, K. Rajagopal, S. Kaushal, B.P. Griffith. Cardiac Surgery, University of Maryland School of Medicine, Baltimore, MD.
- 5:35 PM (330) The Effect of Nutritional Status on Heart Transplant Survival in Patients under Two Years of Age;** J. Godown, J. Friedland-Little, R.J. Gajarski, S. Yu, J.E. Donohue, K.R. Schumacher. Pediatric Cardiology, University of Michigan, Ann Arbor, MI.
- 5:40 PM (331) Endothelial Activation and Coagulation Homeostasis Play a Role in Coronary Allograft Vasculopathy after Heart Transplantation in Children;** M. Fenton, J. Simmonds, V. Shah, P. Brogan, N. Klein, J. Deanfield, B. Michael. Great Ormond Street Hospital for Children NHS Trust, London, United Kingdom.
- 5:45 PM (332) Donor-Recipient Size Matching in Pediatric Heart Transplantation: Is Weight the Most Appropriate Parameter To Predict Outcomes in All Age Groups?;** A.S. Bayoumi, H. Liu, F. Fynn-Thompson. Department of Cardiac Surgery, Boston Children's Hospital, Boston, MA.
- 5:50 PM (333) Pregnancy Outcomes in Female Heart Transplant Recipients with the Initial Diagnosis of Congenital Heart Defect;** L.A. Coscia,<sup>1</sup> C.H. McGrory,<sup>1</sup> L. Ohler,<sup>2</sup> M.J. Moritz,<sup>3</sup> V.T. Armenti.<sup>1</sup> <sup>1</sup>National Transplantation Pregnancy Registry, Philadelphia, PA; <sup>2</sup>Marymount University, Arlington, VA; <sup>3</sup>Surgery, Lehigh Valley Health Network, Allentown, PA.
- 5:55 PM (334) Hospital Charges, Length of Stay, and Outcomes of Hospital Readmissions in the First Two Years after Pediatric Heart Transplantation;** K.V. McCandless,<sup>1</sup> C. Ravishankar,<sup>1</sup> K.Y. Lin,<sup>1</sup> Z. Mohamad,<sup>2</sup> B.D. Kaufman,<sup>1</sup> R.E. Shaddy,<sup>1</sup> T.E. Zaoutis,<sup>2</sup> J.W. Rossano.<sup>1</sup> <sup>1</sup>Cardiac Center, The Children's Hospital of Philadelphia, Philadelphia, PA; <sup>2</sup>The Center for Pediatric Clinical Effectiveness, The Children's Hospital of Philadelphia, Philadelphia, PA.
- 6:00 PM (335) Prevention of Resistant CMV Infection Using Persistent Valganciclovir Therapy through Leukopenia and Extending the Duration;** A. Wadhwa,<sup>1</sup> L.J. Stuckey,<sup>2</sup> D.R. Kaul,<sup>3</sup> C.E. Bartos,<sup>4</sup> H.A. McCullough,<sup>4</sup> R.D. Florn,<sup>4</sup> V.N. Lama,<sup>1</sup> J. Lin,<sup>5</sup> K.M. Chan.<sup>1</sup> <sup>1</sup>Department of Internal Medicine, Division of Pulmonary and Critical Care Medicine, University of Michigan Health System, Ann Arbor, MI; <sup>2</sup>Department of Pharmacy Services, University of Michigan Health System, Ann Arbor, MI; <sup>3</sup>Department of Internal Medicine, Division of Infectious Diseases, University of Michigan Health System, Ann Arbor, MI; <sup>4</sup>Transplant Center, University of Michigan Health System, Ann Arbor, MI; <sup>5</sup>Section of Thoracic Surgery, University of Michigan Health System, Ann Arbor, MI.
- 6:05 PM (336) Anti-Fungal Prophylaxis in Lung Transplant Recipients (LTRs): A Meta-Analysis of Cohort Studies;** A. Bhaskaran,<sup>2</sup> K. Mumtaz,<sup>2</sup> L.G. Singer,<sup>1</sup> C. Rotstein,<sup>2</sup> S. Husain.<sup>2</sup> <sup>1</sup>Toronto Lung Transplant Program, University of Toronto, Toronto, Canada; <sup>2</sup>University Health Network, University of Toronto, Toronto, Canada.

- 6:10 PM (337) Does CMV Mismatch Status Modify the Risk of PTLT Due to EBV Mismatch Status in Lung and Heart Transplant Recipients?;** M.-L. Luong, J. Kim, C. Rotstein, S. Husain. University Health Network, University of Toronto, Toronto, Canada.
- 6:15 PM (338) High Rate of Reactivation of Chagas Disease after Heart Transplantation in the United States;** E. Kransdorf, M. Kittleson, J. Patel, M. Rafiei, A. Osborne, D. Chang, L. Czer, A. Hage, P. Zakowski, J. Kobashigawa. Cedars-Sinai Heart Institute, Los Angeles, CA.
- 6:20 PM (339) The Development of Clostridium Difficile in Heart Transplant Patients on Different Immunosuppression Regimens;** M. Kittleson, J. Patel, M. Rafiei, A. Osborne, A. Moradzadeh, D. Chang, L. Czer, P. Zakowski, J. Kobashigawa. Cedars-Sinai Heart Institute, Los Angeles, CA.
- 6:25 PM (340) The Effect of Achromobacter XyloSIDans in Adult Cystic Fibrosis Lung Transplant Recipients;** T. Rendulic,<sup>1</sup> L.J. Stuckey,<sup>1</sup> K.M. Chan,<sup>2</sup> C.E. Bartos,<sup>3</sup> T.C. Ojo.<sup>2</sup> <sup>1</sup>Department of Pharmacy, University of Michigan Health System, Ann Arbor; <sup>2</sup>Department of Internal Medicine, Division of Pulmonary and Critical Care Medicine, University of Michigan Health System, Ann Arbor; <sup>3</sup>Transplant Center, University of Michigan Health System, Ann Arbor.





5:30 PM – 7:00 PM

**INTERNATIONAL MCS REIMBURSEMENT**

(512H) NOTE: CME CREDIT IS NOT PROVIDED FOR THIS SESSION

**CHAIRS:** Jeffrey Teuteberg, MD and Daniel J. Goldstein, MD**Reimbursement in the United States:**

- 5:30 PM** *Perspective from the Payers*, Dennis Irwin, MD, OptumHealth, Golden Valley, MN, USA
- 5:40 PM** *Updates on Reimbursement in the United States*, Tina Ivovic, Thoratec Corporation, Potomac, MD, USA
- 5:50 PM** *Clinical Perspectives*, Valluvan Jeevanandam, MD, University of Chicago Medical Center, Chicago, IL, USA
- 6:00 PM** Q & A

**The European Landscape:**

- 6:30 PM** *Updates on Reimbursement in Europe*, Timothy L. Homer, MPA, HeartWare Incorporated, Framingham, MA, USA
- 6:40 PM** *Clinical Perspectives*, Stephan Schueler, MD, PhD, FRCS, Freeman Hospital, Newcastle upon Tyne, UK
- 6:50 PM** Q & A

5:30 PM – 6:30 PM

**GENERAL POSTER SESSION 3 (516)**

(SEE PAGE 220 FOR LISTING OF POSTER PRESENTATIONS)

5:30 PM – 7:00 PM

**PAST PRESIDENTS' COUNCIL MEETING AND RECEPTION (519A)**

7:30 PM – 8:45 PM

**PRESIDENT'S GALA COCKTAIL RECEPTION FORTIFICATION CENTRE****SATURDAY, APRIL 27, 2013**

6:30 AM – 12:15 PM

REGISTRATION DESK OPEN (517 FOYER)

6:30 AM – 1:30 PM

SPEAKER READY ROOM OPEN (515AB)

7:00 AM – 8:00 AM

**SUNRISE SYMPOSIUM 10****Congenital Heart Disease – Success and Failure (511)****CHAIRS:** Robert DB Jaquiss, MD and Asif Hasan MD, FRCS (C/th)

**SESSION SUMMARY:** At the end of the session the attendees will be able to discuss the outcomes after heart transplant in patients with congenital heart disease, review the utility of mechanical circulatory support in patients with congenital heart disease and heart failure and learn from a case based discussion.

- 7:00 AM** *Outcomes After Heart Transplantation for Adult Congenital Heart Disease*, Anne I Dipchand, MD, Hospital for Sick Children, Toronto, ON, Canada
- 7:15 AM** *Failed Fontan and Use of Mechanical Assist*, David L.S. Morales, MD, Cincinnati Children's Hospital Medical Center, The Heart Institute, Cincinnati, OH, USA
- 7:30 AM** *My Toughest Cases in Transplantation of ACHD*, Jonathan M. Chen, MD, New York Presbyterian, New York, NY, USA
- 7:45 AM** Discussion

7:00 AM – 8:00 AM

**SUNRISE SYMPOSIUM 11****PH and the Lung Parenchyma (510)****CHAIRS:** Oksana A. Shlobin, MD and Mardi Gombert-Maitland, MD, MSc

**SESSION SUMMARY:** Pulmonary hypertension is commonly seen in patients with advanced interstitial and airway disease but is also seen in patients with relatively mild parenchymal destruction when it is regarded as out of proportion PH. This concept is well recognized but not so well defined. This symposium will discuss the evidence and clinical approaches to the use of targeted therapy for PAH in three common examples seen in clinical practice.

- 7:00 AM** *Sarcoidosis – More Than Granulomas?*, Steven D. Nathan, Inova Fairfax Hospital, Falls Church, VA, USA
- 7:15 AM** *Scleroderma*, Jeffrey A. Golden, MD, UCSF, San Francisco, CA, USA
- 7:30 AM** *Pulmonary Hypertension in Chronic Obstructive Pulmonary Disease – When to Treat?*, Martin P. Iversen, MD, PhD, Rigshospitalet, Copenhagen University Hospital, Copenhagen, Denmark
- 7:45 AM** Discussion

7:00 AM – 8:00 AM

**SUNRISE SYMPOSIUM 12****Challenging Candidates for Lung Transplant Selection (512A-G)****CHAIRS:** Gregory I. Snell, MD and Martin R. Zamora, MD

**SESSION SUMMARY:** Advanced therapies including VADs and transplantation are increasingly being offered to older patients, while the average age of organ donors is also increasing. Therefore more frail patients are referred for lung transplant. As survivors of malignant disease increase, some of them require lung transplant and clinicians are facing difficult decisions on whether they are candidates. As extracorporeal technology for lung failure advances, transplants for patients on ECMO is being considered more and more. Finally, patients with viral infections, especially HCV and HIV are living longer and present special challenges as possible lung transplant candidates. This session will provide a state-of-the-art overview of special considerations and outcomes of providing advanced organ support and replacement to all these groups of challenging recipients.

**7:00 AM** *Bridged or Ventilated Patients*, Kenneth R. McCurry, MD, Cleveland Clinic, Cleveland, OH, USA

**7:10 AM** *Lung Transplant Candidates with Malignancy*, Macé M. Schuurmans, MD, Zurich University Hospital Lung Transplantation Program, Zurich, Switzerland

**7:20 AM** *The Frail and Debilitated Lung Transplant Candidate*, David J. Lederer, MD, MS, Columbia University Medical Center, New York, NY, USA

**7:30 AM** *Viral Infections in the Lung Transplant Candidate (HIV and HCV)*, Lara Danziger-Isakov, MD, MPH, Cincinnati Children's Hospital Medical Center, Cincinnati, OH, USA

**7:40 AM** Discussion

7:00 AM – 8:00 AM

**SUNRISE SYMPOSIUM 13****Pediatric Lung Transplantation: Developments and Controversies (513ABC)****CHAIRS:** Samuel B. Goldfarb, MD and Bart L. Rottier, MD, PhD

**SESSION SUMMARY:** This session aims to update the pediatric lung transplant community on recent developments in the field and to discuss controversies, in particular regarding strategies to overcome donor organ shortage, mechanical support as a bridge to pediatric lung transplantation, bronchoscopy in pediatric lung transplant recipients, and specific pediatric aspects of treatment for Bronchiolitis Obliterans Syndrome (BOS).

**7:00 AM** *Pediatric Aspects of DCD Lung Donors – Where Are We In 2013?* Melinda Solomon MD, FRCP(C), Hospital for Sick Children, Toronto, ON, Canada

**7:10 AM** *Mechanical Support in Children Bridged to Lung Transplantation – Current Practice and Future Challenges*, Nicolaus Schwerk, MD, Clinic for Pediatric Pulmonology, Hannover Medical School, Hannover, Germany

**7:20 AM** *Bronchoscopy in Pediatric Lung Transplant Recipients – Surveillance vs. Clinically Indicated Procedures*, Albert Faro, MD, Washington University in St. Louis, St. Louis, MO, USA

**7:30 AM** *Treatment Options for BOS in Children After Lung Transplantation*, Christian Benden, MD, University Hospital Zurich, Zurich, Switzerland

**7:40 AM** Discussion

7:00 AM – 8:00 AM

**SUNRISE SYMPOSIUM 14****Travel, Leisure and Work After Transplant: Keeping Our Patients Safe From Infections (513DEF)****CHAIRS:** Valentina Stosor, MD and Amparo Solé, MD, PhD

**SESSION SUMMARY:** This session will discuss the role of pre-transplant infectious diseases evaluations, managing donor-related infections and post-transplant strategies for assessing risk and avoiding infections related to everyday activities. The emphasis is on how transplant patients can lead more “normal” lives and safely enjoy the world around them.

**7:00 AM** *The Dreaded Donor Call that Needs the Transplant Infectious Diseases Specialist to Clear for Accepting the Organ: Resources, Diagnostics, Management Strategies*, Amparo Solé MD, PhD, University Hospital La Fe, Valencia, Spain

**7:15 AM** *Pretransplant Infectious Diseases Evaluations: Assessing Risk and Nipping It in the Bud*, Stanley I. Martin, MD, Ohio State University Medical Center, Columbus, OH, USA

**7:30 AM** *Outdoors and Loving Life: Infectious Concerns From Exposures to Soil, Insects and Animals*, Kate Gould, Freeman Hospital, Newcastle upon Tyne, UK

**7:45 AM** Discussion

8:00 AM – 9:30 AM

**PHARM SYMPOSIUM****A Lifecycle Journey in Cystic Fibrosis and Lung Transplantation (512A-G)****CHAIRS:** Christopher R. Ensor, PharmD, BCPS-CV and Allan R. Glanville, MBBS, MD, FRACP

**SESSION SUMMARY:** After the successful symposium “A Lifecycle Journey In Advanced Heart Failure And Transplantation” at the 2012 meeting, we will continue this innovative session for the 2013 meeting, sponsored by the ISHLT Pharmacy and Pharmacology Council. Traditional symposia are presented either in pure didactic tracks or cases with panel discussions. This series is a practical hybrid depicting an enduring case interspersed with a best practice based discussion at predefined key “journey intervals.” The symposium will be rounded off by a panel assisted and audience supported anchoring discussion. For the 2013 Montréal meeting, we will focus on the lifecycle of Cystic Fibrosis and Lung Transplantation with special emphasis on four “journey points:” 1) considerations for listing and management of pre-transplant infections such as multi-drug resistant Burkholderia cepacia complex and Mycobacterium abscessus, 2) peri and immediate post-operative management issues, 3) metabolic and interaction considerations to drug dosing in the CF lung transplantation patient, and 4) management of bronchiolitis obliterans syndrome that demands innovative immunomodulatory strategies. The focus of this series will be on therapeutics that uniquely involve emerging or established knowledge in the pharmacology and pharmacy aspects of the interval disease states or situations.

**8:00 AM** *Pre-transplant Journey: Considerations With Multi-Drug Resistant Infections in the Lung Transplant Candidate With Cystic Fibrosis*, Denis Hadjilias MD, MHS, University of Pennsylvania, Philadelphia, PA, USA

**8:20 AM** *Peri-Operative and Immediate Post-Operative Management of Lung Transplant Patient With Cystic Fibrosis*, Joseph M. Pilewski, MD, University of Pittsburgh, Pittsburgh, PA, USA

**8:40 AM** *Middle Post-transplant Journey: Metabolic and Interaction Considerations to Drug-dosing in the Cystic Fibrosis Lung Transplant Recipient*, Haifa Lyster MSc, BPharm(Hons), Royal Brompton & Harefield NHS Foundation Trust, London, UK

**9:00 AM** *Late Post-transplant Journey: Prevention and Management Strategies for OB in Cystic Fibrosis*, Assoc. Prof. Peter MA Hopkins, The Prince Charles Hospital, Brisbane, QLD, Australia

**9:20 AM** Moderated Panel Discussion



**8:00 AM – 9:30 AM**

## CONCURRENT SESSION 37

### MCS 9: Before the VAD! (511)

**CHAIRS:** Guy A. MacGowan, MD, FACC FRCPI and Gregory Ewald, MD

**8:00 AM (341)** *An International Survey To Assess Referral Thresholds for Destination Therapy in Non-Inotrope Dependent Patients: Results of the CONSENSUS-DT Study*; M. Galvao,<sup>1</sup> J. Immekus,<sup>2</sup> O. Saeed,<sup>1</sup> N. Fida,<sup>1</sup> A. Browne,<sup>1</sup> D.J. Goldstein,<sup>3</sup> S. Maybaum.<sup>4</sup> <sup>1</sup>Department of Internal Medicine, Montefiore Medical Center, Albert Einstein College of Medicine, Bronx, NY; <sup>2</sup>Department of Educational Research and Administration, California State University at Fresno, Fresno, CA; <sup>3</sup>Department of Cardiothoracic and Vascular Surgery, Montefiore Medical Center, Albert Einstein College of Medicine, Bronx, NY; <sup>4</sup>Albert Einstein College of Medicine, Bronx, NY.

**8:15 AM (342)** *Psychosocial Risk as a Predictor of Survival Following LVAD Implant*; S.A. Akhter,<sup>1</sup> M. Marcangelo,<sup>2</sup> T.B. Valeroso,<sup>1</sup> A. Singh,<sup>1</sup> J.D. Rich,<sup>3</sup> V. Jeevanandam.<sup>1</sup> <sup>1</sup>Surgery, University of Chicago Medical Center, Chicago, IL; <sup>2</sup>Psychiatry, University of Chicago Medical Center, Chicago, IL; <sup>3</sup>Medicine, University of Chicago Medical Center, Chicago, IL.

**8:30 AM (343)** *Effect of Perioperative Renal Replacement Therapy on Mechanical Circulatory Support Outcomes*; M.E. Bowdish, E. Luu, F.S. Schenkel, T. Possemato, M.L. Barr. Department of Surgery, Keck School of Medicine of USC, University of Southern California, Los Angeles, CA.

**8:45 AM (344)** *Quantifying the Cardiorenal Syndrome and Its Effect on Mortality after LVAD Implant: An Analysis of 4,917 Patients from INTERMACS*; J.K. Kirklin,<sup>1</sup> D.C. Naftel,<sup>1</sup> R.L. Kormos,<sup>2</sup> F.D. Pagani,<sup>3</sup> J.B. Young,<sup>4</sup> S.L. Myers,<sup>1</sup> L.W. Stevenson.<sup>5</sup> <sup>1</sup>Department of Surgery, University of Alabama at Birmingham, Birmingham, AL; <sup>2</sup>Department of Surgery, University of Pittsburgh, Pittsburgh, PA; <sup>3</sup>Department of Surgery, University of Michigan Medical Center, Ann Arbor, MI; <sup>4</sup>Department of Medicine, Cleveland Clinic Foundation, Cleveland, OH; <sup>5</sup>Department of Medicine, Brigham and Women's Hospital, Boston, MA.

**9:00 AM (345)** *INTERMACS Profiling Identifies Risk of Death or VAD among Medically-Managed Advanced Heart Failure Patients*; G.C. Stewart,<sup>1</sup> J.J. Teuteberg,<sup>2</sup> M. Kittleson,<sup>3</sup> J. Cowger,<sup>4</sup> C. Patel,<sup>5</sup> F. Johnson,<sup>6</sup> M. Mountis,<sup>7</sup> P. Patel,<sup>8</sup> E. Rame,<sup>9</sup> M. Guglin,<sup>10</sup> L.W. Stevenson.<sup>1</sup> <sup>1</sup>Brigham and Women's Hospital, Boston, MA; <sup>2</sup>University of Pittsburgh, Pittsburgh, PA; <sup>3</sup>Cedars-Sinai Hospital, Beverly Hills, CA; <sup>4</sup>University of Michigan, Ann Arbor, MI; <sup>5</sup>Duke University, Durham, NC; <sup>6</sup>University of Iowa, Iowa City, IA; <sup>7</sup>Cleveland Clinic, Cleveland, OH; <sup>8</sup>University of Texas Southwestern, Dallas, TX; <sup>9</sup>University of Pennsylvania, Philadelphia, PA; <sup>10</sup>University of South Florida, Tampa, FL.

**9:15 AM (346)** *Low Serum Total Cholesterol and Triglycerides Are Associated with Adverse Events in Advanced Heart Failure: The "Lipid Paradox" in MEDAMACS*; J. Testani,<sup>1</sup> G.C. Stewart,<sup>2</sup> M. Kittleson,<sup>3</sup> M. Mountis,<sup>4</sup> C. Patel,<sup>5</sup> F. Johnson,<sup>6</sup> M. Guglin,<sup>7</sup> J. Cowger,<sup>8</sup> J. Teuteberg,<sup>9</sup> J.E. Rame.<sup>1</sup> <sup>1</sup>University of Pennsylvania, Philadelphia; <sup>2</sup>Brigham and Women's Hospital, Boston; <sup>3</sup>Cedars Sinai Medical Center, Los Angeles; <sup>4</sup>Cleveland Clinic, Cleveland; <sup>5</sup>Duke University Medical Center, Durham; <sup>6</sup>University of Iowa, Iowa City; <sup>7</sup>University of South Florida, Tampa; <sup>8</sup>University of Michigan, Ann Arbor; <sup>9</sup>University of Pittsburgh, Pittsburgh.



8:00 AM – 9:30 AM

## CONCURRENT SESSION 38

**Heart 9: Progress in Cardiac Allograft Immunosuppression (510)****CHAIRS:** Jignesh Patel, MD, PhD and Sudhir S. Kushwaha, MD

- 8:00 AM (347) Scandinavian Heart Transplant Everolimus De Novo Study with Early Calcineurin Inhibitor Avoidance (SCHEDULE);** A.K. Andreassen,<sup>1</sup> E. Gude,<sup>1</sup> V. Sigurdardottir,<sup>2</sup> G. Dellgren,<sup>2</sup> B. Andersson,<sup>3</sup> B. Ekmeahag,<sup>4</sup> G. Radegran,<sup>4</sup> K. Jansson,<sup>5</sup> F. Gustafsson,<sup>6</sup> H. Eiskjaer,<sup>7</sup> D. Solbu,<sup>8</sup> L. Gullestad.<sup>1</sup> <sup>1</sup>Cardiology, Oslo University Hospital Rikshospitalet, Oslo, Norway; <sup>2</sup>Transplante Institute, Sahlgrenska University Hospital, Gothenburg, Sweden; <sup>3</sup>Cardiology, Sahlgrenska University Hospital, Gothenburg, Sweden; <sup>4</sup>Clinic for Heart Failure and Valvular Disease, Skåne University Hospital, Lund University, Lund, Sweden; <sup>5</sup>Cardiology, Linköping University Hospital, Linköping, Sweden; <sup>6</sup>Cardiology, Copenhagen University Hospital, Copenhagen, Denmark; <sup>7</sup>Cardiology B, Skejby University Hospital, Aarhus, Denmark; <sup>8</sup>Novartis Norge AS, Novartis, Oslo, Norway.
- 8:15 AM (348) Induction Therapy in African American Heart Transplant Recipients: Analysis of the UNOS Database;** B. Coleman, J. Patel, J. Mirocha, L.S.C. Czer, J. Kobashigawa. Cedars-Sinai Heart Institute, Los Angeles, CA.
- 8:30 AM (349) Everolimus-Based Immunosuppression Improves Renal Function in Long-Term Heart Transplanted Patients: Five Years Results of a Prospective Randomized Trial;** R. Fiocchi, E. Radavelli, R. Sebastiani. Heart Transplant Center, Ospedali Riuniti Bergamo, Bergamo, Italy.
- 8:45 AM (350) Influence of Genetic Variation in Pharmacokinetic (PK) and -Dynamic (PD) Pathways of Immunosuppressants on Drug Response in Heart Transplant Patients;** V. Sigurdardottir,<sup>1</sup> D. Lesche,<sup>2</sup> R. Setoud,<sup>1</sup> M. Oberhaensli,<sup>1</sup> T. Carrel,<sup>3</sup> C.R. Largiader,<sup>2</sup> J. Sistonen,<sup>2</sup> P. Mohacs,<sup>1</sup> <sup>1</sup>Department of Cardiology, Swiss CV Centre, University Hospital Bern (Inselspital), Bern, Switzerland; <sup>2</sup>Institute of Clinical Chemistry, University Hospital Bern (Inselspital), Bern, Switzerland; <sup>3</sup>Department of Cardiovascular Surgery, Swiss CV Centre, University Hospital Bern (Inselspital), Bern, Switzerland.
- 9:00 AM (351) Correlates of Long-Term Survival in the TICTAG Trial;** D.A. Baran, C.G. Gidea, J. Pieretti, C.Y. Guerro-Miranda, J.A. Weiss, M. Camacho, M.J. Zucker. Heart Failure and Transplant, Newark Beth Israel Hospital, Newark, NJ.
- 9:15 AM (352) Safety of Early Everolimus in De Novo Heart Transplant Recipients: Interim Analysis of the Randomized Study EVERHEART;** L. Potena,<sup>1</sup> F. Barberini,<sup>1</sup> M. Boffini,<sup>2</sup> C. Amarelli,<sup>3</sup> C. Pellegrini,<sup>4</sup> U. Livi,<sup>5</sup> G. Masciocco,<sup>6</sup> G. Faggian,<sup>7</sup> G. Gerosa,<sup>8</sup> P. Lilla,<sup>9</sup> N. Marraudino,<sup>10</sup> M. Porcu,<sup>11</sup> R. Guarisco,<sup>12</sup> M. Maccherini.<sup>13</sup> <sup>1</sup>AO S. Orsola Malpighi, Bologna, Italy; <sup>2</sup>ASO Molinette S. Giovanni Battista, Torino, Italy; <sup>3</sup>Ospedale Monaldi, Napoli, Italy; <sup>4</sup>Policlinico San Matteo, Pavia, Italy; <sup>5</sup>AOU S. Maria della Misericordia, Udine, Italy; <sup>6</sup>AO Niguarda Ca' Granda, Milano, Italy; <sup>7</sup>Ospedale Civile Maggiore, Verona, Italy; <sup>8</sup>AOU di Padova, Padova, Italy; <sup>9</sup>AO San Camillo Forlanini, Roma, Italy; <sup>10</sup>Policlinico di Bari, Bari, Italy; <sup>11</sup>AO G. Brotzu, Cagliari, Italy; <sup>12</sup>Novartis Farma, Origgio (VA), Italy; <sup>13</sup>AOU Senese, Siena, Italy.

8:00 AM – 9:30 AM

## CONCURRENT SESSION 39

**BSTR 3: The Fundamental Difference – Innate Immunity and Xenotransplantation (513ABC)****CHAIRS:** Daniel R. Goldstein, MD and Daniel Kreisel, MD, PhD

- 8:00 AM (353) Systemic Inhibition of Angiopoietin-2 Prevents Endothelial Activation, and Acute Rejection in Rat Cardiac Allografts;** S.O. Syrjälä,<sup>1</sup> A. Dashkevich,<sup>1</sup> A.I. Nykänen,<sup>1,2</sup> C.C. Leow,<sup>3</sup> K. Alitalo,<sup>4</sup> K.B. Lemström.<sup>1,2</sup> <sup>1</sup>Cardiopulmonary Research Group, Transplantation Laboratory, Haartman Institute, University of Helsinki, Helsinki, Finland; <sup>2</sup>Department of Cardiothoracic Surgery, Helsinki University Central Hospital, Helsinki, Finland; <sup>3</sup>Department of Pre-Clinical Oncology, MedImmune, LLC, Gaithersburg, MD; <sup>4</sup>Molecular/Cancer Biology Program, Institute for Molecular Medicine Finland and Helsinki University Central Hospital, Research Programs Unit, Biomedicum Helsinki, University of Helsinki, Helsinki, Finland.
- 8:15 AM (354) Caspase 1: A Novel Serum Marker of Myocardial Remodeling;** C. Statz, A. Ras, R. Mulamalla, C. Cosgrove, D. Fusco, J. Hammond, D. Wencker. Center for Advanced Heart Failure and Transplant, Hartford Hospital, Hartford, CT.
- 8:30 AM (355) Human Platelet Aggregation and Thrombotic Microangiopathy (TM) in Pig Cardiac Xenografts Is Reduced by Expression of Human Thrombomodulin (TBM);** H. Iwase,<sup>1</sup> V. Satyananda,<sup>1</sup> B. Ekser,<sup>2</sup> J.K. Bhama,<sup>3</sup> H. Hara,<sup>4</sup> M. Ezzelarab,<sup>1</sup> P. Bajona,<sup>1</sup> M. Wijkstrom,<sup>1</sup> C. Phelps,<sup>4</sup> D. Ayares,<sup>4</sup> D.K.C. Cooper.<sup>1</sup> <sup>1</sup>Surgery, Thomas E. Starzl Transplantation Institute University of Pittsburgh, Pittsburgh, PA; <sup>2</sup>Transplantation Surgery, University of Indianapolis, Indianapolis, IN; <sup>3</sup>Cardiothoracic Surgery, Thomas E. Starzl Transplantation Institute University of Pittsburgh, Pittsburgh, PA; <sup>4</sup>Revivacor Inc., Blacksburg, VA.
- 8:45 AM (356) Human EPCR Expression in GaITKO.hCD46 Lungs Extends Survival Time and Lowers PVR in a Xenogenic Lung Perfusion Model;** L. Burdorf,<sup>1</sup> E. Rybak,<sup>1</sup> T. Zhang,<sup>1</sup> A. Riner,<sup>1</sup> G. Braileanu,<sup>1</sup> X. Cheng,<sup>1</sup> C. Phelps,<sup>2</sup> D. Ayares,<sup>2</sup> A.M. Azimzadeh,<sup>1</sup> R.N. Pierson III.<sup>1</sup> <sup>1</sup>Surgery, University of Maryland, Baltimore, MD; <sup>2</sup>Revivacor, Blacksburg, Inc., VA.
- 9:00 AM (357) Thrombin Generation and Platelet Activation in a Xenogenic Lung Perfusion Model Determine Survival of GaITKO.hCD46 Lungs;** L. Burdorf,<sup>1</sup> E. Rybak,<sup>1</sup> A. Riner,<sup>1</sup> T. Zhang,<sup>1</sup> X. Cheng,<sup>1</sup> G. Braileanu,<sup>1</sup> C. Phelps,<sup>2</sup> D. Ayares,<sup>2</sup> A.M. Azimzadeh,<sup>1</sup> R.N. Pierson.<sup>1</sup> <sup>1</sup>Surgery, University of Maryland, Baltimore, MD; <sup>2</sup>Revivacor, Inc., Blacksburg, VA.
- 9:15 AM (358) MAPK/ERK Pathway Activation Leads to Severe Ischemia-Reperfusion-Induced Lung Injury;** M. Okada,<sup>1</sup> M. Yamane,<sup>1</sup> N. Iga,<sup>1</sup> H. Nishikawa,<sup>1</sup> S. Yamamoto,<sup>1</sup> S. Otani,<sup>1</sup> N. Waki,<sup>1</sup> S. Hirayama,<sup>1</sup> K. Miyoshi,<sup>1</sup> S. Sugimoto,<sup>1</sup> S. Toyooka,<sup>1</sup> T. Oto,<sup>1</sup> A. Matsukawa,<sup>2</sup> S. Miyoshi.<sup>1</sup> <sup>1</sup>General Thoracic Surgery and Breast and Endocrinological Surgery, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Okayama, Japan; <sup>2</sup>Pathology and Experimental Medicine, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Okayama, Japan.



8:00 AM – 9:30 AM

## CONCURRENT SESSION 40

## Clinical Case Dilemmas in Thoracic Transplantation

(513DEF)

**CHAIRS:** Pali Shah and Keyur Shah**Expert Panel:**

Fernanda Silveira, MD, University of Pittsburgh Medical Center, Pittsburgh, Pennsylvania, USA

James K. Kirklin, MD, University of Alabama at Birmingham, Birmingham, AL, USA

Mandeep R. Mehra, MD FACC FACP, Brigham and Women's Hospital, Boston, MA, USA

Francis D. Pagani, MD, PhD, University of Michigan, Ann Arbor, MI, USA

Glen P. Westall, MD, Alfred Hospital, Melbourne, Australia

8:00 AM (359) **Heart Transplant: A Mystery in the Myocardium;** V. Cotarlan, D. Firchau, M. Icardi, J. Goerbig, O. Iqbal, K. Light-McGroary, F. Johnson. Cardiomyopathy Treatment Program, University of Iowa, Iowa City, IA.

8:12 AM Discussion by Expert Panel

8:22 AM (360) **Mechanical Circulatory Support: When Less Is More;** D.B. Leviner,<sup>1</sup> A. Keidar,<sup>2</sup> T. Ben Gal,<sup>3</sup> B. Medalion,<sup>1</sup> <sup>1</sup>Cardiothoracic Surgery, Rabin Medical Center, Beilinson Campus, Petach Tiqva, Israel; <sup>2</sup>General Surgery B, Rabin Medical Center, Beilinson Campus, Petach Tiqva, Israel; <sup>3</sup>Cardiology, Rabin Medical Center, Beilinson Campus, Petach Tiqva, Israel.

8:34 AM Discussion by Expert Panel

8:44 AM (361) **Unforeseen Events: Seizures Following Lung Transplant;** I.S.I. Henriksen,<sup>1</sup> M. Østergaard,<sup>1</sup> M.-L.M. Talman,<sup>2</sup> C.B. Andersen,<sup>2</sup> J. Carlsen,<sup>3</sup> M. Zemtsovski,<sup>1</sup> M. Iversen,<sup>3</sup> <sup>1</sup>Department of Cardiothoracic Anaesthesia, Rigshospitalet, Copenhagen University Hospital, Copenhagen, Denmark; <sup>2</sup>Department of Pathology, Rigshospitalet, Copenhagen University Hospital, Copenhagen, Denmark; <sup>3</sup>Department of Lung Transplantation, Rigshospitalet, Copenhagen University Hospital, Copenhagen, Denmark.

8:56 AM Discussion by Expert Panel

9:06 AM (362) **Rapid Respiratory Failure after Heart Transplant;** B. Mani,<sup>1</sup> H. Clauss,<sup>2</sup> R. Alvarez,<sup>1</sup> E. Hamad,<sup>1</sup> L. Nikolaidis,<sup>1</sup> J. Fitzpatrick,<sup>1</sup> M. Ahmed,<sup>1</sup> <sup>1</sup>Division of Cardiology, Temple University School of Medicine, Philadelphia, PA; <sup>2</sup>Division of Infectious Diseases, Temple University School of Medicine, Philadelphia, PA.

9:18 AM Discussion by Expert Panel

9:30 AM – 9:45 AM

COFFEE BREAK (517 FOYER)

9:45 AM – NOON

## PLENARY SESSION

## From Bench to Bedside (511)

**CHAIRS:** Jason D. Christie, MD, MS and Allan R Glanville, MBBS, MD, FRACP

**SESSION SUMMARY:** The final plenary session on Saturday represents one of the clear highlights of the meeting in Montréal and one you will miss at your peril. The session opens with great examples of translational science from the Society represented by two consensus reports on major areas in cardiac transplantation namely primary graft failure and a review of listing criteria based on a thorough review of the latest data. Marlene Rabinovitch, one of our major invited speakers with a fantastic reputation throughout the scientific world, will then illustrate how basic research on BMPRII is offering new targets for much needed therapy in PAH in classic bench to bedside story. She will be followed by Mary Amanda Dew presenting novel data on recognizing the importance of mental health as well as physical health in all aspects of the Society's Interests. The session ends in a flourish with a grand debate on an extended role of VAD implantation in acute heart failure by two of the Society's most respected daughters. This plenary is a true synthesis of many facets of translational science at its best.

9:45 AM **Awards Presentations**

10:00 AM **ISHLT Consensus Conference Report: Primary Graft Failure in Heart Transplantation,** Jon A. Kobashigawa, MD, Cedars-Sinai Heart Institute, Los Angeles, CA, USA

10:08 AM **ISHLT Consensus Conference Report: 2013 Heart Transplantation Listing Criteria,** Mandeep R. Mehra, MD, Harvard Medical School, Boston, MA, USA

10:15 AM **BMPRII: From Mutation to Manipulation,** Marlene Rabinovitch, MD, Stanford University School of Medicine, Stanford, CA, USA

10:40 AM **FEATURED ABSTRACT: (363) Survival in Pulmonary Arterial Hypertension Patients Awaiting Transplant;** M. Gomberg-Maitland,<sup>1,8</sup> C. Glassner-Kolmin,<sup>1</sup> S. Watson,<sup>2</sup> R. Frantz,<sup>3,8</sup> M. Park,<sup>4,8</sup> A. Frost,<sup>5</sup> R. Benza,<sup>6,8</sup> F. Torres,<sup>7,8</sup> <sup>1</sup>Department of Medicine, University of Chicago, Chicago, IL; <sup>2</sup>Department of Health Studies, University of Chicago, Chicago, IL; <sup>3</sup>Mayo Clinic College of Medicine, Rochester, MN; <sup>4</sup>Department of Medicine, University of Maryland School of Medicine, Baltimore, MD; <sup>5</sup>Department of Internal Medicine, Baylor College of Medicine, Houston, TX; <sup>6</sup>Department of Medicine, Allegheny General Hospital, Pittsburgh, PA; <sup>7</sup>Department of Internal Medicine, University of Texas Southwestern Medical Center, Dallas, TX; <sup>8</sup>Scientific Council on Pulmonary Hypertension, International Society for Heart and Lung Transplantation, Addison, TX.

10:55 AM **The Mind Matters,** Mary Amanda Dew, PhD, University of Pittsburgh School of Medicine and Medical Center, Pittsburgh, PA, USA

11:15 AM **FEATURED ABSTRACT: (364) Frailty Index Predicts Mortality but Not Rehospitalization after Destination Left Ventricular Assist Device;** S.M. Dunlay,<sup>1</sup> S.J. Park,<sup>2</sup> L.D. Joyce,<sup>2</sup> R.C. Daly,<sup>2</sup> J.M. Stulak,<sup>2</sup> S.M. McNallan,<sup>3</sup> V.L. Roger,<sup>1</sup> S. Kushwaha,<sup>1</sup> <sup>1</sup>Internal Medicine, Cardiology, Mayo Clinic, Rochester, MN; <sup>2</sup>Cardiothoracic Surgery, Mayo Clinic, Rochester, MN; <sup>3</sup>Health Sciences Research, Mayo Clinic, Rochester, MN

11:30 AM **The President's Debate****MODERATOR:** David O. Taylor, MD**VAD Support Leads to Recovery****Partial Support Works****Heart Failure Patients Should be Implanted Earlier****PRO:** Emma Birks, FRCP, PhD, University of Louisville, Louisville, KY, USA**CON:** Mariell Jessup MD, University of Pennsylvania, Philadelphia, PA, USA

NOON –12:15 PM

COFFEE BREAK (517 FOYER)

12:15 PM – 1:30 PM

## CONCURRENT SESSION 41

## MCS 10: Outcomes Potpourri (511)

CHAIRS: Mark S. Slaughter, MD and Diego H. Delgado, MD

- 12:15 PM (365) A New Universal Wireless Transcutaneous Energy Transfer (TET) System for Implantable LVADs – Preliminary In Vitro and In Vivo Results;** Y. Kassif,<sup>1</sup> M. Zilbershlag,<sup>3</sup> M. Levi,<sup>3</sup> A. Plotkin,<sup>3</sup> S. Schueler.<sup>2</sup> <sup>1</sup>Cardiac Surgery, Sheba Medical Center, Ramat Gan, Israel; <sup>2</sup>Freeman Hospital, Newcastle upon Tyne, United Kingdom; <sup>3</sup>R&D, Leviticus Cardio, Givat Shmuel, Israel.
- 12:27 PM (366) Percutaneous Hemodynamic Support for Cardiogenic Shock Prior to Left Ventricular Assist Device Placement;** P. Shah,<sup>1</sup> J.A. Cowger,<sup>1</sup> J.W. Haft,<sup>2</sup> M.A. Romano,<sup>2</sup> K.D. Aaronson,<sup>1</sup> F.D. Pagani.<sup>2</sup> <sup>1</sup>Division of Cardiology, University of Michigan, Ann Arbor, MI; <sup>2</sup>Department of Cardiac Surgery, University of Michigan, Ann Arbor, MI.
- 12:39 PM (367) Outcomes of Heart Transplant (HT) Recipients Bridged with ECMO;** E.C. DePasquale,<sup>1</sup> R.K. Cheng,<sup>1</sup> A. Baas,<sup>1</sup> M. Cadeiras,<sup>1</sup> D. Cruz,<sup>1</sup> M. Kwon,<sup>2</sup> T. Khuu,<sup>1</sup> A. Nsair,<sup>1</sup> M.C. Deng.<sup>1</sup> <sup>1</sup>Medicine, Division of Cardiology, UCLA Medical Center, Los Angeles, CA; <sup>2</sup>Cardiothoracic Surgery, UCLA Medical Center, Los Angeles, CA.
- 12:51 PM (368) Outcomes after Ventricular Assist Device Support in Patients Bridged with Temporary Circulatory Support: Analysis from INTERMACS;** S. Shreenivas,<sup>1</sup> A.L. Acker,<sup>1</sup> P. Atluri,<sup>1</sup> S. Anwaruddin,<sup>1</sup> Y.J. Woo,<sup>1</sup> M.A. Acker,<sup>1</sup> S.L. Myers,<sup>2</sup> J.E. Rame.<sup>1</sup> <sup>1</sup>University of Pennsylvania, Philadelphia, PA; <sup>2</sup>University of Alabama at Birmingham, Birmingham, AL.
- 1:03 PM (369) The Worldwide Use of SynCardia Total Artificial Heart in Patients with Congenital Heart Disease;** D.L. Morales,<sup>1</sup> F. Zafar,<sup>1</sup> J.W. Gaynor,<sup>2</sup> J.W. Rossano,<sup>2</sup> J.L. Jefferies,<sup>1</sup> T.D. Ryan,<sup>1</sup> J.A. Towbin,<sup>1</sup> A. Lorts.<sup>1</sup> <sup>1</sup>Heart Institute, Cincinnati Children's Hospital, University of Cincinnati School of Medicine, Cincinnati, OH; <sup>2</sup>Cardiac Center, Children's Hospital of Philadelphia, University of Pennsylvania School of Medicine, Philadelphia, PA.
- 1:15 PM (370) Minimally-Invasive Implantation of Left Ventricular Assist Devices Improves the Operative Outcome in Adult Patients with Severe Heart Failure;** S.V. Rojas,<sup>1</sup> M. Avsar,<sup>1</sup> J.S. Hanke,<sup>1</sup> L. Fischer,<sup>1</sup> A. Meyer,<sup>1</sup> L. Repges,<sup>1</sup> T. Thoms,<sup>1</sup> B. Wiegmann,<sup>1</sup> I. Kutschka,<sup>1</sup> M. Strüber,<sup>2</sup> A. Haverich,<sup>1</sup> J.D. Schmitto.<sup>1</sup> <sup>1</sup>Department of Cardiothoracic-, Transplantation- and Vascular Surgery, Hannover Medical School, Hannover, Germany; <sup>2</sup>Department of Cardiac Surgery, Heart Centre Leipzig, Leipzig, Germany.

12:15 PM – 1:30 PM

## CONCURRENT SESSION 42

## Heart 10: Can We Improve Transplant Risk Assessment and Outcome Prediction? (510)

CHAIRS: Michael Zakliczynski, MD and Eric Epailly, MD

- 12:15 PM (371) Advanced Heart Failure Therapy in HIV Positive Patients: Do These Patients Get Equal Treatment?;** N. Uriel,<sup>1</sup> P.C. Colombo,<sup>1</sup> M. Yuzepolskaya,<sup>1</sup> S.W. Restaino,<sup>1</sup> N. Nahumi,<sup>1</sup> J. Han,<sup>1</sup> S.S. Thomas,<sup>1</sup> A.R. Garan,<sup>1</sup> H. Takayama,<sup>2</sup> D.M. Mancini,<sup>1</sup> Y. Naka,<sup>2</sup> U.P. Jorde.<sup>1</sup> <sup>1</sup>Medicine, Columbia University, New York, NY; <sup>2</sup>Surgery, Columbia University, New York, NY.
- 12:27 PM (372) Predictors of Prolonged Status 1A Wait Time Prior to Heart Transplant;** J.A. Yang,<sup>1</sup> Y. Naka,<sup>1</sup> T. Ota,<sup>1</sup> R.C. Neely,<sup>1</sup> N. Uriel,<sup>2</sup> P.C. Colombo,<sup>2</sup> U.P. Jorde,<sup>2</sup> D.M. Mancini,<sup>2</sup> H. Takayama.<sup>1</sup> <sup>1</sup>Division of Cardiac Surgery, Dept of Surgery, Columbia University Medical Center, New York, NY; <sup>2</sup>Division of Cardiology, Dept of Medicine, Columbia University Medical Center, New York, NY.
- 12:39 PM (373) Contemporary Prognosis in Moderate to Severe Heart Failure with Reduced EF: Who Should Be Referred for Advanced Therapy?;** T. Thorvaldsen,<sup>1</sup> L. Bensson,<sup>1</sup> M. Ståhlberg,<sup>1</sup> U. Dahlström,<sup>2</sup> M. Edner,<sup>1</sup> L.H. Lund.<sup>1</sup> <sup>1</sup>Karolinska Institute, Stockholm, Sweden; <sup>2</sup>Linköping University Hospital, Linköping, Sweden.
- 12:51 PM (374) Outcomes of Adult Heart (HT) Versus Heart-Kidney (H+K) Transplant: Influence of CKD (Chronic Kidney Disease) Stage;** E.C. DePasquale,<sup>1</sup> R.K. Cheng,<sup>1</sup> A. Ardehali,<sup>1</sup> A. Baas,<sup>1</sup> M. Cadeiras,<sup>1</sup> D. Cruz,<sup>1</sup> T. Khuu,<sup>1</sup> A. Nsair,<sup>1</sup> D.L. Jacoby,<sup>2</sup> M.C. Deng.<sup>1</sup> <sup>1</sup>Division of Cardiology, David Geffen School of Medicine, University of California, Los Angeles, Los Angeles, CA; <sup>2</sup>Division of Cardiology, Yale University School of Medicine, New Haven, CT.
- 1:03 PM (375) Risk Factors of Death for Patients with UNOS 2 Status Listed for OHT;** T. Zielinski, M. Sobieszczanska-Malek, A. Browarek, J. Korewicki. Haert Failure and Transplantation, Institute of Cardiology, Warsaw, Poland.
- 1:15 PM (376) Cost-Effectiveness of Ventricular Assist Device Therapy as a Bridge to Transplant in Comparison to Non-Bridged Cardiac Recipients;** A.C. Alba,<sup>1</sup> L.F. Alba,<sup>2</sup> D.H. Delgado,<sup>1</sup> V. Rao,<sup>1</sup> H.J. Ross,<sup>1</sup> R. Goeree.<sup>3</sup> <sup>1</sup>Toronto General Hospital, University Health Network, Toronto, Canada; <sup>2</sup>National University of Cuyo, Mendoza, Argentina; <sup>3</sup>Clinical Epidemiology and Biostatistics, Hamilton, Canada.

12:15 PM – 1:30 PM

**CONCURRENT SESSION 43****Lung 6: Transplant Complications and Outcomes (512A-G)****CHAIRS:** Jens Gottlieb, MD and Cecilia Chaparro, MD

**12:15 PM (377) Increased Incidence of PTLD in Adult Lung Transplant Recipients with Cystic Fibrosis: Analysis of the International Society for Heart and Lung Transplantation Registry;** E.M. Lowery,<sup>1</sup> S. Grim,<sup>1</sup> E. Mahoney,<sup>1</sup> R.B. Love,<sup>2</sup> N. Clark,<sup>1</sup> J.E. Layden.<sup>1</sup> <sup>1</sup>Medicine, Loyola University Medical Center, Maywood, IL; <sup>2</sup>Surgery, Medical College of Wisconsin, Milwaukee, WI.

**12:27 PM (378) Center Volume Impacts Survival in Pediatric Lung Transplantation;** M.S. Khan,<sup>1</sup> W. Zhang,<sup>1</sup> I. Adachi,<sup>1</sup> E.D. McKenzie,<sup>1</sup> G.B. Mallory,<sup>2</sup> J.S. Heinle.<sup>1</sup> <sup>1</sup>Congenital Heart Surgery, Texas Children's Hospital, Baylor College of Medicine, Houston, TX; <sup>2</sup>Pediatric Pulmonology, Texas Children's Hospital, Baylor College of Medicine, Houston, TX.

**12:39 PM (379) Lung Size Mismatch and Survival after Bilateral Lung Transplantation for Idiopathic Pulmonary Arterial Hypertension;** M. Eberlein,<sup>1</sup> C.A. Merlo,<sup>2</sup> R.M. Reed.<sup>3</sup> <sup>1</sup>University of Iowa Hospitals and Clinics, Iowa City; <sup>2</sup>Johns Hopkins University, Baltimore; <sup>3</sup>University of Maryland, Baltimore.

**12:51 PM (380) Long-Term Results of Transplantation of Normothermic Ex-Vivo Perfused Donor Lungs;** J.M. Tikkanen, M. Cypel, S. Azad, C.W. Chow, C. Chaparro, M. Binnie, M. de Perrot, K. Yafufuku, T. Waddell, A. Pierre, S. Keshavjee, L.G. Singer. Toronto Lung Transplant Program, Toronto General Hospital, Toronto, ON, Canada.

**1:03 PM (381) Utility of Six-Minute Walk Distance in Predicting Outcomes after Lung Transplant: A Nationwide Survival Analysis;** A.W. Castleberry,<sup>1</sup> B.R. Englum,<sup>1</sup> L.D. Snyder,<sup>2</sup> M. Worni,<sup>1</sup> A.A. Osho,<sup>1</sup> R.S. Pietrobon,<sup>1</sup> S.M. Palmer,<sup>2</sup> R.D. Davis,<sup>3</sup> M.G. Hartwig.<sup>3</sup> <sup>1</sup>Division of General Surgery, Duke University Medical Center, Durham, NC; <sup>2</sup>Division of Pulmonary and Critical Care, Duke University Medical Center, Durham, NC; <sup>3</sup>Division of Thoracic Surgery, Duke University Medical Center, Durham, NC.

**1:15 PM (382) Outcomes in Lung and Combined Heart-Lung Transplantation for Congenital Heart Disease;** C.A. Beaty, T.J. George, A. Kilic, J.V. Conte. Division of Cardiac Surgery, Johns Hopkins Medical Institutions, Baltimore, MD.

12:15 PM – 1:30 PM

**CONCURRENT SESSION 44****MCS 11: Translational Science and New Devices (513ABC)****CHAIRS:** James K. Kirklin, MD and Nader Moazami, MD

**12:15 PM (383) RNA Sequencing Identifies Novel Genes That Could Modulate Bleeding Risk in Heart Failure Patients after LVAD Placement;** A. Mitchell,<sup>1</sup> R. Staggs,<sup>1</sup> W. Guan,<sup>1</sup> S. Grindle,<sup>2</sup> N. Adhikari,<sup>2</sup> S. Hozayen,<sup>1</sup> R. John,<sup>2</sup> J.L. Hall,<sup>1</sup> P. Eckman.<sup>1</sup> <sup>1</sup>University of Minnesota, Minneapolis; <sup>2</sup>Lillehei Heart Institute, Minneapolis.

**12:27 PM (384) LVAD-Induced Improvement in Myocardial Function Is Associated with a Unique Pattern of Circulating microRNAs;** O. Galenko,<sup>2</sup> A.G. Kfoury,<sup>1,2</sup> C.H. Selzman,<sup>1,3</sup> J. Stehlik,<sup>1</sup> B.B. Reid,<sup>1,2</sup> S.P. Samineneni,<sup>2</sup> K.D. Brunisholz,<sup>1,2</sup> R. Alharethi,<sup>1,2</sup> N. Diakos,<sup>3</sup> O. Wever-Pinzon,<sup>1</sup> D. Budge,<sup>1,2</sup> J. Nativi-Nicolau,<sup>1</sup> S. McKellar,<sup>1</sup> D.Y. Li,<sup>3</sup> J.C. Carlquist,<sup>2</sup> S.G. Drakos.<sup>1,3</sup> <sup>1</sup>UTAH Cardiac Transplant Program, Salt Lake City, UT; <sup>2</sup>Intermountain Heart Institute, Intermountain Medical Center, Salt Lake City, UT; <sup>3</sup>University of Utah Molecular Medicine, Salt Lake City, UT.

**12:39 PM (385) CIRCULITE® SYNERGY® System for the Treatment of Intermacs ≥4 Heart Failure;** B. Meyns,<sup>1</sup> F. Rega,<sup>1</sup> A. Barbone,<sup>2</sup> D. Ornaghi,<sup>2</sup> M. Strueber,<sup>3</sup> A. Simon,<sup>4</sup> E. Vitali.<sup>2</sup> <sup>1</sup>K.U.Leuven Gasthuisberg University Hospital, Leuven, Belgium; <sup>2</sup>Istituto Clinico Humanitas, Rozzano, Italy; <sup>3</sup>Herzzentrum Leipzig – Universitätsklinik, Leipzig, Germany; <sup>4</sup>Harefield Hospital, Harefield, United Kingdom.

**12:51 PM (386) In Vivo Testing of a Novel Blood Pump for Short-Term Extracorporeal Life Support;** N.R. Teman,<sup>1</sup> D.S. Demos,<sup>1</sup> B.S. Bryner,<sup>1</sup> B. Faliqs,<sup>1</sup> E.M. Fracz,<sup>2</sup> D.E. Mazur,<sup>2</sup> A. Rojas-Pena,<sup>1</sup> R.H. Bartlett,<sup>1</sup> J.W. Haft.<sup>1</sup> <sup>1</sup>University of Michigan Health System, Ann Arbor, MI; <sup>2</sup>Michigan Critical Care Consultants, Inc., Ann Arbor, MI.

**1:03 PM (387) The HeartWare Transcatheter Miniature Ventricular Assist Device Used for Right Ventricular Support;** M. Connelan, A. Iyer, D. Robson, E. Granger, K. Dhital, P. Spratt, P. Jansz. Department of Cardiothoracic and Transplant Surgery, St Vincent's Hospital, Darlinghurst, NSW, Australia.

**1:15 PM (388) Artificial Heart Patients Discharged Home with a Portable Pneumatic Driver – The Pivotal US Clinical Trial Experience;** V. Kasirajan,<sup>1</sup> F. Arabia,<sup>2</sup> D. Tang,<sup>1</sup> D.E. Jarowszeki,<sup>2</sup> C.W. Hoopes,<sup>3</sup> F. Esmailian,<sup>4</sup> L. Joyce,<sup>5</sup> M.F. McGrath,<sup>6</sup> M.L.S. David,<sup>7</sup> C. Smith,<sup>8</sup> G. Jennifer,<sup>9</sup> M. Bowdish,<sup>10</sup> N. Mokadam,<sup>11</sup> J. Long.<sup>12</sup> <sup>1</sup>Virginia Commonwealth University, Richmond, VA; <sup>2</sup>Mayo Clinic, Phoenix, AZ; <sup>3</sup>University of Kentucky, Lexington, KY; <sup>4</sup>Cedars Sinai Heart Institute, Los Angeles, CA; <sup>5</sup>Sentara Heart Hospital, Norfolk, VA; <sup>6</sup>Texas Childrens Hospital, Houston, TX; <sup>7</sup>University of Arizona Health Science Center, Tucson, AZ; <sup>8</sup>University of Iowa, Iowa City, IA; <sup>9</sup>University of Southern California Keck School of Medicine, Los Angeles, CA; <sup>10</sup>University of Washington, Seattle, WA; <sup>11</sup>Integrus Advanced Cardiac Care, Oklahoma City, OK.

12:15 PM – 1:30 PM

## CONCURRENT SESSION 45

## PEDS 3: Heart and Lung Transplantation (513DEF)

CHAIRS: Marc G. Schecter, MD and Simon Urschel, MD

- 12:15 PM (389) Time from Development of De Novo Donor-Specific HLA Antibodies to Rejection or Graft Loss in Pediatric Cardiac Transplantation;** C. Irving,<sup>1</sup> V. Carter,<sup>2</sup> A. Gennery,<sup>1</sup> G. Parry,<sup>1</sup> M. Griselli,<sup>1</sup> A. Hasan,<sup>1</sup> R. Kirk,<sup>1</sup> <sup>1</sup>Transplant Institute, Freeman Hospital, Newcastle upon Tyne, Tyne and Wear, United Kingdom; <sup>2</sup>National Health Service Blood and Transplant, Newcastle upon Tyne, Tyne and Wear, United Kingdom.
- 12:27 PM (390) The Regulatory Capacity of Interleukin-10 Producing B Cells and Their Possible Role on Graft Acceptance in Children;** Y. Ling,<sup>1,3</sup> E. Dijke,<sup>1</sup> B. Motyka,<sup>1</sup> L.J. West,<sup>1,2,3</sup> S. Urschel.<sup>1,3</sup> <sup>1</sup>Pediatrics, University of Alberta, Edmonton, AB, Canada; <sup>2</sup>Surgery, University of Alberta, Edmonton, AB, Canada; <sup>3</sup>Medical Microbiology and Immunology, University of Alberta, Edmonton, AB, Canada.
- 12:39 PM (391) Cytomegalovirus Specific Immunity in Paediatric Cardiac Transplantation;** M.C. Jacobsen,<sup>1</sup> M.D.I. Manunta,<sup>1</sup> E.S. Pincott,<sup>2</sup> N.J. Klein,<sup>1</sup> M. Burch.<sup>2</sup> <sup>1</sup>Institute of Child Health, University College London, London, United Kingdom; <sup>2</sup>Department of Cardiology, Great Ormond Street Hospital for Children, London, United Kingdom.
- 12:51 PM (392) Adolescent CF Lung Transplant Recipients Have Decreased Survival When Compared to CF Lung Transplant Recipients in Other Age Groups;** S.B. Goldfarb,<sup>1</sup> S. Weinrib,<sup>2</sup> J. Kreindler,<sup>1</sup> R. Hammond,<sup>1</sup> J.W. Gaynor,<sup>1</sup> J. Rossano.<sup>1</sup> <sup>1</sup>The Children's Hospital of Philadelphia, Philadelphia, PA; <sup>2</sup>University of Pennsylvania, Philadelphia, PA.
- 1:03 PM (393) The Lung Microbiome and Development of Bronchiolitis Obliterans Syndrome after Pediatric Lung Transplantation;** M. Sagar,<sup>1</sup> S.A. Crabtree,<sup>1</sup> E.B. Hollister,<sup>2</sup> J.K. Runge,<sup>2</sup> Y. Shang,<sup>2</sup> J.S. Heinle,<sup>3</sup> E.D. McKenzie,<sup>3</sup> G.B. Mallory,<sup>1</sup> R.A. Luna,<sup>2</sup> M.G. Schecter.<sup>1</sup> <sup>1</sup>Pulmonology, Texas Children's Hospital, Houston, TX; <sup>2</sup>Pathology, Immunology, Microbiome Center, Texas Children's Hospital, Houston, TX; <sup>3</sup>Surgery, Cardiovascular, Texas Children's Hospital, Houston, TX.
- 1:15 PM (394) Pediatric Thoracic Multiorgan Transplantation in the United States;** M.S. Khan,<sup>1</sup> C.D. Fraser III,<sup>1</sup> D.L.S. Morales,<sup>2</sup> E.D. McKenzie,<sup>1</sup> I. Adachi,<sup>1</sup> M.G. Schecter,<sup>3</sup> G.B. Mallory,<sup>3</sup> J.S. Heinle.<sup>1</sup> <sup>1</sup>Congenital Heart Surgery, Texas Children's Hospital, Baylor College of Medicine, Houston, TX; <sup>2</sup>Pediatric Cardiothoracic Surgery, Cincinnati Children's Hospital Medical Center, Cincinnati, OH; <sup>3</sup>Pediatric Pulmonology, Texas Children's Hospital, Baylor College of Medicine, Houston, TX.

1:30 PM – 3:00 PM

COUNCIL AND COMMITTEE REPORTS TO THE BOARD AND MEMBERSHIP (513DEF)

3:00 PM – 10:00 PM

ISHLT BOARD OF DIRECTORS MEETING (514C)

# General Poster Sessions





# GENERAL POSTER SESSION 1 <sup>(516)</sup>

## Wednesday, April 24, 2013

**NOTE:** Poster presenters and poster moderators will be present in the poster hall from 6:30 pm – 7:30 pm

### LUNG DONOR MANAGEMENT/ORGAN ALLOCATION

**(395) Metabolites in Human Ex Vivo Lung Perfusates Are Differentially Affected in Brain Death (BDD) vs. Cardiac Death Donors (DCD) and Modified by Duration of Normothermic Perfusion;** M.K. Hsin, M. Cypel, R. Zamel, T. Machuca, M. Chen, M. Liu, S. Keshavjee. Latner Thoracic Surgical Research Laboratory, University of Toronto, Toronto, ON, Canada.

**(396) Pulmonary Edema and Biomarkers of Inflammation and Lung Epithelial Dysfunction Are Associated with Donor Smoking in the Ex Vivo Donor Lung;** L.B. Ware,<sup>1</sup> J.W. Lee,<sup>2</sup> M. Landeck,<sup>3</sup> N. Wickersham,<sup>1</sup> M.A. Matthay,<sup>2</sup> C.S. Calfee,<sup>2</sup> The California Transplant Donor Network.<sup>4</sup>  
<sup>1</sup>Vanderbilt University, Nashville; <sup>2</sup>University of California, San Francisco; <sup>3</sup>California Transplant Donor Network, Oakland; <sup>4</sup>Oakland, CA.

**(397) Impact of Duration of “Agonal Time” during the Controlled D onation after Circulatory Death (DCD) on Early and Mid-Term Results of Lung Transplantation (LTx);** B. Zych, P. Mohite, D. Garcia-Saez, A. Sabashnikov, A. Moza, F. De Robertis, M. Amrani, T. Bahrami, A. Reed, M. Carby, A.R. Simon. Department of Cardiothoracic Transplantation and Mechanical Circulatory Support, Harefield Hospital. Royal Brompton and Harefield NHS Foundation Trust, Harefield, Middlesex, United Kingdom.

**(398) Prednisolone as Preservation Additive Prevents from Ischemia Reperfusion Induced Graft Dysfunction in a Rat Model of Orthotopic Lung Transplantation;** P. Paulus,<sup>1</sup> A. Urbschat,<sup>2</sup> H. Mutlak,<sup>1</sup> K. Zacharowski,<sup>1</sup> B. Scheller,<sup>1</sup> J. Holfeld.<sup>3</sup> <sup>1</sup>Clinic of Anesthesiology, Intensive Care Medicine and Pain Therapy, Goethe-University Hospital, Frankfurt, Germany; <sup>2</sup>Clinic of Urology, Goethe-University Hospital, Frankfurt, Germany; <sup>3</sup>Clinic of Cardiac Surgery, Innsbruck Medical University, Innsbruck, Austria.

**(399) Carbon Monoxide (CO) Inhalation Prolongs Survival of the Fully MHC-Disparate Lung Graft from Brain Death Donors in Miniature Swine;** H. Sahara, K. Miura, A. Kawai, S. Waki, M. Sekijima, A. Shimizu, K. Yamada. Organ Replacement and Xenotransplantation Surgery, Center for Advanced Biomedical and Swine Research, Kagoshima University, Kagoshima, Japan.

**(400) WITHDRAWN**

**(401) Transplantation of Initially Rejected Donor Lungs after Ex-Vivo Lung Perfusion;** A. Wallinder,<sup>1</sup> S.-E. Ricksten,<sup>3</sup> G.C. Riise,<sup>2</sup> M. Silverborn,<sup>1</sup> H. Liden,<sup>1</sup> G. Dellgren.<sup>1,2</sup> <sup>1</sup>Department of Cardiothoracic Surgery, Sahlgrenska University Hospital, Gothenburg, Sweden; <sup>2</sup>Transplant Institute, Sahlgrenska University Hospital, Gothenburg, Sweden; <sup>3</sup>Cardiothoracic Anaesthesia and Intensive Care, Sahlgrenska University Hospital, Gothenburg, Sweden.

**(402) Effect of Warm Perfusion of Donor Lungs Using the OCS on Immune Mediator Release during Preservation;** B. Wiegmann,<sup>1</sup> C.S. Falk,<sup>2</sup> B. Müller,<sup>2</sup> C. Neudörfel,<sup>2</sup> A. Akhdar,<sup>2</sup> C. Kühn,<sup>1</sup> I. Tudorache,<sup>1</sup> W. Sommer,<sup>1</sup> M. Avsar,<sup>1</sup> A. Haverich,<sup>1</sup> G. Warnecke.<sup>1</sup> <sup>1</sup>Department for Cardiothoracic, Transplantation and Vascular Surgery, Hannover Medical School, Hannover, Germany; <sup>2</sup>Institute of Transplant Immunology, Integrated Research and Treatment Center Transplantation, Hannover Medical School, Hannover, Germany.

**(403) Australia’s Experience with Ex-Vivo Lung Perfusion of Highly Marginal Donors;** P.M. Hopkins,<sup>1,2</sup> D.C. Chambers,<sup>1,2</sup> R. Naidoo,<sup>1</sup> D.A. Wall,<sup>1</sup> I.J. Smith,<sup>3</sup> W.G. Hunt.<sup>3</sup> <sup>1</sup>Queensland Lung Transplant Service, The Prince Charles Hospital, Brisbane, Queensland, Australia; <sup>2</sup>School of Medicine,

University of Queensland, Brisbane, Queensland, Australia; <sup>3</sup>Department of Perfusion and Anaesthetics, The Prince Charles Hospital, Brisbane, Queensland, Australia.

**(404) Eligibility and Availability of Lungs for Transplantation: The French Experience;** F.X. Lamy,<sup>1</sup> C. Cantrelle,<sup>1</sup> M. Stern,<sup>2</sup> H. Mal,<sup>3</sup> M. Thuong,<sup>1</sup> O. Huot,<sup>1</sup> A. Atinault,<sup>1</sup> R. Dorent,<sup>1</sup> French Transplant Teams.<sup>1</sup> <sup>1</sup>Medical & Scientific, Agence de la Biomédecine, La Plaine Saint Denis, France; <sup>2</sup>Pneumologie, Hôpital Foch, Suresnes, France; <sup>3</sup>Pneumologie, Hôpital Bichat, Paris, France.

**(405) Single Lung Transplantation Using Donors with Heavy Smoking History Can Be Safely Performed;** S. Taghavi,<sup>1</sup> S. Jayarajan,<sup>1</sup> E. Komaroff,<sup>2</sup> T. Horai,<sup>3</sup> S. Brann,<sup>3</sup> F. Cordova,<sup>4</sup> G. Criner,<sup>4</sup> S. Guy,<sup>3</sup> Y. Toyoda.<sup>3</sup> <sup>1</sup>Department of Surgery, Temple University Hospital, Philadelphia, PA; <sup>2</sup>Department of Public Health, Temple University, Philadelphia, PA; <sup>3</sup>Department of Cardiovascular Surgery, Temple University Hospital, Philadelphia, PA; <sup>4</sup>Department of Internal Medicine, Temple University Hospital, Philadelphia, PA.

**(406) Extended Criteria Donors; a Safe Way To Expand the Lung Donor Pool?;** J. Somers,<sup>1</sup> D. Ruttens,<sup>2</sup> A. Stanzi,<sup>1</sup> S.E. Verleden,<sup>2</sup> E. Vandermeulen,<sup>2</sup> A. Vaneylen,<sup>2</sup> R. Vos,<sup>2</sup> B. Vanaudenaerde,<sup>2</sup> G.M. Verleden,<sup>2</sup> D.E. Van Raemdonck.<sup>1</sup> <sup>1</sup>Experimentele Thoraxheekunde, Katholieke Universiteit Leuven, Leuven, Vlaams-Brabant, Belgium; <sup>2</sup>Pneumologie, Katholieke Universiteit Leuven, Leuven, Vlaams-Brabant, Belgium.

**(407) Tissue Evaluation of Donor Lungs Preserved with the Organ Care System (OCS) Device: Experience of Padova;** F. Calabrese,<sup>1</sup> M. Schiavon,<sup>1</sup> F. Lunardi,<sup>1</sup> N. Nannini,<sup>1</sup> G. Marulli,<sup>1</sup> S. Nicotra,<sup>1</sup> P. Feltracco,<sup>2</sup> G. Di Gregorio,<sup>2</sup> M. Loy,<sup>1</sup> F. Rea.<sup>1</sup> <sup>1</sup>Department of Cardiac, Thoracic and Vascular Sciences, University of Padova, Padova, Italy; <sup>2</sup>Department of Pharmacology and Anesthesiology, University of Padova, Padova, Italy.

### HEART DONOR MANAGEMENT/ORGAN ALLOCATION

**(408) Retrograde Machine Perfusion for Long-Term Preservation of Canine Hearts;** M.L. Cobert, S. Brant, L.M. West, M.E. Jessen, M. Peltz. Cardiovascular and Thoracic Surgery, University of Texas Southwestern Medical Center, Dallas, TX.

**(409) Donor Hearts Not Offered or Rejected for Transplantation – A Lost Opportunity?;** J.M. DiMaio, M. Morse, W.A. Teeter, M.L. Cobert, L.M. West, M.E. Jessen, M. Peltz. Cardiovascular and Thoracic Surgery, University of Texas Southwestern Medical Center, Dallas, TX.

**(410) Ex-Vivo Perfusion of Human Donor Hearts Reduces Cold Ischemia Time;** M. Deng,<sup>2</sup> E. Soltesz,<sup>3</sup> E. Hsich,<sup>4</sup> Y. Naka,<sup>5</sup> D. Mancini,<sup>5</sup> F. Esmailian,<sup>6</sup> J. Kobashigawa,<sup>6</sup> M. Camacho,<sup>7</sup> D. Baran,<sup>8</sup> J. Madsen,<sup>9</sup> P. LePrince,<sup>10</sup> A. Ardehali.<sup>1</sup> <sup>1</sup>Department of Surgery, Division of Cardiothoracic Surgery, David Geffen School of Medicine at University of California, Los Angeles, Los Angeles, CA; <sup>2</sup>Department of Medicine, Division of Cardiology, David Geffen School of Medicine at University of California, Los Angeles, Los Angeles, CA; <sup>3</sup>Department of Thoracic and Cardiovascular Surgery, Cleveland Clinic, Cleveland, OH; <sup>4</sup>Department of Cardiovascular Medicine, Cleveland Clinic, Cleveland, OH; <sup>5</sup>Department of Surgery, New York Presbyterian Hospital/Columbia Medical Center, New York, NY; <sup>6</sup>Cedars-Sinai Heart Institute, Cedars-Sinai Medical Center, Los Angeles, CA; <sup>7</sup>Department of Cardiothoracic Surgery, Barnabas Health Heart Center of Newark Beth Isreal Medical Center, Newark, NJ; <sup>8</sup>Department of Heart Failure and Transplant, Barnabas Health Heart Center of Newark Beth Isreal Medical Center, Newark, NJ; <sup>9</sup>Department of Surgery, Cardiac Surgery, Massachusetts General Hospital, Boston, MA; <sup>10</sup>Department of Surgery, Groupe Hospitalier Pitie-Salpetriere, Paris, France.

**(411) Is Lactate Level during Warm Perfusion a Predictor for Post Transplant Outcomes?;** M. Deng,<sup>2</sup> E. Soltesz,<sup>3</sup> E. Hsich,<sup>4</sup> Y. Naka,<sup>5</sup> D. Mancini,<sup>5</sup> F. Esmailian,<sup>6</sup> J. Kobashigawa,<sup>6</sup> M. Camacho,<sup>7</sup> D. Baran,<sup>8</sup> J. Madsen,<sup>9</sup> P. LePrince,<sup>10</sup> A. Ardehali.<sup>1</sup> <sup>1</sup>Department of Surgery, Division of Cardio-

thoracic Surgery, David Geffen School of Medicine at University of California, Los Angeles, Los Angeles, CA; <sup>2</sup>Department of Medicine, Division of Cardiology, David Geffen School of Medicine at University of California, Los Angeles, Los Angeles, CA; <sup>3</sup>Department of Thoracic and Cardiovascular Surgery, Cleveland Clinic, Cleveland, OH; <sup>4</sup>Department of Cardiovascular Medicine, Cleveland Clinic, Cleveland, OH; <sup>5</sup>Department of Surgery, New York Presbyterian Hospital/Columbia Medical Center, New York, NY; <sup>6</sup>Cedars-Sinai Heart Institute, Cedars-Sinai Medical Center, Los Angeles, CA; <sup>7</sup>Department of Cardiothoracic Surgery, Barnabas Health Heart Center of Newark Beth Israel Medical Center, Newark, NJ; <sup>8</sup>Department of Heart Failure and Transplant, Barnabas Health Heart Center of Newark Beth Israel Medical Center, Newark, NJ; <sup>9</sup>Department of Surgery, Cardiac Surgery, Massachusetts General Hospital, Boston, MA; <sup>10</sup>Department of Surgery, Groupe Hospitalier Pitie-Salpetriere, Paris, France.

**(412) Non-Transplantation of Hearts When There Is Consent for Donation: A UK National Study;** V.B. Dronavalli,<sup>1,6,7</sup> H. Small,<sup>1</sup> P. Gosling,<sup>1</sup> C.A. Rogers,<sup>2,7</sup> H. Thomas,<sup>3,7</sup> J.K. Parameshwar,<sup>4,7</sup> N.R. Banner.<sup>5,7</sup> <sup>1</sup>Queen Elizabeth Hospital, University Hospitals Birmingham, Birmingham, United Kingdom; <sup>2</sup>Bristol Heart Institute, Bristol, United Kingdom; <sup>3</sup>NHS Blood and Transfusion, Bristol, United Kingdom; <sup>4</sup>Papworth Hospital, Papworth, United Kingdom; <sup>5</sup>Harefield Hospital, London, United Kingdom; <sup>6</sup>University of Birmingham, Birmingham, United Kingdom; <sup>7</sup>On behalf of the Steering Group UK Cardiothoracic Transplant Audit, United Kingdom.

**(413) Current Status of Donor Echocardiography in UK;** V.B. Dronavalli,<sup>1,6,7</sup> H. Small,<sup>1,7</sup> P. Gosling,<sup>1</sup> C.A. Rogers,<sup>2,7</sup> H. Thomas,<sup>3,7</sup> J.K. Parameshwar,<sup>4,7</sup> N.R. Banner.<sup>5,7</sup> <sup>1</sup>University Hospitals Birmingham, Birmingham, United Kingdom; <sup>2</sup>Bristol Heart Institute, Bristol, United Kingdom; <sup>3</sup>Harefield hospital, London, United Kingdom; <sup>4</sup>Papworth Hospital, Papworth, United Kingdom; <sup>5</sup>NHS Blood and Transfusion, Bristol, United Kingdom; <sup>6</sup>University of Birmingham, Birmingham, United Kingdom; <sup>7</sup>On behalf of the Steering Group UK Cardiothoracic Transplant Audit, United Kingdom.

**(414) Development of Coronary Atherosclerosis in Older Donor Hearts after Heart Transplantation;** L. Haralambiev,<sup>1</sup> G. Schmidt,<sup>1</sup> F. Polster,<sup>2</sup> R. Yeter,<sup>1</sup> I. Grünwald,<sup>1</sup> C. Wesslau,<sup>1</sup> O. Grauhan,<sup>1</sup> R. Hetzer.<sup>1</sup> <sup>1</sup>German Heart Institute Berlin, Department of Cardiothoracic and Vascular Surgery, Berlin, Berlin, Germany; <sup>2</sup>DGFG, DGFG, Rostock, Mecklenburg Vorpommern, Germany.

**(415) Characterizing the Agonal Phase of the Non-Heart Beating Donor in Canines – Implications for Utilization of DCD Hearts for Transplantation;** S. Brant, M.L. Cobert, L.M. West, M.E. Jessen, M. Peltz. Cardiovascular and Thoracic Surgery, University of Texas Southwestern Medical Center, Dallas, TX.

**(416) Static Cold Storage of Brain Dead Donor Hearts: Can ‘Pharmacological Conditioning’ Overcome Primary Graft Failure?;** G. Kumarasinghe,<sup>1,2</sup> L. Gao,<sup>1</sup> M. Hicks,<sup>1</sup> A. Jabbour,<sup>1,2</sup> A. Doyle,<sup>1</sup> A. Iyer,<sup>1,2</sup> P. Macdonald.<sup>1,2</sup> <sup>1</sup>Cardiac Transplant Laboratory, Victor Chang Cardiac Research Institute, Sydney, NSW, Australia; <sup>2</sup>Heart and Lung Transplantation Unit, St. Vincent’s Hospital, Sydney, NSW, Australia.

**(417) The Downtime Donor Heart: Analysis of Pre-Transplant Function and Current Utilization for Transplantation;** A.A. Ali, K. Southerland, M. Schechter, J. Schroder, C. Milano. Cardiothoracic Surgery, Duke University Medical Center, Durham, NC.

## HEART FAILURE

**(418) Aggregate Annual Health Care Expenditures Associated with Heart Transplantation in the United States: 1980-2011;** R.W. Evans. United Network for the Recruitment of Transplantation Professionals, Rochester, MN.

**(419) The United States Heart and Lung Transplant “Social” Network. Insights from the UNOS Database;** S. Venugopal,<sup>1</sup> E. Stoner,<sup>1</sup> M. Deng,<sup>2</sup> R. Menezes,<sup>1</sup> M. Cadeiras,<sup>2</sup> <sup>1</sup>Computational Science, Florida Institute of Technology, Melbourne, FL; <sup>2</sup>Medicine, University of California Los Angeles, Los Angeles, CA.

**(420) Trends in Hospital Charges for Heart Transplants in the United States;** P.H.U. Lee, A.Y. Sheikh, R.V. Ha, R. Beygui, P.E. Oyer. Cardiothoracic Surgery, Stanford University, Stanford, CA.

**(421) Increasing Heart Donation: Results of a Multi-Ethnic Population-Based Survey from Turkey;** H. Yerebakan,<sup>1</sup> S. Jones,<sup>1</sup> E. Blotky,<sup>1</sup> T. Ota,<sup>1</sup> E. Kaya,<sup>3</sup> Z.T. Demirozu,<sup>2</sup> M.A. Ozatik,<sup>4</sup> C. Yakut,<sup>3</sup> M. Ozbaran,<sup>5</sup> D.S. Kucukaksu.<sup>2</sup> <sup>1</sup>Division of Cardiothoracic Surgery, Columbia University Medical Center, New York, NY; <sup>2</sup>Department of Cardiovascular Surgery, Sisli Florence Nightingale Hospital, Istanbul, Turkey; <sup>3</sup>Department of Cardiovascular Surgery, Pendik Bolge Hospital, Istanbul, Turkey; <sup>4</sup>Department of Cardiovascular Surgery, Acibadem University, Eskisehir Acibadem Hospital, Eskisehir, Turkey; <sup>5</sup>Department of Cardiovascular Surgery, Ege University, Faculty of Medicine, Izmir, Turkey.

**(422) End-Stage Heart Failure: Cardiologists’ Reluctance to Discuss End of Life Care;** M.B. Karlekar,<sup>1</sup> C. Gupta,<sup>2</sup> S. Martin.<sup>1</sup> <sup>1</sup>Palliative Care, Vanderbilt University, Nashville, TN; <sup>2</sup>Cardiology, Vanderbilt University, Nashville, TN.

**(423) Safety and Feasibility of Surgical AF Ablation in Patients with Severely Reduced Left Ventricular Ejection Fraction (LVEF);** S. Pecha, T. Schäfer, T. Ahmadzade, H. Reichenspurner, F.M. Wagner. Cardiovascular Surgery, University Heart Center Hamburg, Hamburg, Germany.

**(424) Screening Patients with Cardiac Resynchronization Therapy/Implantable Cardioverter-Defibrillator for Indications for Heart Transplantation and Left Ventricular Assist Device: A Pilot Study;** S. Zabarovskaja,<sup>1,2</sup> F. Gadler,<sup>1,2</sup> A. Gabrielsen,<sup>1</sup> I. Hagerman,<sup>1,2</sup> L. Hellgren,<sup>3</sup> A. Tornqvist,<sup>2</sup> C. Linde,<sup>1,2</sup> L.H. Lund.<sup>1,2</sup> <sup>1</sup>Medicine, Karolinska Institutet, Stockholm, Sweden; <sup>2</sup>Cardiology, Karolinska University Hospital, Stockholm, Sweden; <sup>3</sup>Uppsala University Hospital, Uppsala, Sweden.

**(425) Continuous Monitoring of Right Ventricular Function with a 3-Axis Accelerometer during Left Ventricular Assist Device Implantation;** P.S. Halvorsen,<sup>1</sup> A. Espinoza,<sup>2</sup> A.E. Fiane,<sup>3</sup> E. Fosse.<sup>1</sup> <sup>1</sup>The Intervention Centre, Oslo University Hospital, Oslo, Norway; <sup>2</sup>Department of Anesthesia, Oslo University Hospital, Oslo, Norway; <sup>3</sup>Department of Cardiothoracic Surgery, Oslo University Hospital, Oslo, Norway.

**(426) Early Mortality and Morbidity in First 60 Days in Adult Heart Transplant Recipients with Prior History of Cardiac Surgery: Analysis of United Network for Organ Sharing Database;** P. Kansara, J. Patel, M. Kittleson, M. Rafiei, A. Osborne, D. Chang, L. Czer, F. Esmailian, A. Trento, J. Kobashigawa. Cedars-Sinai Heart Institute, Los Angeles, CA.

**(427) Evaluation of End-Stage Heart Failure Patients on Inotropic Therapy in the Defibrillator Era;** M. Caccamo, M. Barnes, S. Murali, R.L. Benza, M. Kanwar, A. Raina, R. Agarwal, D.V. Thompson, G.G. Sokos. Allegheny General Hospital, Pittsburgh, PA.

**(428) Monitoring Dedifferentiation of Cardiomyocytes in the Human Diseased Myocardium;** M.H. Richter,<sup>1</sup> V. Polyakova,<sup>2</sup> T. Kubin,<sup>2</sup> T. Braun,<sup>2</sup> T. Walther.<sup>1</sup> <sup>1</sup>Cardiac Surgery, Kerckhoff Heart Center, Bad Nauheim, Hessen, Germany; <sup>2</sup>Heart and Lung Research, Max-Planck-Institute, Bad Nauheim, Hessen, Germany.

**(429) Mechanical Unloading through Ventricular Assist Devices Increases Myocardial Content of Unsaturated Acyl-CoA Species in Patients with Advanced Heart Failure;** R. Ji, H. Akashi, H. Jiang, Y. Naka, H. Takayama, I. Goldberg, P.C. Schulze. Cardiology/Medicine, Columbia University, New York, NY.

**(430) Pathological Substrates of Impaired Coronary Flow Reserve in Dilated Cardiomyopathy and Heart Transplant Patients;** M. Fedrigo, F. Tona, N. Gattazzo, G. Famoso, C. Castellani, G. Feltrin, S. Iliceto, G. Gerosa,

M. Valente, G. Thiene, A. Angelini. Cardiac, Thoracic and Vascular Science, University of Padua, Padua, Italy.

**(431) Use of Global Functional Index in the Assessment of Diastolic Dysfunction;** N. Nair,<sup>1</sup> D. Jupiter,<sup>2</sup> E. Gongora,<sup>3</sup> S. Thotakura,<sup>1</sup> S. John.<sup>1</sup>

<sup>1</sup>Division of Cardiology/Department of Medicine, Scott & White Hospital/TAMHSC College of Medicine, Temple, TX; <sup>2</sup>Department of Surgery, Scott & White Hospital/TAMHSC College of Medicine, Temple, TX; <sup>3</sup>Department of Cardiothoracic Surgery, Drexel College of Medicine/Hahnemann University Hospital, Philadelphia, PA.

**(432) Risk Prediction Models for Mortality in Ambulatory Heart Failure Patients: A Systematic Review;** A.C. Alba,<sup>1</sup> T. Agoritsas,<sup>2</sup> M. Jankowski,<sup>3</sup>

D. Courvoisier,<sup>4</sup> S. Walter,<sup>2</sup> G.H. Guyatt,<sup>2</sup> H.J. Ross.<sup>1</sup> <sup>1</sup>Toronto General Hospital, University Health Network, Toronto, Canada; <sup>2</sup>Clinical Epidemiology and Biostatistics, McMaster University, Hamilton, Canada; <sup>3</sup>Department of Internal Medicine, Jagiellonian University Medical College, Krakow, Poland; <sup>4</sup>Center for Health Behavior Monitoring and Intervention, University of Rhode Island, RI.

**(433) Impact of Different Indications for HU Listing of VAD Patients on Survival after Heart Transplantation;** U. Schulz, M. Morshuis, C. Oezpeker, K. Hakim-Meibodi, S. Ensminger, J. Börgermann, J. Gummert. Thoracic and Cardiovascular Surgery, Heart and Diabetes Center NRW, Bad Oeynhausen, Germany.

**(434) Liver Dysfunction and Early Mortality after Heart Transplant;**

J. Kobulnik, L. Goldraich, D. Delgado, M. McDonald, C. Alba, H. Ross. Multi-Organ Transplant, Toronto General Hospital, University of Toronto, Toronto, ON, Canada.

**(435) Hepatic Dysfunction in Ambulatory Patients with Heart Failure – Application of the MELD Scoring System for Outcome Prediction;**

T.S. Kato, M.S. Kim, M. Farr, C. Wu, R. Givens, E. Collado, D.M. Mancini, P.C. Schulze. Department of Medicine, Division of Cardiology, Columbia University Medical Center, New York, NY.

**(436) Outpatient Inotropes: An Ever-Lengthening Bridge to Transplant;** S.A. Hall, J. Kuiper, B. Hardaway. Baylor Univ. Medical Center, Dallas, TX.

**(437) Outcome of Adults with Congenital Heart Disease Evaluated for Heart Transplant: A Multi-Center Study;** D. Boucek,<sup>1,2</sup> A.T. Yetman,<sup>2</sup>

E. Yeung,<sup>4</sup> S. Miyamoto,<sup>4</sup> A.G. Kfoury,<sup>1,3</sup> E.M. Gilbert,<sup>1,2</sup> J. Stehlik,<sup>1,2</sup> K. Brunisholz,<sup>1,3</sup> J.N. Nativi,<sup>1,2</sup> S. Drakos,<sup>1,2</sup> R. Alharethi,<sup>1,3</sup> D. Budge,<sup>1,3</sup> A.K. Kaza,<sup>1,2</sup> K.M. Molina,<sup>1,2</sup> M.D. Everitt.<sup>1,2</sup> <sup>1</sup>UTAH Cardiac Transplant Program, Salt Lake City, UT; <sup>2</sup>University of Utah, Salt Lake City, UT; <sup>3</sup>Intermountain Medical Center, Salt Lake City, UT; <sup>4</sup>Children's Hospital Colorado, Aurora, CO.

**(438) Influence of Pre-Transplant Chronic Kidney Disease (CKD) on Adult Heart Transplant (HT) Outcomes;** E.C. DePasquale,<sup>1</sup> R.K. Cheng,<sup>1</sup>

A. Ardehali,<sup>1</sup> A. Baas,<sup>1</sup> M. Cadeiras,<sup>1</sup> D. Cruz,<sup>1</sup> T. Khuu,<sup>1</sup> A. Nsair,<sup>1</sup> D.L. Jacoby,<sup>2</sup> M.C. Deng.<sup>1</sup> <sup>1</sup>Division of Cardiology, David Geffen School of Medicine, University of California, Los Angeles, Los Angeles, CA; <sup>2</sup>Division of Cardiology, Yale University School of Medicine, New Haven, CT.

**(439) Predictors of Mild Cognitive Dysfunction in an Advanced Heart Failure Population;** C. Chien, J. Mudd, J. Gelow, C. Lee. Cardiovascular Medicine, Oregon Health and Science University, Portland, OR.

**(440) Triage for Advanced Heart Failure: Effect of Regional Wait Time Disparity;** M.M. Kittleson,<sup>1</sup> G.C. Stewart,<sup>2</sup> J. Cowger,<sup>3</sup> C. Patel,<sup>4</sup> E. Rame,<sup>5</sup>

J. Testani,<sup>5</sup> M. Mountis,<sup>6</sup> P. Patel,<sup>7</sup> F. Johnson,<sup>8</sup> M. Guglin,<sup>9</sup> J. Teuteberg,<sup>10</sup> J.A. Kobashigawa,<sup>1</sup> L.W. Stevenson,<sup>2</sup> M.A. Hamilton.<sup>1</sup> <sup>1</sup>Cedars-Sinai Heart Institute, Los Angeles; <sup>2</sup>Brigham and Women's Hospital, Boston; <sup>3</sup>University of Michigan, Ann Arbor; <sup>4</sup>Duke, Durham; <sup>5</sup>University of Pennsylvania, Philadelphia; <sup>6</sup>Cleveland Clinic, Cleveland; <sup>7</sup>University of Texas Southwestern, Dallas; <sup>8</sup>University of Iowa, Iowa City; <sup>9</sup>University of South Florida, Tampa; <sup>10</sup>University of Pittsburgh, Pittsburgh.

**(441) Long-Term Survival and Prognostic Markers in 1000 Patients with Advanced Heart Failure. A Single-Center Analysis;** P. Lesny,<sup>1</sup>

M. Luknar,<sup>1</sup> I. Varga,<sup>1</sup> P. Solik,<sup>1</sup> S. Wimmerova,<sup>2</sup> E. Goncalvesova.<sup>1</sup> <sup>1</sup>Heart

Failure and Transplant Department, National Cardiovascular Institute, Bratislava, Slovakia (Slovak Republic); <sup>2</sup>Slovak Medical University, Bratislava, Slovakia (Slovak Republic).

## LUNG FAILURE

**(442) Appearance of Posttransplant De Novo Anti-HLA Antibodies in Living-Donor Lobar Lung Transplantation;** A. Ohsumi,<sup>1</sup> F. Chen,<sup>1</sup> K. Yurugi,<sup>2</sup>

T. Maekawa,<sup>2</sup> T. Yamada,<sup>1</sup> M. Sato,<sup>1</sup> A. Aoyama,<sup>1</sup> T. Sato,<sup>1</sup> M. Sonobe,<sup>1</sup> M. Omasa,<sup>1</sup> T. Bando,<sup>1</sup> I. Matsumoto,<sup>1</sup> H. Date.<sup>1</sup> <sup>1</sup>Thoracic Surgery, Graduate School of Medicine, Kyoto University, Kyoto, Japan; <sup>2</sup>Center for Cell and Molecular Therapy, Kyoto University Hospital, Kyoto, Japan.

**(740) Radiation Exposure and Attribute Cancer Risk after Lung Transplantation;** D. Rosengarten,<sup>1</sup> Y. Raviv,<sup>1</sup> V. Rosanov,<sup>1</sup> O. More-Rahav,<sup>2</sup>

O. Fruchter,<sup>1</sup> A.M. Allen,<sup>3</sup> M.R. Kramer.<sup>1</sup> <sup>1</sup>Institute of Pulmonology, Rabin Medical Center, Petach Tikwa, Israel; <sup>2</sup>Radiology Department, Rabin Medical Center, Petach Tikwa, Israel; <sup>3</sup>Institute of Oncology, Rabin Medical Center, Petach Tikwa, Israel.

**(443) Intraoperative Extracorporeal Membrane Oxygenation as an Alternative to Cardiopulmonary Bypass in Lung Transplantation;** D.D.

Odeell, J. D' Cunha, N. Shigemura, A. Shiose, J.D. Luketich, J.K. Bhama, C. Bermudez. Cardiothoracic Surgery, University of Pittsburgh Medical Center, Pittsburgh, PA.

**(444) Role of HLA-G Expression as a Predictive Marker of a Low Risk of Bronchiolitis Obliterans Syndrome in Lung Transplant Recipients: A 3-Year Prospective Study;** O. Brugière,<sup>1,2</sup> G. Thabut,<sup>1</sup> I. Krawice,<sup>2</sup>

E. Carosella,<sup>2</sup> N. Rouas-Freiss.<sup>2</sup> <sup>1</sup>Service de Pneumologie B et Transplantation Pulmonaire, Hôpital Bichat, Paris, France; <sup>2</sup>Laboratoire d'Hémo-Immunologie, CEA, Hôpital Saint-Louis, Paris, France.

**(445) IgG Immunologic Monitoring To Identify Lung Recipients at Risk of Opportunistic Infections: Prospective Multicenter Study;** E. Sarmiento,<sup>1</sup>

J. Cifrian,<sup>2</sup> R. Laporta,<sup>3</sup> P. Ussetti,<sup>3</sup> C. Bravo,<sup>4</sup> S. Lopez,<sup>4</sup> P. Morales,<sup>5</sup> A. de Pablos,<sup>6</sup> M. Jaramillo,<sup>1</sup> J. Navarro,<sup>1</sup> J. Rodriguez-Molina,<sup>1</sup> J. Carbone.<sup>1</sup> <sup>1</sup>Hospital General Universitario Gregorio Marañón, Madrid, Spain; <sup>2</sup>Hospital Marqués de Valdecilla, Santander, Spain; <sup>3</sup>Hospital Universitario Puerta de Hierro, Madrid, Spain; <sup>4</sup>Hospital Vall de Hebron, Barcelona, Spain; <sup>5</sup>Hospital La Fe, Valencia, Spain; <sup>6</sup>Hospital Universitario Doce de Octubre, Madrid, Spain.

**(446) A Phase One, Open Label, Multi-Dose Study To Evaluate the Safety, Tolerability, and Biologic Effects of Three Doses of IW001**

**in Patients with Idiopathic Pulmonary Fibrosis (IPF);** K. Rothhaar,<sup>1</sup> T. Chew,<sup>1</sup> S. Frye,<sup>1</sup> M. Klemsz,<sup>1,2</sup> W. Lange,<sup>1</sup> D.S. Wilkes.<sup>1,2</sup> <sup>1</sup>ImmuneWorks, Indianapolis, IN; <sup>2</sup>Indiana University School of Medicine, Indianapolis, IN.

**(447) Predicting Lung Transplant Waitlist Survival with the Lung Allocation Score in British Columbia, Canada;** A. Hirji,<sup>1</sup> J. Yee,<sup>2</sup> M. Sاداتsafavi,<sup>3</sup>

L.G. Singer,<sup>3</sup> L.G. Levy.<sup>1</sup> <sup>1</sup>Respiratory Division, Department of Medicine and British Columbia Transplant, University of British Columbia, Vancouver, BC, Canada; <sup>2</sup>Department of Thoracic Surgery, University of British Columbia, Vancouver, BC, Canada; <sup>3</sup>Faculty of Medicine, University of British Columbia, Vancouver, BC, Canada; <sup>4</sup>Toronto Lung Transplant Program, Dept of Medicine, University Health Network, University of Toronto, Toronto, ON, Canada.

**(448) Cytochrome P450 3A5 Genotype Is Associated with Early Post-Operative Tacrolimus Serum Levels in Lung Transplant Patients;** J.D. Fleisch,<sup>1</sup> B.L. Strom,<sup>2</sup> R.J. Shah,<sup>1</sup> J.M. Diamond,<sup>1</sup> V.N. Ahya,<sup>1</sup> E. Cantu,<sup>3</sup>

T.E. Claridge,<sup>4</sup> J.D. Christie.<sup>1</sup> <sup>1</sup>Division of Pulmonary, Allergy, and Critical Care Medicine, Perelman School of Medicine at the University of Pennsylvania, Philadelphia, PA; <sup>2</sup>Department of Epidemiology and Biostatistics, Perelman School of Medicine at the University of Pennsylvania, Philadelphia, PA; <sup>3</sup>Department of Cardiovascular Surgery, Perelman School of Medicine at the University of Pennsylvania, Philadelphia, PA; <sup>4</sup>Pharmacy Department, Hospital of the University of Pennsylvania, Philadelphia, PA.



**(449) Histological Findings of Bronchial Biopsies and De Novo Donor Specific HLA Antibodies: Comparing Notes;** M. Askar, P. Reville, L. Klingman, A. Zhang, J. Schold, J. Daghestani, M. Budev, K. McCurry, C. Farver. Transplant Center, Cleveland Clinic, Cleveland, OH.

**(450) Lung Transplantation: Making Sense of the Sensitized;** G.P. Westall,<sup>1</sup> M. Parasekva,<sup>1</sup> A. Paul,<sup>2</sup> B. Levvey,<sup>1</sup> G.I. Snell.<sup>1</sup> <sup>1</sup>Lung Transplant Service, Alfred Hospital, Melbourne, Australia; <sup>2</sup>Department of Epidemiology, Monash University, Melbourne, Australia.

**(451) Tacrolimus Level Variability Is a Novel Measure Associated with Increased Acute Rejection in Lung Transplant (LTx) Recipients;** C.Y. Chiang,<sup>1</sup> H.G. Schneider,<sup>1</sup> B. Levvey,<sup>2</sup> L. Mitchell,<sup>2</sup> G.I. Snell.<sup>2</sup> <sup>1</sup>Pathology, Alfred Hospital, Prahran, VIC, Australia; <sup>2</sup>Lung Transplant Service, Alfred Hospital, Prahran, VIC, Australia.

**(452) HLA Allo-sensitization in ECMO as a Bridge to Lung Transplantation;** S. Zeltzer,<sup>1</sup> R. Fadul,<sup>2</sup> M. Askar,<sup>3,4</sup> C. Lane,<sup>2</sup> P. Garcha,<sup>2</sup> O. Akindipe,<sup>2</sup> A. Tang,<sup>5</sup> J. Schold,<sup>6</sup> K. McCurry,<sup>3,5</sup> G. Petterson,<sup>3,5</sup> D.P. Mason,<sup>3,5</sup> S. Murthy,<sup>3,5</sup> D. Johnston,<sup>3</sup> M. Budev.<sup>1,3,5</sup> <sup>1</sup>Cleveland Clinic Lerner College of Medicine, Case Western Reserve University, Cleveland; <sup>2</sup>Respiratory Institute, Cleveland Clinic, Cleveland; <sup>3</sup>Thoracic and Cardiovascular Surgery, Cleveland Clinic, Cleveland, OH; <sup>4</sup>Allogen Laboratories, Cleveland Clinic, Cleveland, OH; <sup>5</sup>Transplantation Center, Cleveland Clinic, Cleveland, OH; <sup>6</sup>Quantitative Health Sciences, Cleveland Clinic, Cleveland, OH.

**(453) Antibody Directed Therapy after Lung Transplant;** A.L. Gray,<sup>1</sup> Z. Wang,<sup>1</sup> N. Patel,<sup>1</sup> J.M. Reynolds,<sup>1</sup> R.D. Davis,<sup>2</sup> S.M. Palmer,<sup>1</sup> L.D. Snyder.<sup>1</sup> <sup>1</sup>Medicine, Duke University Medical Center, Durham, NC; <sup>2</sup>Surgery, Duke University Medical Center, Durham, NC.

**(454) Pre-Transplant Donor-Specific HLA Antibodies (DSA) Frequently Decline Following Lung Transplantation;** L.A. Baxter-Lowe, J.P. Singer, J.A. Golden, S.R. Hays, J. Kukreja, L.E. Leard. University of California, San Francisco, San Francisco, CA.

**(455) Palliative Care Referral and Outcomes in Lung Transplant Candidates;** R.E. Colman,<sup>1</sup> L.G. Singer,<sup>1,2</sup> R. Barua,<sup>3</sup> J. Downar.<sup>1,4</sup> <sup>1</sup>Division of Respiriology, University of Toronto, Toronto, ON, Canada; <sup>2</sup>Toronto Lung Transplant Program, University Health Network, Toronto, ON, Canada; <sup>3</sup>Faculty of Medicine, Queens University, Kingston, ON, Canada; <sup>4</sup>Division of Palliative Care Medicine, University of Toronto, Toronto, ON, Canada.

**(456) Comparison of an Innovative Everolimus-Containing Quadruple Immunosuppressive Regimen Versus a Standard Triple Regimen in Lung Transplant Recipients and Its Impact on Renal Function, Safety and Efficacy: The 4EVERLUNG Study Design;** J. Gottlieb,<sup>1</sup> T. Deuse,<sup>2</sup> C. Witt,<sup>3</sup> C. Neurohr,<sup>4</sup> J. Mueller-Quernheim,<sup>5</sup> U. Sommerwerck,<sup>6</sup> H. Wirtz,<sup>7</sup> P. Wimmer,<sup>8</sup> E.-M. Paulus,<sup>8</sup> M. Strueber.<sup>9</sup> <sup>1</sup>Hannover Medical School, Hannover, Germany; <sup>2</sup>University Heart Center Hamburg, Hamburg, Germany; <sup>3</sup>Charité Campus Mitte, Berlin, Germany; <sup>4</sup>Klinikum Grosshadern LMU, Munich, Germany; <sup>5</sup>University Hospital Freiburg, Freiburg, Germany; <sup>6</sup>University Hospital Essen, Essen, Germany; <sup>7</sup>University Hospital Leipzig, Leipzig, Germany; <sup>8</sup>Novartis Pharma GmbH, Nuernberg, Germany; <sup>9</sup>Heart Center Leipzig, Leipzig, Germany.

**(457) Survival Benefit of Lung Transplantation in Japan: Extreme Donor Shortage and the Potential Role of Living Transplantation;** M. Sato,<sup>1</sup> K. Ohmori-Matsuda,<sup>2</sup> T. Kondo,<sup>3</sup> M. Chida,<sup>4</sup> H. Date,<sup>1</sup> M. Okumura,<sup>5</sup> T. Oto,<sup>6</sup> T. Shiraiishi,<sup>7</sup> T. Nagayasu.<sup>8</sup> <sup>1</sup>Thoracic Surgery, Kyoto University Hospital, Kyoto, Kyoto, Japan; <sup>2</sup>Centre for Research on Inner City Health, St. Michael's Hospital, Toronto, ON, Canada; <sup>3</sup>Institute of Development, Aging and Cancer, Division of Cancer Control, Thoracic Surgery, Tohoku University, Sendai, Miyagi, Japan; <sup>4</sup>Department of Thoracic and Cardiovascular Surgery, Dokkyo Medical University, Shimotsuga, Tochigi, Japan; <sup>5</sup>Department of General Thoracic Surgery, Osaka University Graduate School of Medicine, Suita, Osaka, Japan; <sup>6</sup>Department of Thoracic Surgery, Okayama University Hospital, Okayama, Okayama, Japan; <sup>7</sup>Department of Surgery, Division of Thoracic Surgery, Fukuoka University Hospital, Fukuoka, Fukuoka, Japan; <sup>8</sup>Division of Surgical Oncology, Nagasaki Graduate School of Biomedical Sciences, Nagasaki, Nagasaki, Japan.

**(458) The Impact of Repeat HLA Mismatches on the Development of De Novo Donor Specific HLA Antibodies (DSA) in Lung Re-Transplants;** M. Askar,<sup>1</sup> P. Reville,<sup>1</sup> J. Daghestani,<sup>1</sup> L. Klingman,<sup>1</sup> K. McCurry,<sup>2</sup> M. Budev.<sup>3</sup> <sup>1</sup>Allogen Laboratories, Cleveland Clinic, Cleveland, OH; <sup>2</sup>Thoracic and Cardiovascular Surgery, Cleveland Clinic, Cleveland, OH; <sup>3</sup>Pulmonary, Allergy and Critical Care Medicine, Cleveland Clinic, Cleveland, OH.

## MECHANICAL CIRCULATORY SUPPORT

**(459) Autoantibodies after LVAD: Profiling with Antigen Microarrays;** A. Chruscinski,<sup>1</sup> J. Lioe,<sup>1</sup> L. Grosman-Rimon,<sup>1</sup> J. Hu,<sup>2</sup> R. Pierson,<sup>2</sup> V. Rao,<sup>1</sup> H. Ross.<sup>1</sup> <sup>1</sup>Multi-Organ Transplant, Toronto General Hospital, Toronto, ON, Canada; <sup>2</sup>Cardiac Surgery, University of Maryland Medical Center, Baltimore, MD.

**(460) The Clinical Impact of Ventricular Arrhythmias Following Continuous Flow Left Ventricular Assist Device Implantation;** A.R. Garan,<sup>1</sup> K. Morrison,<sup>1</sup> L. Letarte,<sup>1</sup> J. Vazquez,<sup>1</sup> D. Dano,<sup>1</sup> P. Colombo,<sup>1</sup> M. Yuzefpolskaya,<sup>1</sup> R. Te-Frey,<sup>2</sup> H. Takayama,<sup>2</sup> Y. Naka,<sup>2</sup> J. Morrow,<sup>1</sup> H. Garan,<sup>1</sup> U.P. Jorde,<sup>1</sup> N. Uriel.<sup>1</sup> <sup>1</sup>Cardiology, Columbia University Medical Center, New York, NY; <sup>2</sup>Cardiothoracic Surgery, Columbia University Medical Center, New York, NY.

**(461) Does Gender Influence Survival of Heart Transplant (HT) Recipients Bridged with LVAD Support?;** E.C. DePasquale, R.K. Cheng, A. Ardehali, A. Baas, M. Cadeiras, D. Cruz, T. Khuu, A. Nsair, M. Deng. Division of Cardiology, David Geffen School of Medicine, University of California, Los Angeles, Los Angeles, CA.

**(462) Non-Responders to Antiplatelet Therapy in Patients with Left Ventricular Assist Devices;** J. Riebandt,<sup>1</sup> S. Mahr,<sup>1</sup> T. Haberl,<sup>1</sup> S. Panzer,<sup>2</sup> H. Schima,<sup>1,3</sup> G. Laufer,<sup>1</sup> D. Zimpher.<sup>1</sup> <sup>1</sup>Department of Cardiac Surgery, Medical University of Vienna, Vienna, Austria; <sup>2</sup>Department of Blood Group Serology and Transfusion Medicine, Medical University of Vienna, Vienna, Austria; <sup>3</sup>Center for Medical Physics and Biomedical Engineering, Medical University of Vienna, Vienna, Austria.

**(463) Development of a Novel Tissue-Compatible Apical Inflow Cannula for an Implantable VAD;** T. Mizuno, T. Tsukiya, Y. Takawa, E. Tatsumi. Dept. of Artificial Organs, National Cerebral and Cardiovascular Center Institute, Suita, Osaka, Japan.

**(464) Sub-Acute Animal Implantation of a Novel Bioprosthetic Artificial Heart;** C. Latremouille,<sup>1</sup> D. Duveau,<sup>2</sup> B. Fellah,<sup>3</sup> B. Cholley,<sup>4</sup> P. Desseigne,<sup>2</sup> D. Meleard,<sup>4</sup> O. Gauthier,<sup>3</sup> J.C. Perles,<sup>5</sup> A. Capel,<sup>5</sup> P. Jansen,<sup>5</sup> A. Carpentier.<sup>1</sup> <sup>1</sup>Cardiovascular Surgery, European Hospital George Pompidou, Paris, France; <sup>2</sup>Thorax Institute, Laennec Hospital, Nantes, France; <sup>3</sup>National Veterinary School, Nantes, France; <sup>4</sup>Anesthesia and Intensive Care, European Hospital George Pompidou, Paris, France; <sup>5</sup>Carlat SA, Velizy, France.

**(465) Novoseven Use To Reduce Peri-Operative Bleeding Following HeartMate II Implant;** T.A. Snyder, S.P. Howell, K.E. Nelson, N.M. Chelikani, A.E. Ghuloom, P.J. Kannaly, J.S. Chaffin, C.C. Elkins, D.A. Horstmanshof, J.W. Long. Integris Advanced Cardiac Care, Integris Baptist Medical Center, Oklahoma City, OK.

**(466) Influence of Partial Mechanical Left Ventricular Support on Metabolism of Neuroendocrine Hormones and Exercise Capacity;** H.A. Welp, A. Rukosujew, J.R. Sindermann, A. Hoffmeier, M. Scherer, S. Martens. Department of Cardiac Surgery, University Hospital Münster, Münster, NRW, Germany.

**(467) Structured Rehabilitation Program in LVAD Patients Leads to Shortened Lengths of Stay;** R.R. Bunge,<sup>1</sup> C. Perme,<sup>2</sup> T. Motomura,<sup>1</sup> M. Loebe,<sup>1</sup> B.A. Bruckner.<sup>1</sup> <sup>1</sup>Cardiovascular Surgery, The Methodist Hospital DeBakey Heart & Vascular Center, Houston, TX; <sup>2</sup>Physical Therapy, The Methodist Hospital, Houston, TX.



- (468) Heartmate II Inflow Cannula Position on Chest X-Ray Predicts Inotrope Dependence;** K.A. Sell,<sup>1</sup> B.C. Sheridan, A. C. Kiser, A. Bowen,<sup>1</sup> J.N. Katz,<sup>2</sup> W.E. Stansfield.<sup>1</sup> <sup>1</sup>Surgery, University of North Carolina School of Medicine, Chapel Hill, NC; <sup>2</sup>Medicine, University of North Carolina School of Medicine, Chapel Hill, NC.
- (469) Post Discharge Non-Compliance Increases Risk of Left Ventricular Assist Device (LVAD) Malfunction but Does Not Affect Survival;** A. Hackmann, K. Lockard, C. Allen, N. Kunz, K. Jackson, J. Bhamra, C. Bermudez, J. Teuteberg, R. Kormos. Heart and Vascular Institute, University of Pittsburgh Medical Center, Pittsburgh, PA.
- (470) Is Intermittent Hemodialysis Safe in Patients with a Continuous Flow Left Ventricular Assist Device?;** M.A. Quader,<sup>1</sup> D. Kumar,<sup>2</sup> K.B. Shah,<sup>3</sup> Y.I. Fatani,<sup>2</sup> G. Katlups,<sup>1</sup> V. Kasirajan.<sup>1</sup> <sup>1</sup>Cardiothoracic Surgery, Virginia Commonwealth University, Richmond, VA; <sup>2</sup>Nephrology, Virginia Commonwealth University, Richmond, VA; <sup>3</sup>Cardiology, Virginia Commonwealth University, Richmond, VA.
- (471) Temporary Mechanical Circulatory Support for Acute Right Ventricular Failure;** A. Cheung,<sup>1</sup> C.W. White,<sup>2</sup> M. Davis,<sup>3</sup> D.H. Freed.<sup>2</sup> <sup>1</sup>Cardiac Surgery, St. Paul's Hospital, University of British Columbia, Vancouver, Canada; <sup>2</sup>Cardiac Surgery, St. Boniface Hospital, University of Manitoba, Winnipeg, Canada; <sup>3</sup>Cardiology, St. Paul's Hospital, University of British Columbia, Vancouver, Canada.
- (472) Different Impact on the Coagulation System of Two Continuous Flow LVADs: Axial Versus Centrifugal Flow;** V. Tarzia,<sup>1</sup> F. Vasques,<sup>1</sup> G. Bortolussi,<sup>1</sup> J. Bejko,<sup>1</sup> M. Gallo,<sup>1</sup> M. Carrozzini,<sup>1</sup> M. Comisso,<sup>1</sup> E. Buratto,<sup>1</sup> M. De Franceschi,<sup>1</sup> E. Campello,<sup>2</sup> L. Spiezia,<sup>2</sup> P. Simioni,<sup>2</sup> T. Bottio,<sup>1</sup> G. Gerosa.<sup>1</sup> <sup>1</sup>Department of Cardiac, Thoracic and Vascular Sciences – Cardiac Surgery, University Hospital of Padua, Padua, Italy; <sup>2</sup>Department of Cardiac, Thoracic and Vascular Sciences – Second Chair of Internal Medicine, University Hospital of Padua, Padua, Italy.
- (473) Mechanical Definition of the Multiorgan Dysfunction Syndrome in Mechanical Circulatory Therapy for Advanced Heart Failure;** M. Cadeiras,<sup>1</sup> Y. Korin,<sup>1</sup> B. Galina,<sup>1</sup> C. Richard,<sup>1</sup> C. Eleanor,<sup>1</sup> W. Nicholas,<sup>1</sup> M. Joseph,<sup>1</sup> L. Farhana,<sup>2</sup> S. Khurram,<sup>1</sup> R. Elain,<sup>1</sup> D. Mario.<sup>1</sup> <sup>1</sup>University of California Los Angeles, Los Angeles; <sup>2</sup>Columbia University, New York.
- (474) Oxidative Stress Induced DNA Damage and Repair in Heart Failure Patients Supported by Continuous Flow Ventricular Assist Devices;** N.K. Mondal,<sup>1</sup> E.N. Sorensen,<sup>2</sup> N. Hiivala,<sup>2</sup> E.D. Feller,<sup>3</sup> B.P. Griffith,<sup>1</sup> Z.J. Wu.<sup>1</sup> <sup>1</sup>Department of Surgery, Artificial Organ Lab, University of Maryland School of Medicine, Baltimore, MD; <sup>2</sup>Department of Clinical Engineering, University of Maryland Medical Center, Baltimore, MD; <sup>3</sup>Department of Medicine, University of Maryland School of Medicine, Baltimore, MD.
- (475) Racial Differences in over 1000 Patients with Continuous Flow Left Ventricular Assist Devices;** G. Bhat,<sup>1</sup> A. Aggarwal,<sup>1</sup> A. Tatooles,<sup>1</sup> M. Slaughter,<sup>2</sup> U. Jorde,<sup>3</sup> R. Brewer,<sup>4</sup> L. Chen,<sup>5</sup> K. Sundareswaran,<sup>6</sup> D. Farrar.<sup>6</sup> <sup>1</sup>Advocate Christ Medical Center, Oak Lawn, IL; <sup>2</sup>University of Louisville, Louisville, KY; <sup>3</sup>Columbia University Medical Center, New York; <sup>4</sup>Henry Ford Hospital, Detroit; <sup>5</sup>University of Rochester Medical Center, Rochester; <sup>6</sup>Thoratec Corporation, Pleasanton.
- (476) Home INR Monitoring: Does It Help Reduce the Chance of Re-Admission for LVAD Patients?;** J. Han,<sup>1</sup> N. Nahumi,<sup>1</sup> M. Yuzefpolskaya,<sup>1</sup> R. Te-Frey,<sup>2</sup> A.R. Garan,<sup>1</sup> M. F.R. Torres,<sup>1</sup> H. Takayama,<sup>2</sup> P.C. Colombo,<sup>1</sup> Y. Naka,<sup>2</sup> U.P. Jorde,<sup>1</sup> N. Uriel.<sup>1</sup> <sup>1</sup>Medicine, Columbia University, New York, NY; <sup>2</sup>Surgery, Columbia University, New York, NY.
- (477) LV Unloading with Continuous-Flow Left Ventricular Assist Devices: The Association Between Left Ventricular Size and Late Survival;** A.D. Nagpal,<sup>1</sup> N. Moazami,<sup>1</sup> D. Kalavrouziotis,<sup>1</sup> M.Z. Tong,<sup>1</sup> K.J. Hoercher,<sup>1</sup> S. Lee.<sup>2</sup> <sup>1</sup>Cardiothoracic Surgery, Cleveland Clinic Foundation, Cleveland; <sup>2</sup>Cardiology, Cleveland Clinic Foundation, Cleveland.
- (478) Outcomes of Minimally Invasive vs. Conventional Implantation of Continuous Flow Left Ventricular Assist Device: A Single Center Experience;** M. Toma,<sup>1</sup> J. Bashir,<sup>2</sup> A. Kaan,<sup>3</sup> S.S. Cowan,<sup>1</sup> A. Cheung,<sup>2</sup> S. Virani.<sup>1</sup> <sup>1</sup>Department of Medicine, Division of Cardiology, St. Paul's Hospital, University of British Columbia, Vancouver, BC, Canada; <sup>2</sup>Department of Surgery, Division of Cardiovascular Surgery, St. Paul's Hospital, University of British Columbia, Vancouver, BC, Canada; <sup>3</sup>Department of Nursing, St. Paul's Hospital, University of British Columbia, Vancouver, BC, Canada.
- (479) Device Thrombogenicity Emulation: A Novel Methodology To Predict "Hot Spot" Sites of Thrombus Formation in Continuous Flow LVADs;** M.J. Slepian,<sup>1</sup> P. Chiu,<sup>2</sup> J. Sheriff,<sup>3</sup> P. Tran,<sup>1</sup> D. Bluestein.<sup>2</sup> <sup>1</sup>Medicine and BioMedical Engineering, University of Arizona, Tucson, AZ; <sup>2</sup>BioMedical Engineering, Stony Brook University, Stony Brook, NY.
- (480) Left Ventricular Assist Device (LVAD) Outcomes Are Not Adversely Affected by Geographic Variables;** J.M. Vader,<sup>1</sup> S. LaRue,<sup>1</sup> G. Ewald,<sup>1</sup> S. Silvestry,<sup>2</sup> S. Prasad,<sup>2</sup> S. Joseph.<sup>1</sup> <sup>1</sup>Internal Medicine, Cardiovascular Division, Washington University, St Louis, MO; <sup>2</sup>Surgery, Division of Cardiothoracic Surgery, Washington University, St Louis, MO.
- (481) The Clinical Inaccuracy of Estimated Flow in Continuous Flow Ventricular Assist Devices;** T. Thenappan,<sup>1</sup> A. Anderson,<sup>1</sup> S. Fedson,<sup>1</sup> S. Akhter,<sup>2</sup> V. Jeevanandham,<sup>2</sup> J. Rich.<sup>1</sup> <sup>1</sup>Cardiology, University of Chicago, Chicago, IL; <sup>2</sup>Cardiothoracic Surgery, University of Chicago, Chicago, IL.
- (482) Safety and Effectiveness of Exercise Training in Patients with Continuous Flow Ventricular Assist Devices;** F. Moscato,<sup>1,2,3</sup> C. Danzinger,<sup>1</sup> M. Käferbäck,<sup>1</sup> T. Lackner,<sup>4</sup> D. Zimpfer,<sup>2</sup> H. Schima,<sup>1,2,3</sup> C. Marko.<sup>4</sup> <sup>1</sup>Center for Medical Physics and Biomedical Engineering, Medical University of Vienna, Vienna, Austria; <sup>2</sup>Department of Cardiac Surgery, Medical University of Vienna, Vienna, Austria; <sup>3</sup>Ludwig Boltzmann Cluster for Cardiovascular Research, Vienna, Austria; <sup>4</sup>Rehabilitation Clinic Felbring, Muthmannsdorf, Austria.
- (483) The Effect of Percutaneous Lead Placement on Drive Line Exit Site Infections in HeartMate II Patients;** W.H. Perry, N.M. Chelikani, T.A. Snyder, K.E. Nelson, P.J. Kannaly, J.S. Chaffin, C.C. Elkins, D.A. Horstman-shof, J.W. Long. Integris Advanced Cardiac Care, Integris Baptist Medical Center, Oklahoma City, OK.
- (484) Infection Control and Prevention Practices for Mechanical Circulatory Support: An International Survey;** S. Kusne,<sup>1</sup> L. Danziger-Isakov,<sup>2</sup> M. Mooney,<sup>3</sup> P. Grossi,<sup>4</sup> S. Husain,<sup>5</sup> F. Pagani,<sup>6</sup> F.P. Silveira,<sup>7</sup> M.M. Hannan,<sup>8</sup> S. Huprikar,<sup>9</sup> D.E. Jaroszewski,<sup>1</sup> Y.H.H. Chang,<sup>1</sup> L. Staley,<sup>1</sup> F. Arabia.<sup>1</sup> <sup>1</sup>Mayo Clinic in Arizona, Phoenix, AZ; <sup>2</sup>Cincinnati Children's Hospital Medical Center, Cincinnati, OH; <sup>3</sup>Eastern Virginia Medical School, Norfolk, VA; <sup>4</sup>University of Insubria, Varese, Italy; <sup>5</sup>University of Toronto, Toronto, ON, Canada; <sup>6</sup>University of Michigan Health System, Ann Arbor, MI; <sup>7</sup>University of Pittsburgh Medical Center, Pittsburgh, PA; <sup>8</sup>Mater Misericordiae University Hospital, Dublin, Ireland; <sup>9</sup>The Mount Sinai Medical Center, New York, NY.
- (485) ECMO as a Bridge to Decision in "Crash an Burn" Patients: 8-Years Experience;** F. Juthier, N. Rousse, C. Banfi, C. Pinçon, M. Alibrahim, A. Prat, A. Vincentelli. Cardiac Surgery, Cardiologic Hospital, Lille University Hospital, Lille, France.
- (486) Long-Term Outcomes for LVAD Patients Who Underwent Speed Optimization Using Pre-Discharge Ramp Test;** N. Uriel,<sup>1</sup> J. Han,<sup>1</sup> N. Nahumi,<sup>1</sup> P.C. Colombo,<sup>1</sup> S.S. Thomas,<sup>1</sup> A.R. Garan,<sup>1</sup> M. Yuzefpolskaya,<sup>1</sup> F. Latif,<sup>1</sup> S.W. Restaino,<sup>1</sup> H. Takayama,<sup>2</sup> Y. Naka,<sup>2</sup> U.P. Jorde.<sup>1</sup> <sup>1</sup>Medicine, Columbia University, New York, NY; <sup>2</sup>Surgery, Columbia University, New York, NY.
- (487) Incidence and Pre-Implant Predictors of Late Right Ventricular Failure in Patients Supported with Continuous-Flow LVADs;** M. Aldeiri,<sup>1</sup> R.P. Vivo,<sup>1,2</sup> D. Hall,<sup>1</sup> A.M. Cordero-Reyes,<sup>1</sup> A. Soliman,<sup>1</sup> M. El-Beheary,<sup>1</sup> A. Bhimaraj,<sup>1</sup> B.A. Bruckner,<sup>3</sup> M. Loebe,<sup>3</sup> B.H. Trachtenberg,<sup>1</sup> G. Torre-Amione,<sup>1</sup> J.D. Estep.<sup>1</sup> <sup>1</sup>Cardiology, Methodist DeBakey Heart and Vascular Center, Houston, TX; <sup>2</sup>Cardiology, The University of Texas Medical Branch, Galveston, TX; <sup>3</sup>Cardiovascular Surgery, Methodist DeBakey Heart and Vascular Center, Houston, TX.

**(488) The Utility of 320 Row Multi-Detector Computed Tomography in Evaluating Patients with Left Ventricular Assist Devices;** G.S. Chrysant, D.A. Horstmannshof, A. Brittsan, P. Fisher, J.W. Long. INTEGRIS Baptist Medical Center, Oklahoma City, OK.

**(489) Improved Outcomes in Left Ventricular Assist Device Therapy for Patients between 65 and 70 Years;** S. Deo,<sup>1</sup> J.M. Stulak,<sup>1</sup> J. Cowger,<sup>2</sup> S.J. Park,<sup>1</sup> L.D. Joyce,<sup>1</sup> R.C. Daly,<sup>1</sup> K. Aaronson,<sup>2</sup> F.D. Pagani,<sup>2</sup> <sup>1</sup>Cardiovascular Surgery, Mayo Clinic College of Medicine, Rochester, MN; <sup>2</sup>Cardiac Surgery, University of Michigan Health System, Ann Arbor, MI.

**(490) Regression of Inflammation in the Failing Human Heart after Continuous Flow Left Ventricular Assist Device-Induced Mechanical Unloading?;** N.A. Diakos,<sup>1,2</sup> C.H. Selzman,<sup>1,2</sup> C.-G. Yen,<sup>1,2</sup> A.G. Kfoury,<sup>1</sup> B.B. Reid,<sup>1</sup> D. Budge,<sup>1</sup> J. Nativi-Nicolau,<sup>3</sup> W. Johnson,<sup>3</sup> V. Chen,<sup>3</sup> D.V. Miller,<sup>1</sup> M.P. Revelo,<sup>1</sup> S. McKellar,<sup>1</sup> D.Y. Li,<sup>2</sup> J. Stehlik,<sup>1</sup> S.G. Drakos,<sup>1,2</sup> <sup>1</sup>UTAH Cardiac Transplant Program, Salt Lake City, UT; <sup>2</sup>University of Utah Molecular Medicine, Salt Lake City, UT; <sup>3</sup>Sanford-Burnham Medical Research Institute, La Jolla, CA.

**(491) Improvements in Pulmonary Hemodynamics Persist after Heart Transplant in Patients Bridged with Continuous-Flow LVAD (CF-LVAD);** F. Kamdar, A. Klaassen Kamdar, P.M. Eckman, M. Colvin-Adams, K. Liao, R. John. Division of Cardiology and Cardiovascular Surgery, University of Minnesota, Minneapolis, MN.

**(492) Hemodynamic Evaluation of HeartWare MVAD in Normal and Infarct Swine Models;** D.T. Pham,<sup>1</sup> V. Paruchuri,<sup>2</sup> M. Esposito,<sup>2</sup> D.P. Schraufnagel,<sup>2</sup> D. McSparren,<sup>1</sup> D. Civiello,<sup>1</sup> V. Todd-Elliot,<sup>1</sup> C. Vassallo,<sup>1</sup> B. Murphy,<sup>1</sup> L. Reyelt,<sup>1</sup> C.N. Beale,<sup>1</sup> D. Tamez,<sup>3</sup> N.J. Nunez,<sup>3</sup> N. Voskoboynikov,<sup>3</sup> N.K. Kapur,<sup>2</sup> <sup>1</sup>Cardiac Surgery, Tufts Medical Center, Boston, MA; <sup>2</sup>Cardiology, Tufts Medical Center, Boston, MA; <sup>3</sup>HeartWare, Inc., Miami Lakes, FL.

**(493) The Prevalence of Aortic Insufficiency in Patients Maintained on Continuous Flow Left Ventricular Assist Devices;** D. Bejar,<sup>1</sup> N. Nahumi,<sup>1</sup> N. Uriel,<sup>1</sup> S. Thomas,<sup>1</sup> J. Han,<sup>1</sup> A. Garan,<sup>1</sup> M. Yuzefpolskaya,<sup>1</sup> P. Colombo,<sup>1</sup> M. Casenghi,<sup>1</sup> P. Reyfman,<sup>1</sup> T. Ota,<sup>2</sup> H. Takayama,<sup>2</sup> Y. Naka,<sup>2</sup> U. Jorde,<sup>1</sup> <sup>1</sup>Division of Cardiology, Columbia University, New York, NY; <sup>2</sup>Division of Cardiothoracic Surgery, Columbia University, New York, NY.

**(494) Evaluation of the DuraHeart® Left Ventricular Assist Device for the Treatment of Advanced Heart Failure in Patients Awaiting Heart Transplantation;** D. Feldman,<sup>1</sup> Y. Naka,<sup>2</sup> U. Jorde,<sup>2</sup> K. Aaronson,<sup>3</sup> S. Bailey,<sup>4</sup> S. Murali,<sup>4</sup> M. Camacho,<sup>3</sup> M. Zucker,<sup>3</sup> N. Moazami,<sup>1</sup> E. Pagani,<sup>3</sup> <sup>1</sup>Cardiology/Cardiac Surgery, Minneapolis Heart Institute, Minneapolis, MN; <sup>2</sup>Cardiology/Cardiac Surgery, Columbia, New York, NY; <sup>3</sup>Cardiology/Cardiac Surgery, University of Michigan, Ann Arbor, MI; <sup>4</sup>Cardiology/Cardiac Surgery, Allegheny Medical Center, Pittsburgh, PA; <sup>5</sup>Cardiology/Cardiac Surgery, Newark Beth Israel, Newark, NJ.

**(495) Extracorporeal Membrane Oxygenation Support System as Bridge to Solution in Refractory Cardiogenic Shock;** A. Loforte,<sup>1</sup> E. Pilato,<sup>1</sup> S. Martin-Suarez,<sup>1</sup> A. Montalto,<sup>2</sup> P. Lilla Della Monica,<sup>2</sup> L. Potenza,<sup>1</sup> F. Grigioni,<sup>1</sup> G. Marinelli,<sup>1</sup> G. Frascaroli,<sup>1</sup> A. Menichetti,<sup>2</sup> F. Musumeci,<sup>2</sup> G. Arpesella,<sup>1</sup> <sup>1</sup>Cardiovascular Surgery and Transplantation, S. Orsola Hospital, Bologna University, Bologna, Italy; <sup>2</sup>Cardiac Surgery and Transplantation, S. Camillo Hospital, Rome, Italy.

**(496) Comparison of Post Implant Hemodynamics with 2nd Versus 3rd Generation Continuous Flow Left Ventricular Assist Device;** D. Spiegelstein,<sup>2</sup> C.M. Rosner,<sup>1</sup> C.W. May, S.S. Desai,<sup>1</sup> L.G. Edwards,<sup>1</sup> T. Elliott,<sup>1</sup> N.A. Burton,<sup>2</sup> A.J. Rongione,<sup>2</sup> <sup>1</sup>Heart Failure/Heart Transplant, Inova Heart and Vascular Institute at Inova Fairfax Hospital, Falls Church, VA; <sup>2</sup>Cardiac Surgery, Inova Heart and Vascular Institute at Inova Fairfax Hospital, Falls Church, VA.

**(497) Management and Outcomes of Ventricular Assist Device Patients with Suspected Pump Thrombosis;** A.J. Lenneman,<sup>1</sup> P. Combs,<sup>1</sup> S. Rhode,<sup>1</sup> K. Vessels,<sup>1</sup> K. McCants,<sup>1</sup> R. Singh,<sup>2</sup> E. Birks,<sup>1</sup> M. Slaughter,<sup>2</sup> <sup>1</sup>Cardiovascular Medicine, University of Louisville, Louisville, KY; <sup>2</sup>Cardiovascular Surgery, University of Louisville, Louisville, KY.

**(498) Late Onset Infection in Patients with Ventricular Assist Devices: Etiology, Management and Outcomes;** M.Z. Tong, D. Kalavrouzioutis, D.A. Nagpal, T. Chamogeorgakis, E.G. Soltesz, N.G. Smedira, S. Lee, N. Moazami. Thoracic Cardiovascular Surgery, Heart and Vascular Institute, Cleveland Clinic, Cleveland, OH.

**(499) Subcostal LVAD Exchange Is Associated with Shorter Recovery and Improved Long-Term Survival Than Full Sternotomy Approach;** A. Itoh,<sup>1</sup> S.M. Prasad,<sup>1</sup> S.M. Joseph,<sup>2</sup> G.A. Ewald,<sup>2</sup> S.C. Silvestry,<sup>1</sup> <sup>1</sup>Surgery, Washington University in St. Louis, St. Louis, MO; <sup>2</sup>Cardiology, Washington University in St. Louis, St. Louis, MO.

**(500) First-in-Man Transfemoral Transcatheter Aortic Valve Implantation for Severe Aortic Regurgitation in a Patient with Left Ventricular Assist Device;** J. Lavee,<sup>1,4</sup> A. Segev,<sup>2,4</sup> S. Preisman,<sup>3,4</sup> D. Freimark,<sup>2,4</sup> V. Guetta,<sup>2,4</sup> <sup>1</sup>Heart Transplantation Unit, Department of Cardiac Surgery, Leviev Heart Center, Sheba Medical Center, Ramat Gan, Israel; <sup>2</sup>Department of Cardiology, Leviev Heart Center, Sheba Medical Center, Ramat Gan, Israel; <sup>3</sup>Department of Anesthesia, Sheba Medical Center, Ramat Gan, Israel; <sup>4</sup>Sackler Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel.

**(501) Micro-And Macrovascular Function in End-Stage Heart Failure: Influence of Mechanical Circulatory Support and of Heart Transplant;** R. Sansone,<sup>1</sup> B. Stanske,<sup>1</sup> D. Schuler,<sup>1</sup> A. Lichtenberg,<sup>2</sup> D. Saeed,<sup>2</sup> A. Albert,<sup>2</sup> U. Boeken,<sup>2</sup> R. Westenfeld,<sup>1</sup> M. Kelm,<sup>1</sup> C. Heiss,<sup>1</sup> <sup>1</sup>Division of Cardiology, Pulmonology, and Vascular Medicine Division of Cardiology, Pulmonology, and Vascular Medicine, Medical Faculty, University Duesseldorf, Duesseldorf, Germany; <sup>2</sup>Department of Cardiovascular Surgery, Medical Faculty, University Duesseldorf, Duesseldorf, Germany.

## INFECTIOUS DISEASES

**(502) Lung Transplantation for Diffuse Panbronchiolitis;** S. Sugimoto, T. Oto, K. Miyoshi, H. Nishikawa, A. Nakatani, M. Yamane, S. Miyoshi. Thoracic Surgery, Okayama University Hospital, Okayama, Japan.

**(503) Rhinovirus Infection in Adult Lung Transplant Recipients: A Case-Controlled Study;** K.M. Vandervest, M.R. Zamora. Lung Transplantation, University of Colorado Health Sciences Center, Aurora, CO.

**(504) Early Bacterial Bronchopulmonary Infection after Lung Transplantation: Bacterial Epidemiology and Diagnostic Value of Clinical and Biological Parameters;** M. Desmard,<sup>1</sup> S. Tanaka,<sup>2</sup> C. Geneve,<sup>1</sup> C. De Vaumas,<sup>4</sup> H. Mal,<sup>3</sup> P. Augustin,<sup>1</sup> P. Montravers.<sup>1</sup> <sup>1</sup>Anesthésie Réanimation Chirurgicale, Assistance Publique Hopitaux de Paris, Centre Hospitalier Universitaire Bichat-Claude Bernard, Paris, France; <sup>2</sup>Anesthésie Réanimation, Assistance Publique Hopitaux de Paris, Centre Hospitalier Universitaire Bicetre, Kremlin-Bicetre, France; <sup>3</sup>Service de Pneumologie B et de Transplantation Pulmonaire, Assistance Publique Hopitaux de Paris, Centre Hospitalier Universitaire Bichat-Claude Bernard, Paris, France; <sup>4</sup>Anesthésie Réanimation, Centre Hospitalier Intercommunal de Villeneuve Saint Georges, Villeneuve Saint Georges, France.

**(505) Effect of Therapeutic Drug Monitoring (TDM) on the Efficacy and Safety of Pre-Empiric Voriconazole in Lung Transplant Recipients;** O. Morrissey,<sup>1</sup> S. Ivulich,<sup>2</sup> J. Garlick,<sup>1</sup> G. Snell,<sup>2</sup> B. Levvey,<sup>2</sup> T. Williams,<sup>2</sup> H. Whitford,<sup>2</sup> G. Westall,<sup>2</sup> M. Paraskeva,<sup>2</sup> T. Kotsimbos,<sup>2</sup> M. Black,<sup>3</sup> H.G. Schneider,<sup>3</sup> <sup>1</sup>Infectious Diseases, Alfred Health, Melbourne, Victoria, Australia; <sup>2</sup>Lung Transplant Service, Alfred Health, Melbourne, Victoria, Australia; <sup>3</sup>Alfred Pathology Service, Alfred Health, Melbourne, Victoria, Australia.

**(506) Early Fungal Bronchial Colonization after Lung Transplantation: Risk Factors and Outcome;** S. Tanaka,<sup>1</sup> C. Geneve,<sup>2</sup> P. Piednoir,<sup>2</sup> H. Mal,<sup>3</sup> G. Dauriat,<sup>3</sup> P. Montravers,<sup>2</sup> M. Desmard,<sup>2</sup> <sup>1</sup>Departement d'Anesthésie Réanimation, Assistance-Publique Hopitaux de Paris, Centre Hospitalier Universitaire Bicetre, Kremlin-Bicetre, France; <sup>2</sup>Departement d'Anesthésie-Réanimation Chirurgicale, Assistance Publique Hopitaux de Paris, Centre

Hospitalier Universitaire Bichat-Claude Bernard, Paris, France; <sup>3</sup>Service de Pneumologie B et de Transplantation Pulmonaire, Assistance Publique Hôpitaux de Paris, Centre Hospitalier Universitaire Bichat-Claude Bernard, Paris, France.

**(507) Outcomes Associated Mycobacterium xenopi (M. xenopi) Infections in Lung Transplant Recipients (LTRs);** K. Hryckiewicz,<sup>2</sup> C. Chaparro,<sup>1</sup> D. Ketten,<sup>2</sup> L.G. Singer,<sup>1</sup> S. Azad,<sup>2</sup> C. Rotstein,<sup>2</sup> S. Keshavjee,<sup>1</sup> S. Husain.<sup>2</sup>  
<sup>1</sup>Toronto Lung Transplant Program, University of Toronto, Toronto, Canada; <sup>2</sup>University Health Network, University of Toronto, Toronto, Canada.

**(508) Influence of Everolimus-Based Immunosuppression on Infections in Heart Transplant Recipients;** S. Ohdah,<sup>1</sup> S. Meyer,<sup>2</sup> M. Schlüter,<sup>1</sup> T. Deuse,<sup>3</sup> K. Müllerleile,<sup>4</sup> H. Reichenspurner.<sup>3</sup>  
<sup>1</sup>General and Interventional Cardiology, University Heart Center Hamburg, Hamburg, Germany; <sup>2</sup>Department of Cardiology, University Medical Center Groningen, Groningen, Netherlands; <sup>3</sup>Department of Cardiovascular Surgery, University Heart Center Hamburg, Hamburg, Germany; <sup>4</sup>Department of Cardiology, Electrophysiology, University Heart Center Hamburg, Hamburg, Germany.

## PEDIATRICS

**(509) Noninvasive Predictors of Diastolic Dysfunction in Children after Cardiac Transplant;** A. DiPietro, S.K. Sexon-Tejtel, R. Pignatelli, Q. Cui, A.G. Cabrera, J. Price, D. Mitchell, W.J. Dreyer, A. Jeewa, S. Denfield. Pediatric Cardiology, Texas Children's Hospital, Houston, TX.

**(510) The Utility of Speckle Tracking Echocardiography (STE) Derived Strain for the Detection of Acute Rejection after Pediatric Heart Transplantation;** A. Jeewa,<sup>1</sup> S.K. Sexon-Tejtel,<sup>1</sup> Q. Cui,<sup>1</sup> W.J. Dreyer,<sup>1</sup> J. Price,<sup>1</sup> A. Cabrera,<sup>1</sup> K. Zaruca,<sup>2</sup> C. Looney,<sup>1</sup> S. Sami,<sup>2</sup> S. Denfield,<sup>1</sup> R. Pignatelli.<sup>1</sup>  
<sup>1</sup>Baylor College of Medicine, Houston; <sup>2</sup>Texas Children's Hospital, Houston.

**(511) Impact of Adolescent Age on Graft Survival in Patients with Congenital Heart Disease Versus Myocarditis;** J.J. Savla, K.Y. Lin, D.S. Lefkowitz, S.M. Paridon, J. W. Gaynor, R. Hammond, R.E. Shaddy, J.W. Rossano. Division of Cardiology, Children's Hospital of Philadelphia, Philadelphia, PA.

**(512) Outcomes of Third Heart Transplants in Pediatric and Young Adult Patients;** J.M. Friedland-Little, R.J. Gajarski, S. Yu, J.E. Donohue, M. Zamberlan, K.R. Schumacher. Division of Pediatric Cardiology, University of Michigan, Ann Arbor, MI.

**(513) Impact of Immunosuppressive Therapy on Anti-EBV Specific CD8+T-Cells in Pediatric Heart Transplant Recipients;** S. Hingler, B. Peters, M. Yigitbasi, F. Berger, S. Schubert. Department of Congenital Heart Disease/Pediatric Cardiology, Deutsches Herzzentrum, Berlin, Germany.

**(514) Impact of Donor-Recipient Sex Matchup on Survival after Heart Transplantation in Children: An Analysis of >6000 Pediatric Heart Transplants;** M. Kemna, E. Albers, P. Sullivan, S. Law, L. Permut, Y. Law. Seattle Children's Hospital, Seattle.

**(515) Long-Term Outcome of Renal Function with Everolimus Treatment in a Pediatric Center;** K. Behnke-Hall, J. Bauer, J. Thul, N. Mazhari, D. Schranz. Pediatric Cardiology, Pediatric Heart Center, Giessen, Germany.

**(516) Detection of Cardiac Allograft Vasculopathy with the New Optical Coherence Tomography in Pediatric Heart Transplant Recipients – Initial Experience;** S. Schubert,<sup>1</sup> B. Peters,<sup>1</sup> M. Kanaan,<sup>1</sup> M. Huebler,<sup>2</sup> R. Hetzer,<sup>2</sup> F. Berger.<sup>1</sup>  
<sup>1</sup>Congenital Heart Disease/Pediatric Cardiology, Deutsches Herzzentrum, Berlin, Germany; <sup>2</sup>Department of Cardiothoracic and Vascular Surgery, Deutsches Herzzentrum, Berlin, Germany.

**(517) Development of De Novo Anti-HLA Antibodies in Pediatric Heart Transplant Recipients;** C.K. Chen,<sup>1</sup> C. Manlihot,<sup>1</sup> J. Conway,<sup>1</sup> T. Allain-Rooney,<sup>1</sup> B.W. McCrindle,<sup>1</sup> K. Tinckam,<sup>2</sup> A.I. Dipchand.<sup>1</sup>  
<sup>1</sup>Pediatrics, Hospital

for Sick Children, Toronto, ON, Canada; <sup>2</sup>Multiorgan Transplant Program, University Health Network, Toronto, ON, Canada.

**(518) Insights into Heart Transplantation for Protein Losing Enteropathy: A 24 Year Experience;** K. Gambetta, C. Backer, B. Deal, H. Russell, E. Pahl. Department of Pediatric Cardiology, Ann and Robert H Lurie Children's Hospital, Chicago, IL.

**(519) Incidence and Importance of New Postoperative Right Bundle Branch Block after Pediatric Orthotopic Heart Transplantation;** J. Ramey, T. Starc, W. Zuckerman, R. Singh, L. Addonizio, M. Richmond. Pediatric Cardiology, Columbia University, New York-Presbyterian / Morgan Stanley Children's Hospital, New York, NY.

**(520) Extracorporeal Photopheresis in Pediatric Heart Transplantation;** W.F. Carlo,<sup>1</sup> F.B. Pearce,<sup>1</sup> J.K. Kirklin,<sup>2</sup> J.F. George.<sup>2</sup>  
<sup>1</sup>Pediatrics, University of Alabama at Birmingham, Birmingham, AL; <sup>2</sup>Cardiovascular Surgery, University of Alabama at Birmingham, Birmingham, AL.

**(521) Characteristics and Cost of Treatment of Acute Rejection within 1 Year after Pediatric Heart Transplant: A Multi-Institutional Study;** A.G. Cabrera,<sup>1</sup> A. Jeewa,<sup>1</sup> C.M. Mery,<sup>2</sup> S.W. Denfield,<sup>1</sup> I. Adachi,<sup>2</sup> W.J. Dreyer,<sup>1</sup> J.F. Price,<sup>1</sup> B.S. Moffet.<sup>3</sup>  
<sup>1</sup>Pediatrics, Texas Childrens/Baylor College of Medicine, Houston, TX; <sup>2</sup>Surgery, Texas Childrens/Baylor College of Medicine, Houston, TX; <sup>3</sup>Pharmacy, Texas Childrens/Baylor College of Medicine, Houston, TX.

## NURSING, HEALTH SCIENCES, ALLIED HEALTH

**(522) Adolescence and Transition to Adult Services: Are These Risky Times for Heart and/or Lung Recipients?;** J. Wray, H. Sugarman, L. Davis, T. Lunnon-Wood, E. Dempsey, A. Hawkyard, K. Bull, M. Burch. Cardiorespiratory Department, Great Ormond Street Hospital for Children NHS Foundation Trust, London, United Kingdom.

**(523) School Re-Integration for Pediatric VADs;** A. Lin, E. Liu, M. Keating, K. Maeda, S. Hollander, D. Rosenthal. Pediatric Cardiology, Lucile Packard Children's Hospital, Palo Alto, CA.

**(524) The Impact of Heart Transplant on Adolescent Siblings;** K. Martin,<sup>1</sup> I. Chen,<sup>1,3</sup> R. Niedra,<sup>1,2</sup> A. Drabble,<sup>1</sup> A.I. Dipchand,<sup>1,2</sup> M. Kaufman.<sup>1,3</sup>  
<sup>1</sup>Transplant and Regenerative Medicine Centre, The Hospital for Sick Children, Toronto, ON, Canada; <sup>2</sup>Labatt Family Heart Centre, The Hospital for Sick Children, Toronto, ON, Canada; <sup>3</sup>Division of Adolescent Medicine, The Hospital for Sick Children, Toronto, ON, Canada.

**(525) Health Status, Anxiety and Depression in Heart Failure Patients after Heart Transplantation Versus Left Ventricular Assist Device Implantation;** C. Brouwers,<sup>1</sup> J. Denollet,<sup>1</sup> N. de Jonge,<sup>2</sup> K. Caliskan,<sup>3</sup> Q. Young,<sup>4</sup> J. Kealy,<sup>4</sup> A. Kaan,<sup>4</sup> C. Cannon,<sup>4</sup> S.S. Pedersen.<sup>1,3</sup>  
<sup>1</sup>Department of Medical and Clinical Psychology, Tilburg University, Tilburg, Noord-Brabant, Netherlands; <sup>2</sup>Division Heart and Lung, University Medical Center Utrecht, Utrecht, Netherlands; <sup>3</sup>Thoraxcenter, Erasmus Medical Center, Rotterdam, Zuid-Holland, Netherlands; <sup>4</sup>Heart Center, St. Paul's Hospital, Vancouver, Canada.

**(526) Life on the Heart Transplant Waiting List: Life on Hold? Life at All?;** O. Mauthner,<sup>1</sup> J.M. Poole,<sup>2</sup> E. De Luca,<sup>1</sup> S.E. Abbey,<sup>1</sup> M. Shildrick,<sup>3</sup> J. Ward,<sup>2</sup> M. Gewarges,<sup>1</sup> H. Ross.<sup>1</sup>  
<sup>1</sup>University Health Network, Toronto, Canada; <sup>2</sup>Ryerson University, Toronto, Canada; <sup>3</sup>Linköping University, Linköping, Sweden.

**(527) WITHDRAWN**

**(528) Health-Related Quality of Life Among Patients with Mechanical Circulatory Assistance: Clinician Perspectives;** K.L. Grady,<sup>1</sup> S. Magasi,<sup>2</sup> S. Buono,<sup>2</sup> T. Abraham,<sup>1</sup> C. Yancy,<sup>3</sup> E. McGee, Jr.<sup>1</sup>  
<sup>1</sup>Surgery, Division of Cardiac Surgery, Northwestern University, Chicago, IL; <sup>2</sup>Medical Social Sciences, Northwestern University, Chicago, IL; <sup>3</sup>Medicine, Division of Cardiology, Northwestern University, Chicago, IL.



**(529) Gender Differences in Health-Related Quality of Life and Adherence 5 Years after Heart Transplantation;** K.L. Grady,<sup>1</sup> A.-C. Andrei,<sup>1</sup> Z. Li,<sup>1</sup> B. Rybarczyk,<sup>2</sup> C. White-Williams,<sup>3</sup> R. Gordon,<sup>1</sup> E. McGee, Jr.,<sup>1</sup> <sup>1</sup>Surgery/Division of Cardiac Surgery, Northwestern University, Chicago, IL; <sup>2</sup>Psychology, Virginia Commonwealth University, Richmond, VA; <sup>3</sup>Nursing, University of Alabama Medical Center, Birmingham, AL.

**(530) Integration of Nurse Practitioner Clinical Practice Model into Outpatient Heart Transplant Clinic;** S.V. Chambers, P.C. Stutman, M.A. Williams, D.M. Chojnowski, L.R. Goldberg. Heart Failure Transplant Program, Hospital of the University of Pennsylvania, Philadelphia, PA.

**(531) The Utility of Psycho-Social Assessment Tools in Predicting Cardiovascular Outcomes in Post Cardiac Transplant Patients;** N.C. Sharma, D. Kim. Cardiology, Mazankowski Heart Institute, Edmonton, AB, Canada.

**(532) Comparison of Surgical Wound Infection Etiology in Patients Treated with Short-Term Pulsatile Mechanical Circulatory Support, Receiving Heart Transplant, or Undergoing Other Cardiac Surgery Procedure;** I. Copik, M. Zakliczynski, M. Siola, H. Pisarska, B. Urbanczyk, H. Gancarczyk, A. Larysz, J. Pacholewicz, M. Zembala. Dept. of Cardiac Surgery & Transplantation, Silesian Center for Heart Disease, Zabrze, Poland.

**(533) Does Regular Exercise after Heart Transplantation Have Any Benefit? Real Life Experience;** T. Daun, J. Patel, M. Kittleson, M. Rafiei, A. Osborne, A. Velleca, L. Pionniau, D. Chang, L. Czer, M. Hamilton, J. Kobashigawa. Cedars-Sinai Heart Institute, Los Angeles, CA.

**(534) Return to Work after Heart Transplantation: The New Zealand Experience;** C.B. Samaranyake, P.N. Ruygrok, C.A. Wasywich, A. Coverdale. Green Lane Cardiovascular Service, Auckland City Hospital, Grafton, Auckland, New Zealand.

**(535) A Practicable Public Private Partnership Model for Deceased Donor Transplantation – Tamil Nadu Experience;** Mohan Thanikachalam,<sup>1</sup> C.E. Karunakaran,<sup>2</sup> J. Amalorpavanathan.<sup>3</sup> <sup>1</sup>Cardiovascular Medicine, Ohio State University, Columbus, OH; <sup>2</sup>National Network for Organ Sharing, Chennai, Tamil Nadu, India; <sup>3</sup>Department of Surgery, Madras Medical College, Chennai, Tamil Nadu, India.

## GENERAL POSTER SESSION 2<sup>(516)</sup>

Thursday, April 25, 2013

**NOTE:** Poster presenters and poster moderators will be present in the poster hall from 5:30 pm – 6:30 pm

### HEART DIAGNOSTICS/THERAPEUTICS

**(536) Mycophenolate Not Azathioprine Is Associated with Increased Risk for Skin Cancer after Heart Transplant;** L. Pionniau, M. Kittleson, J. Patel, M. Rafiei, A. Osborne, V. Dhiantravan, D. Chang, L. Czer, A. Hage, M. Hamilton, J. Moriguchi, J. Kobashigawa. Cedars-Sinai Heart Institute, Los Angeles, CA.

**(537) Alemtuzumab Induction Facilitates Steroid-Free Immunosuppression in Human Cardiac Transplantation: Five Year Outcomes;** J.J. Teuteberg,<sup>1</sup> R. Zomak,<sup>1</sup> C. Yost,<sup>1</sup> C. Newman,<sup>1</sup> C. Grabowski,<sup>1</sup> J.K. Bhamra,<sup>1</sup> R.L. Kormos,<sup>1</sup> D. McNamara,<sup>1</sup> C. Bermudez,<sup>1</sup> M.A. Shullo.<sup>2</sup> <sup>1</sup>Heart and Vascular Institute, University of Pittsburgh, Pittsburgh, PA; <sup>2</sup>Department of Pharmacy and Therapeutics, University of Pittsburgh, Pittsburgh, PA.

**(538) Promising Outcomes after Long-Term Therapy with Everolimus: Two-Years Results of the CERTIC Registry;** L. Potena,<sup>1</sup> A. D'Armini,<sup>2</sup> R. Focchi,<sup>3</sup> M. Frigerio,<sup>4</sup> G. Gerosa,<sup>5</sup> G. Leonardi,<sup>6</sup> U. Livi,<sup>7</sup> M. Maccherini,<sup>8</sup> C. Maiello,<sup>9</sup> M. Rinaldi,<sup>10</sup> D. Colombo,<sup>11</sup> R. Brusa,<sup>11</sup> F. Parisi.<sup>12</sup> <sup>1</sup>Cardiovascu-

lar Department, University of Bologna, Bologna, Italy; <sup>2</sup>Policlinico San Matteo – Fondazione IRCCS, Pavia, Italy; <sup>3</sup>A.O. Ospedali Riuniti di Bergamo, Bergamo, Italy; <sup>4</sup>A.O. Niguarda – Ca' Granda, Milano, Italy; <sup>5</sup>A.O. di Padova – Università degli Studi, Padova, Italy; <sup>6</sup>Presidio Ospedaliero Ferrarotto, Catania, Italy; <sup>7</sup>Osp. Univ. di Udine – A.O. Santa Maria della Misericordia, Udine, Italy; <sup>8</sup>A.O. Univ. Senese – Policlinico Santa Maria alle Scotte, Siena, Italy; <sup>9</sup>AORN Monaldi – II Università di Napoli, Napoli, Italy; <sup>10</sup>A.O. di Giovanni Battista di Torino, Torino, Italy; <sup>11</sup>Novartis Farma, Origgio, VA, Italy; <sup>12</sup>Ospedale Pediatrico Bambin Gesù, Roma, Italy.

**(539) Failed Prednisone Taper off after Heart Transplant: Is There a Price To Be Paid?;** M. Kittleson, J. Patel, M. Rafiei, A. Osborne, R. Shiozaki, D. Chang, J. Moriguchi, L. Czer, J. Kobashigawa. Cedars-Sinai Heart Institute, Los Angeles, CA.

**(540) ATG Induction Improves Outcome for Sensitized Patients Who Have Undergone Heart Transplantation;** A. Phan, M. Kittleson, J. Patel, M. Rafiei, A. Osborne, D. Chang, L. Czer, D. Ramzy, F. Esmailian, J. Kobashigawa. Cedars-Sinai Heart Institute, Los Angeles, CA.

**(541) Adverse Events (AEs) Associated with Everolimus (EVR) or Mycophenolate Mofetil (MMF) in De Novo Heart Transplant (HTx) Recipients: Results from the North American (NA) Subpopulation of Study A2310;** H. Eisen,<sup>1</sup> H. Ross,<sup>2</sup> D. Pauly,<sup>3</sup> A. Kfoury,<sup>4</sup> A. Van Bakel,<sup>5</sup> R. Starling,<sup>6</sup> D. Patel,<sup>7</sup> A. Wiland,<sup>7</sup> P. Lopez,<sup>8</sup> A. Balfour,<sup>8</sup> J. Kobashigawa.<sup>9</sup> <sup>1</sup>Drexel University College of Medicine, Philadelphia, PA; <sup>2</sup>University Health Network, Toronto General Hospital, Toronto, Canada; <sup>3</sup>University of Florida College of Medicine, Gainesville, FL; <sup>4</sup>Intermountain Medical Center, Salt Lake City, UT; <sup>5</sup>Medical University of South Carolina, Charleston, SC; <sup>6</sup>Kaufman Center for Heart Failure, Heart and Vascular Institute, Cleveland Clinic Foundation, Cleveland, OH; <sup>7</sup>Novartis Pharmaceuticals Corporation, East Hanover, NJ; <sup>8</sup>Novartis Pharma AG, Basel, Switzerland; <sup>9</sup>Cedars-Sinai Heart Institute, Los Angeles, CA.

**(542) North American Results from the Multicenter Randomized Trial of Everolimus vs Mycophenolate Mofetil in Heart Transplantation;** J. Kobashigawa,<sup>1</sup> D. Pauly,<sup>2</sup> H. Ross,<sup>3</sup> A. Kfoury,<sup>4</sup> A. Van Bakel,<sup>5</sup> D. Patel,<sup>6</sup> A. Wiland,<sup>6</sup> P. Lopez,<sup>7</sup> A. Balfour,<sup>7</sup> R. Starling,<sup>8</sup> H. Eisen.<sup>9</sup> <sup>1</sup>Cedars-Sinai Heart Institute, Los Angeles, CA; <sup>2</sup>University of Florida College of Medicine, Gainesville, FL; <sup>3</sup>University Health Network, Toronto General Hospital, Toronto, Canada; <sup>4</sup>Intermountain Medical Center, Salt Lake City, UT; <sup>5</sup>Medical University of South Carolina, Charleston, SC; <sup>6</sup>Novartis Pharmaceuticals Corporation, East Hanover, NJ; <sup>7</sup>Novartis Pharma AG, Basel, Switzerland; <sup>8</sup>Kaufman Center for Heart Failure, Heart & Vascular Institute, Cleveland Clinic Foundation, Cleveland, OH; <sup>9</sup>Drexel University College of Medicine, Philadelphia, PA.

**(543) Men Versus Women: Outcome Differences on Cyclosporine and Tacrolimus;** J. Rush, M. Kittleson, J. Patel, M. Rafiei, A. Osborne, A. Velleca, L. Pionniau, D.H. Chang, L. Czer, J. Kobashigawa. Cedars-Sinai Heart Institute, Los Angeles, CA.

**(544) Tacrolimus- Versus Cyclosporine-Induced Diabetes Leads to More Diabetic Complications after Heart Transplantation;** A. Velleca, M. Kittleson, J. Patel, M. Rafiei, A. Osborne, A. Ngan, A. Hage, D.H. Chang, L. Czer, J. Kobashigawa. Cedars-Sinai Heart Institute, Los Angeles, CA.

**(545) Lymphatic CD68+ Endothelial Cells in Cardiac Allograft Humoral Rejection;** L.V. Beletskaia,<sup>1</sup> A.G. Kupriyanoval,<sup>2</sup> V.A. Zaidenov,<sup>1</sup> S.V. Gautier.<sup>2</sup> <sup>1</sup>Federal V.Shumakov Research Center of Transplantology and Artificial Organs, Moscow, Moscow Region, Russian Federation; <sup>2</sup>M.Sechenov First Moscow State Medical University, Moscow, Moscow Region, Russian Federation.

**(546) Utility of Gene Expression Profiling Test Score Stability To Predict Future Clinical Events in Heart Transplant Recipients;** M.C. Deng,<sup>1,2</sup> B. Elashoff,<sup>1,2</sup> D. Hiller,<sup>1,2</sup> M.X. Pham,<sup>3,13</sup> J.J. Teuteberg,<sup>4</sup> A.G. Kfoury,<sup>5</sup> R.C. Starling,<sup>6</sup> A. Kao,<sup>7</sup> A.S. Anderson,<sup>8</sup> W.G. Cotts,<sup>9,14</sup> G.A. Ewald,<sup>10</sup> D.A. Baran,<sup>11</sup> J. Yee,<sup>12</sup> H.A. Valantine.<sup>3</sup> <sup>1</sup>Department of Medicine – Division of Cardiology, UCLA Medical Center, Los Angeles, CA; <sup>2</sup>New York Presbyterian



Hospital – Columbia University, New York, NY; <sup>3</sup>Stanford University Medical Center, Palo Alto, CA; <sup>4</sup>University of Pittsburgh Medical Center, Pittsburgh, PA; <sup>5</sup>Intermountain Medical Center, Salt Lake City, UT; <sup>6</sup>The Cleveland Clinic, Cleveland, OH; <sup>7</sup>Mid-America Heart Institute, Kansas City, MO; <sup>8</sup>University of Chicago Medical Center, Chicago, IL; <sup>9</sup>Northwestern University, Chicago, IL; <sup>10</sup>Washington University School of Medicine, St. Louis, MO; <sup>11</sup>Newark Beth Israel Medical Center, Newark, NJ; <sup>12</sup>XDx, Brisbane, CA; <sup>13</sup>VA Palo Alto Health Care System, Palo Alto, CA; <sup>14</sup>Advocate Christ Medical Center, Oak Lawn, IL.

**(547) Clinical Consequences of Preoperative anti-HLA Antibodies and Panel Reactive Antibodies in Heart Transplantation;** T. Gazdic,<sup>3</sup> M. Kubanek,<sup>1</sup> E. Slimackova,<sup>2</sup> A. Slavcev,<sup>2</sup> J. Pirk,<sup>3</sup> I. Malek.<sup>1</sup> <sup>1</sup>Cardiology, Institute for Clinical and Experimental Medicine, Prague, Czech Republic; <sup>2</sup>Immunogenetics, Institute for Clinical and Experimental Medicine, Prague, Czech Republic; <sup>3</sup>Cardiac Surgery, Institute for Clinical and Experimental Medicine, Prague, Czech Republic.

**(548) Results of a Randomized Trial of Allomap vs Heart Biopsy in the 1st Year after Heart Transplant: Early Invasive Monitoring Attenuation through Gene Expression Trial;** J. Kobashigawa, J. Patel, M. Kittleson, D.H. Chang, L. Czer, T. Daun, A. Trento, F. Esmailian. Cedars-Sinai Heart Institute, Los Angeles, CA.

**(549) Clinical Significance of a Positive Cross Match in the Setting of Non-Complement Fixing Donor Specific Antibodies in Adult Heart Transplant Recipients;** C. Eshelbrenner,<sup>1</sup> C. Murphey,<sup>4</sup> S. Robinson,<sup>3</sup> M. Kwan,<sup>2</sup> J. Pal,<sup>1</sup> C. Kunavarapu.<sup>2</sup> <sup>1</sup>University of Texas Health Science Center at San Antonio, San Antonio, TX; <sup>2</sup>Advanced Heart Failure and Heart Transplant Clinic, Methodist Hospital System, San Antonio, TX; <sup>3</sup>Southwest Immunodiagnosics, San Antonio, TX.

## HEART POST TRANSPLANT COMPLICATIONS

**(550) Sympathetic Reinnervation of the Sinus Node Following Cardiac Transplantation: Time-Course and Prevalence;** M. Das,<sup>1</sup> S.W. Lord,<sup>1</sup> G. Parry,<sup>2</sup> J.H. Dark,<sup>2</sup> J.M. McComb.<sup>1</sup> <sup>1</sup>Department of Cardiology, Freeman Hospital, Newcastle upon Tyne, United Kingdom; <sup>2</sup>Department of Cardiopulmonary Transplantation, Freeman Hospital, Newcastle upon Tyne, United Kingdom.

**(551) Accuracy of a New Method for Semi-Quantitative Assessment of Right Ventricular Ejection Fraction by Cardiac MRI: Right Ventricular Fractional Diameter Changes;** E. Vermes, R. Nicolas, G. Olivier, A. Daniel. Cardiac Transplantation, University Hospital of Trousseau, Tours, France.

**(552) Cardiopulmonary Bypass Is Associated with Pulmonary Artery Endothelial Dysfunction: Therapeutic Potential of Tezosentan;** L.P. Perreault,<sup>1,2</sup> M.-C. Aubin,<sup>1</sup> A. Mommerot,<sup>1,2,3</sup> J. Dupuis,<sup>1,5</sup> M. Carrier.<sup>1,2</sup> <sup>1</sup>Research Center, Montréal Heart Institute, Montréal, QC, Canada; <sup>2</sup>Department of Cardiovascular Surgery, Montréal Heart Institute, Montréal, QC, Canada; <sup>3</sup>Department of Cardiac Surgery, University Hospital of Strasbourg, Strasbourg, France; <sup>4</sup>Department of Anesthesiology, Montréal Heart Institute, Montréal, QC, Canada; <sup>5</sup>Department of Medicine, Université de Montréal, Montréal, QC, Canada.

**(553) The Value of Cardiorenal Biomarkers for Prediction of Renal Dysfunction after Heart Transplantation;** L. Hoskova,<sup>1</sup> J. Franekova,<sup>3</sup> I. Malek,<sup>1</sup> P. Secnik,<sup>3</sup> J. Pirk,<sup>2</sup> J. Kautzner,<sup>1</sup> O. Szarszoi,<sup>2</sup> A. Jabor.<sup>3</sup> <sup>1</sup>Cardiology, Institute for Clinical and Experimental Medicine, Prague, Czech Republic; <sup>2</sup>Cardiovascular Surgery, Institute for Clinical and Experimental Medicine, Prague, Czech Republic; <sup>3</sup>Laboratory Methods, Institute for Clinical and Experimental Medicine, Prague, Czech Republic.

**(554) Prevalence of Thrombophilia and Thrombogenic Factors Among 122 Heart Transplant Recipients;** B. Salmela,<sup>1</sup> M.-L. Hellstedt,<sup>2</sup> R. Lassila,<sup>1,3</sup> J. Lommi.<sup>2</sup> <sup>1</sup>Coagulation Disorders Unit, Division of Hematology, Helsinki University Central Hospital, Helsinki, Finland; <sup>2</sup>Cardiology, Helsinki Univer-

sity Central Hospital, Helsinki, Finland; <sup>3</sup>Clinical Chemistry, HUSLAB Laboratory Services, Helsinki University Central Hospital, Helsinki, Finland.

**(555) Observational Epidemiological Study To Assess Cardiovascular Risk Factors in Heart Transplant Recipients in Spain (CTC Study): Preliminary Results at 18 Months Post-Transplantation;** G. Rábago,<sup>1</sup> L. Almenar,<sup>2</sup> J. Fernández-Yáñez,<sup>3</sup> E. Lage,<sup>4</sup> J.L. Lambert,<sup>5</sup> F. González-Víchez,<sup>6</sup> M.G. Crespo-Leiro,<sup>7</sup> J.F. Delgado.<sup>8</sup> <sup>1</sup>Clínica Universitaria de Navarra, Pamplona, Spain; <sup>2</sup>Hospital La Fe, Valencia, Spain; <sup>3</sup>Hospital Gregorio Marañón, Madrid, Spain; <sup>4</sup>Hospital Universitario Virgen del Rocío, Sevilla, Spain; <sup>5</sup>Hospital Universitario Central de Asturias, Oviedo, Spain; <sup>6</sup>Hospital Universitario Marqués de Valdecilla, Santander, Spain; <sup>7</sup>Complejo Hospitalario Universitario A Coruña, A Coruña, Spain; <sup>8</sup>Hospital 12 de Octubre, Madrid, Spain.

**(556) Post-Heart Transplant (HT) Survival for Adult Congenital Heart Disease (ACHD);** R.K. Cheng, E. Depasquale, M. Allareddy, M. Cadeiras, T. Khuu, A. Baas, A. Nsair, D. Cruz, M.C. Deng. Medicine, Division of Cardiology, UCLA Medical Center, Los Angeles, CA.

**(557) Heart Transplant Workup Medical Imaging and Resulting Radiation Exposure;** S.C. McKenzie,<sup>1,3</sup> M.R. Brown,<sup>1,3</sup> D.G. Platts,<sup>1,3</sup> J. Maddicks-Law,<sup>1</sup> G. Javorsky,<sup>1</sup> M. Whitby.<sup>2</sup> <sup>1</sup>Advanced Heart Failure and Cardiac Transplant Unit, The Prince Charles Hospital, Brisbane, Queensland, Australia; <sup>2</sup>Biomedical Technology Services, The Prince Charles Hospital, Brisbane, Queensland, Australia; <sup>3</sup>School of Medicine, University of Queensland, Brisbane, Queensland, Australia.

**(558) Cardiac Re-Transplantation: A 33-Year Single Centre Clinical Experience;** J. Barnard, P. Curry, J. Parameshwar, C. Lewis, P. Catarino, S. Nair, C. Sudarshan, D. Jenkins, J. Dunning, S. Tsui. Transplant Department, Papworth Hospital, Cambridge, Cambridgeshire, United Kingdom.

**(559) The Fate of Atrioventricular Valve Function of Transplanted Heart;** G.S. Kim,<sup>1</sup> J.B. Kim,<sup>1</sup> T.-J. Yun,<sup>1</sup> J.J. Kim,<sup>2</sup> S.J. Choo,<sup>1</sup> C.H. Chung,<sup>1</sup> J.W. Lee,<sup>1</sup> S.-H. Jung.<sup>1</sup> <sup>1</sup>Thoracic and Cardiovascular Surgery, Asan Medical Center, University of Ulsan College of Medicine, Seoul, Republic of Korea; <sup>2</sup>Cardiology, Asan Medical Center, University of Ulsan College of Medicine, Seoul, Republic of Korea.

**(560) Sildenafil Improves Small Artery Elasticity in Heart Transplant Recipients;** M.M. Colvin-Adams, N. Harcourt, D. Duprez, M. Pritzker. Cardiology, University of Minnesota, Minneapolis, MN.

**(561) Increased Myocardial Extracellular Volume in New-Onset Non-Ischemic Cardiomyopathy Assessed by Cardiovascular Magnetic Resonance Imaging;** U.K. Radunski,<sup>1</sup> G.K. Lund,<sup>2</sup> G. Adam,<sup>2</sup> H. Reichen-spurner,<sup>1</sup> S. Blankenberg,<sup>1</sup> K. Muellerleile.<sup>1</sup> <sup>1</sup>University Heart Center Hamburg-Eppendorf, Hamburg, Germany; <sup>2</sup>Department of Radiology, University Medical Center Hamburg-Eppendorf, Hamburg, Germany.

**(562) Complications on the Heart Transplant Waiting List Is Common: Reducing Wait List Time for Sensitized Patients May Avoid Complications;** R. Morlend, M. Kittleson, J. Patel, M. Rafiei, A. Osborne, A. Hage, D. Chang, L. Czer, J. Moriguchi, A. Trento, J. Kobashigawa. Cedars-Sinai Heart Institute, Los Angeles, CA.

**(563) The Impact of Donor Benign Intimal Thickening on Cardiac Allograft Vasculopathy;** J.J. Devitt,<sup>1</sup> A.J. Rice,<sup>2</sup> S.K. Murray,<sup>3</sup> G.M. Hirsch,<sup>1</sup> T.D.G. Lee.<sup>1,3,4</sup> <sup>1</sup>Surgery, Dalhousie University, Halifax, NS, Canada; <sup>2</sup>Laboratory Medicine, Royal Brompton Hospital Trust, London, United Kingdom; <sup>3</sup>Pathology, Dalhousie University, Halifax, NS, Canada; <sup>4</sup>Microbiology & Immunology, Dalhousie University, Halifax, NS, Canada.

**(564) An Improvement in Peripheral Endothelial Function Six Months after Heart Transplantation Is Associated with a Lower Incidence of Coronary Allograft Vasculopathy;** M. Farrero, M. Cardona, A. Cuppoletti, S. Resi, V. Isabel, M. Masotti, R. Eulalia, P.-V. Felix. Heart Failure and Heart Transplantation, Hospital Clinic, Barcelona, Barcelona, Spain.

**(565) Quantification of Lipid Burden in Heart Transplant (HT) Patients by Near-Infrared Spectroscopy (NIRS);** R.K. Cheng, S. Bhutani, R. Gevor-

gyan, E. Depasquale, J. Tobis, M.C. Deng, W. Suh. Medicine, Division of Cardiology, UCLA Medical Center, Los Angeles, CA.

**(566) Insulin Growth Factor 1 and Cardiac Allograft Vasculopathy;** R. Alharethi, S. Knight, O. Galenko, J. Carlquist, B. Horne, D. Budge, S. Frampton, K. Rassmusson, J. Nixon, J. Rollo, K. Brunisholz, A.G. Kfoury. UTAH Cardiac Transplant Program, Intermountain Heart Institute, Salt Lake City, UT.

**(567) Comparison of Optical Coherence Tomography (OCT) and Intravascular Ultrasound (IWUS) for the Early Diagnosis of Cardiac Allograft Vasculopathy in Heart Transplant Patients;** C.-M. Tissot,<sup>1</sup> S. Guendouz,<sup>1</sup> G. Mouillet,<sup>2</sup> T. Damy,<sup>1</sup> J.P. Couetil,<sup>3</sup> E. Teiger,<sup>2</sup> B. Gellen.<sup>1</sup> <sup>1</sup>Cardiology, Henri Mondor Hospital, Creteil, France; <sup>2</sup>Explorations Fonctionnelles, Henri Mondor Hospital, Creteil, France; <sup>3</sup>Cardiac Surgery, Henri Mondor Hospital, Creteil, France.

**(568) Cardiac Allograft Vasculopathy Is Less Frequent in Contemporary Heart Transplant Population;** J. Wei, B. Azarbal, R. Cheng, D. Geft, M. Rafiei, J. Patel, L. Czer, J. Kobashigawa. Cedars-Sinai Heart Institute, Cedars-Sinai Medical Center, Los Angeles, CA.

**(569) Does Mechanical Circulatory Support Prior to Heart Transplantation Influence Early Onset of Coronary Allograft Vasculopathy;** H.A. Welj,<sup>1</sup> A. Osterhues,<sup>1</sup> J. Stypmann,<sup>2</sup> M. Scherer,<sup>1</sup> S. Martens,<sup>1</sup> J.R. Sindermann.<sup>1</sup> <sup>1</sup>Department of Cardiac Surgery, University Hospital Münster, Münster, NRW, Germany; <sup>2</sup>Department of Cardiology and Angiology, University Hospital Münster, Münster, NRW, Germany.

**(570) Cardiac Allograft Vasculopathy in HIV-Infected Patients;** S. Dizon,<sup>1</sup> N. Nahumi,<sup>1</sup> J. Han,<sup>1</sup> M. Yuzepolskaya,<sup>1</sup> S.W. Restaino,<sup>1</sup> A.R. Garan,<sup>1</sup> P.C. Colombo,<sup>1</sup> H. Takayama,<sup>2</sup> D.M. Mancini,<sup>1</sup> Y. Naka,<sup>2</sup> U.P. Jorde,<sup>1</sup> N. Uriel.<sup>1</sup> <sup>1</sup>Medicine, Columbia University, New York, NY; <sup>2</sup>Surgery, Columbia University, New York, NY.

**(571) Coronary Artery Fistulae after Orthotopic Heart Transplantation Are Associated with Decreased Prevalence of Transplant Coronary Artery Disease;** J. Wei,<sup>1</sup> S. Singh,<sup>1</sup> R. Cheng,<sup>1</sup> A. Young,<sup>1</sup> M. Rafiei,<sup>1</sup> A. Hage,<sup>1</sup> J. Patel,<sup>1</sup> F. Esmailian,<sup>1</sup> J. Currier,<sup>2</sup> J. Kobashigawa,<sup>1</sup> B. Azarbal.<sup>1</sup> <sup>1</sup>Cedars-Sinai Heart Institute, Cedars-Sinai Medical Center, Los Angeles, CA; <sup>2</sup>Division of Cardiology, West Los Angeles Veterans Administration Medical Center, Los Angeles, CA.

**(572) Persisting Mild Lesions in Coronary Angiography Prognosticate Poor Long-Term Survival of Heart Transplant Recipients;** M. Zakliczynski,<sup>1</sup> A. Babinska,<sup>2</sup> B. Flak,<sup>2</sup> J. Nozynski,<sup>1</sup> M. Zembala.<sup>1</sup> <sup>1</sup>Silesian Center for Heart Disease, Zabrze, Poland; <sup>2</sup>Medical University of Silesia, Zabrze, Poland.

**(573) Higher Donor Body Mass Index Is Associated with Higher Risk of Cardiac Allograft Vasculopathy;** W.I. Khalife, R.P. Vivo, P. Nalabothu, S. Garikipati, S. Johnson, K. Kislingbury, R. Sharif, A. Charif. Cardiology, University of Texas Medical Branch, Galveston, TX.

**(574) The Ratio of Epidermal Growth Factor (EGF) to Monocyte Chemotactic Peptide-1 (MCP1) in the Urine May Predict Renal Prognosis in HTx;** R. Fiocchi,<sup>1</sup> R. Sebastiani,<sup>1</sup> N. Gorislavets,<sup>2</sup> E. Radavelli,<sup>1</sup> M. Bombardieri,<sup>2</sup> M.G. Alessio.<sup>2</sup> <sup>1</sup>Heart Transplant Center, Ospedali Riuniti Bergamo, Bergamo, Italy; <sup>2</sup>Clinical Laboratory Department, Ospedali Riuniti Bergamo, Bergamo, Italy.

**(575) Ventricular Repolarization Dynamics and the Risk of Sudden Cardiac Death after Heart Transplantation;** B. Vrtovec,<sup>1</sup> G. Poglajen,<sup>1</sup> M. Fister,<sup>1</sup> I. Knezevic,<sup>1</sup> V. Starc,<sup>2</sup> F. Haddad.<sup>3</sup> <sup>1</sup>Advanced Heart Failure and Transplantation Ctr, Ljubljana, Slovenia; <sup>2</sup>Institute of Physiology, Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia; <sup>3</sup>Stanford University School of Medicine, Stanford, CA.

**(576) The Obesity Paradox;** E. Stimpson, J. Patel, M. Kittleson, M. Rafiei, A. Osborne, F. Lee, D.H. Chang, A. Hage, D. Ramzy, L. Czer, M. Hamilton, J. Kobashigawa. Cedars-Sinai Heart Institute, Los Angeles, CA.

**(577) Primary Graft Dysfunction vs. Primary Graft Failure: Are All Graft Problems Created Equal?;** A.Z. Aliabadi, M. Groemmer, D. Wiedemann, D. Zimpfer, G. Laufer, A.O. Zuckermann. Cardiac Surgery, Medical University of Vienna, Vienna, Austria.

**(578) Human Leukocyte Antigen Mismatch in Heart Transplants Continues To Predict Outcomes in Modern Era of Immunosuppression;** T. Carvajal,<sup>1</sup> E.P. Kransdorf,<sup>2</sup> D.L. Kasper,<sup>1</sup> R.L. Scott,<sup>2</sup> D.E. Steidley,<sup>2</sup> R.S. Gopalan,<sup>2</sup> A.V. Kalya,<sup>2</sup> F.A. Arabia,<sup>1</sup> O.E. Pajaro.<sup>1</sup> <sup>1</sup>Division of Cardiothoracic and Transplant Surgery, Mayo Clinic – Arizona, Phoenix, AZ; <sup>2</sup>Division of Cardiovascular Disease, Mayo Clinic – Arizona, Phoenix, AZ.

**(579) Exploring Parenthood in the New Zealand Heart Transplant Program;** C. Wasywicz,<sup>1</sup> A. Ruygrok,<sup>2</sup> H. Gibbs,<sup>1</sup> L. Painter,<sup>1</sup> A. Coverdale,<sup>1</sup> P. Ruygrok.<sup>1</sup> <sup>1</sup>New Zealand Heart and Lung Transplant Service, Auckland City Hospital, Auckland, New Zealand; <sup>2</sup>Faculty of Medicine, University of Otago, Dunedin, New Zealand.

**(580) WITHDRAWN**

**(818) Tranexamic Acid as Replacement Antifibrinolytic for Aprotinin – An Efficacy and Safety Study;** H. Ricky, S. Kathirvel, M. Jose, S. Erin, B. Christian. University of Pittsburgh Medical Center (UPMC), Pittsburgh, PA.

**(581) Primary Graft Dysfunction Following Heart Transplantation; Validity of a Pragmatic Self-Reporting Definition;** V.B. Dronavalli,<sup>1,6,7</sup> H. Small,<sup>1,7</sup> C.A. Rogers,<sup>4,7</sup> H. Thomas,<sup>2,7</sup> P. Gosling,<sup>1</sup> J.K. Parameshwar,<sup>3,7</sup> N.R. Banner.<sup>5,7</sup> <sup>1</sup>Queen Elizabeth Hospital, University Hospitals Birmingham, Birmingham, United Kingdom; <sup>2</sup>NHS Blood and Transfusion, Bristol, United Kingdom; <sup>3</sup>Papworth hospital, Papworth, United Kingdom; <sup>4</sup>Bristol Heart institute, Bristol, United Kingdom; <sup>5</sup>Harefield Hospital, London, United Kingdom; <sup>6</sup>University of Birmingham, Birmingham, United Kingdom; <sup>7</sup>On behalf of the Steering Group UK Cardiothoracic Transplant Audit, United Kingdom

## LUNG FAILURE, DIAGNOSTICS, THERAPEUTICS

**(582) Diabetes Dramatically Decreases Survival in Lung Transplant Recipients;** K.L. Hackman,<sup>1,2</sup> G.J. Snell,<sup>1,2</sup> L.A. Bach.<sup>1,2</sup> <sup>1</sup>The Alfred Hospital, Melbourne, Australia; <sup>2</sup>Monash University, Melbourne, Australia.

**(583) Losing the War before the First Battle: Explant Malignancy in Lung Transplantation;** C.R. Brown,<sup>1</sup> A.E. Shafii,<sup>1</sup> S.C. Murthy,<sup>1</sup> G.B. Petersson,<sup>1</sup> M.M. Budev,<sup>2</sup> D.P. Mason.<sup>1</sup> <sup>1</sup>Thoracic and Cardiovascular Surgery, Cleveland Clinic, Cleveland, OH; <sup>2</sup>Department of Pulmonary, Allergy, and Critical Care Medicine, Cleveland Clinic, Cleveland, OH.

**(584) Estimation of Minimal Important Differences in Health-Related Quality of Life Measures for Lung Transplant Recipients;** L.G. Singer,<sup>1,2</sup> N. Chowdhury.<sup>1</sup> <sup>1</sup>Toronto Lung Transplant Program, University Health Network, Toronto, Canada; <sup>2</sup>Medicine, University of Toronto, Toronto, Canada.

**(585) Venous Thromboembolic Events after Recombinant Activated Factor VII in Lung Transplant Recipients;** J.A. Iuppa,<sup>1</sup> R.R. Hachem,<sup>2</sup> G.A. Patterson,<sup>3</sup> E.P. Trulock.<sup>2</sup> <sup>1</sup>Pharmacy Department, Barnes-Jewish Hospital, St. Louis, MO; <sup>2</sup>Division of Pulmonary and Critical Care Medicine, Washington University-School of Medicine, St. Louis, MO; <sup>3</sup>Division of Cardiothoracic Surgery, Washington University-School of Medicine, St. Louis, MO.

**(586) Obesity and Lung Transplants – It's an Age Thing;** G.I.O. Aruede,<sup>1</sup> G. Parry,<sup>2</sup> J.H. Dark.<sup>3</sup> <sup>1</sup>Newcastle Medical School, Newcastle University, Newcastle upon Tyne, United Kingdom; <sup>2</sup>Department of Cardiopulmonary Transplantation, Freeman Hospital, Newcastle upon Tyne, United Kingdom; <sup>3</sup>Cardiothoracic Centre, Freeman Hospital, Newcastle upon Tyne, United Kingdom.

**(587) Improving Outcomes in Lung Transplantation for Cystic Fibrosis – A Unified Approach;** A.M. Ranasinghe,<sup>1</sup> S. Clark,<sup>1</sup> P.A. Corris,<sup>1,2</sup> A.J. Fisher,<sup>1,2</sup> K. Gould,<sup>3</sup> L. Hamilton,<sup>1</sup> J.L. Lordan,<sup>1</sup> G. Meachery,<sup>1</sup> K. Morley,<sup>1</sup> G. Parry,<sup>1</sup> A. Perry,<sup>3</sup> T. Pillay,<sup>1</sup> S. Schueler,<sup>1</sup> K. Tocewicz,<sup>1</sup> J.H. Dark.<sup>1</sup> <sup>1</sup>Cardiopulmonary

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**(588) Time after Lung Transplantation Influence the Correlation between Acute Rejection and Frequency of Regulatory T Cells in Transbronchial Lung Biopsies;** D. Krstrup,<sup>1</sup> M. Iversen,<sup>2</sup> C.B. Andersen.<sup>1</sup>  
<sup>1</sup>Department of Pathology, Copenhagen University Hospital, Copenhagen, Denmark; <sup>2</sup>The Heart and Lung Transplantation Unit, Copenhagen University Hospital, Copenhagen, Denmark.

**(589) Detection of Restored Lung by Novel Radiologic Parameter in Living Lobar Lung Transplant Donors;** T. Mizobuchi,<sup>1</sup> F. Chen,<sup>2</sup> T. Iwata,<sup>1</sup> M. Sato,<sup>2</sup> A. Aoyama,<sup>2</sup> T. Bando,<sup>2</sup> H. Suzuki,<sup>1</sup> Y. Yamada,<sup>1</sup> T. Tagawa,<sup>1</sup> S. Yoshida,<sup>1</sup> H. Date,<sup>2</sup> I. Yoshino.<sup>1</sup> <sup>1</sup>General Thoracic Surgery, Chiba University, Chiba, Japan; <sup>2</sup>Thoracic Surgery, Kyoto University, Kyoto, Japan.

**(590) Optimizing the Estimation of Renal Function in Lung Transplant Candidates;** A.A. Osho,<sup>1</sup> A.W. Castleberry,<sup>2</sup> L.D. Snyder,<sup>3</sup> S.M. Palmer,<sup>3</sup> S.S. Lin,<sup>2</sup> R.D. Davis,<sup>2</sup> M.G. Hartwig.<sup>2</sup> <sup>1</sup>School of Medicine, Duke University Medical Center, Durham, NC; <sup>2</sup>Department of Surgery, Duke University Medical Center, Durham, NC; <sup>3</sup>Department of Medicine, Duke University Medical Center, Durham, NC.

**(591) Lung Transplantation from Donation after Cardiac Death – 3 Years Single Centre Experience;** S.F. Hashmi, N. Khasati, A. Machaal, R. Venkateswaran, N. Yonan. Department of Heart and Lung Transplantation, University Hospital of South Manchester – Wythenshawe Hospital, Manchester, Lancashire, United Kingdom.

**(592) A New Program of Living-Donor Lobar Lung Transplantation;** H. Date, F. Chen, M. Sato, A. Aoyama, T. Yamada, T. Bando. Thoracic Surgery, Kyoto University, Kyoto, Japan.

**(593) Pitfalls of ECMO Implementation in Lung Transplantation – A Survival Analysis;** S.C. Tomaszek,<sup>1</sup> I. Inci,<sup>1</sup> S. Hillinger,<sup>1</sup> K. Slankamenac,<sup>2</sup> P. Kestenholz,<sup>1</sup> D. Schneider,<sup>1</sup> W. Weder.<sup>1</sup> <sup>1</sup>Thoracic Surgery, University Hospital Zurich, Zurich, Switzerland; <sup>2</sup>Visceral and Transplant Surgery, University Hospital Zurich, Zurich, Switzerland.

**(594) Outcomes of Long-Term Venovenous Extracorporeal Membrane Oxygenation Support for Acute Respiratory Distress Syndrome;** Z.N. Kon, C.F. Evans, G.J. Bittle, M. Gibber, P.B. Wehman, D. Herr, K. Rajagopal, A.T. Iacono, J.P. Garcia, B.P. Griffith. University of Maryland School of Medicine, Baltimore, MD.

**(595) Extracorporeal Membrane Oxygenation as a Bridge to Lung Transplantation:** Long-Term Follow-Up; G. Dellgren,<sup>1</sup> M. Silverborn,<sup>1</sup> M. Gilljam,<sup>2</sup> K. Swärd,<sup>3</sup> G. Riise.<sup>2</sup> <sup>1</sup>Cardiothoracic Surgery, Sahlgrenska Univ Hospital, Gothenburg, Sweden; <sup>2</sup>Cardiothoracic Anesthesia, Sahlgrenska Univ Hospital, Gothenburg, Sweden; <sup>3</sup>Pulmonary Medicine, Sahlgrenska Univ Hospital, Gothenburg, Sweden.

**(596) Long-Term Outcome after Bronchial Artery Revascularization in Double Lung Transplantation – A More Than Fifteen Year Follow-Up Study;** M. Perch,<sup>1</sup> M.A. Nørgaard,<sup>2</sup> C.J. Møller,<sup>3</sup> J. Carlsen,<sup>1</sup> M. Iversen,<sup>1</sup> G. Pettersson.<sup>4</sup> <sup>1</sup>Department of Cardiology, Unit of Lung Transplantation, Rigshospitalet, Copenhagen University Hospital, Copenhagen, Denmark; <sup>2</sup>Department of Thoracic Surgery, Aalborg University Hospital, Aalborg, Denmark; <sup>3</sup>Department of Cardiothoracic Surgery, Rigshospitalet, Copenhagen University Hospital, Copenhagen, Denmark; <sup>4</sup>Department of Thoracic and Cardiovascular Surgery, Cleveland Clinic, Cleveland, OH.

**(597) Prebypass Hemodynamic Instability in Patients with Severe Pulmonary Hypertension Undergoing Double Lung Transplantation;** P. Shah, H. Ricky, M. Jose, B. Christian, S. Kathirvel. Anesthesiology and Thoracic Transplantation, University of Pittsburgh, Pittsburgh, PA.

**(598) Bridge to Lung Transplantation with Venovenous Extracorporeal Membrane Oxygenation for End-Stage Lung Disease: A Single Center Experience;** C.F. Evans,<sup>1</sup> Z.N. Kon,<sup>1</sup> B.P. Wehman,<sup>1</sup> M. Gibber,<sup>1</sup> A.T. Iacono,<sup>2</sup>

J.P. Garcia,<sup>1</sup> B.P. Griffith.<sup>1</sup> <sup>1</sup>Division of Cardiac Surgery, Department of Surgery, University of Maryland Medical Center, Baltimore, MD; <sup>2</sup>Division of Pulmonary and Critical Care Medicine, Department of Medicine, University of Maryland Medical Center, Baltimore, MD.

**(599) CT Volumetry Versus Body Plethysmography in Measuring TLC in Lung Transplantation;** P. Sastry,<sup>1</sup> S. Messer,<sup>1</sup> A. Page,<sup>1</sup> E. Ortmann,<sup>1</sup> L. Clements,<sup>1</sup> J. Parmar,<sup>1</sup> J. Dunning,<sup>1</sup> S. Tsui,<sup>1</sup> P. Catarino,<sup>1</sup> R. Parker,<sup>1</sup> N. Qureshi,<sup>2</sup> S. Nair.<sup>1</sup> <sup>1</sup>Department of Transplantation, Papworth Hospital NHS Trust, Cambridge, United Kingdom; <sup>2</sup>Institute of Public Health, Cambridge University, Cambridge, United Kingdom.

**(600) The SysCLAD- Systems Prediction of Chronic Lung Allograft Dysfunction Study: Aims, Strategy and First Data;** C. Pison,<sup>1,16</sup> A. Tissot,<sup>2</sup> A. Magnan,<sup>2</sup> K. Botturi,<sup>2</sup> M. Stern,<sup>3</sup> M. Reynaud-Gaubert,<sup>4</sup> R. Kessler,<sup>5</sup> S. Mussot,<sup>6</sup> C. Dromer,<sup>7</sup> V. Boussaud,<sup>8</sup> J.-F. Mornex,<sup>9</sup> G. Thabut,<sup>10</sup> M. Dahan,<sup>11</sup> J.-D. Aubert,<sup>12</sup> A. Boehler,<sup>13</sup> C. Knopp,<sup>14</sup> M. Sève,<sup>1</sup> S. Brouard,<sup>2</sup> B. Marshland,<sup>12</sup> K. Deplanche,<sup>15</sup> D. Koubi,<sup>15</sup> D. Maier,<sup>16</sup> G. Oliveira,<sup>17</sup> J.-P. Boissel,<sup>17</sup> C. Auffray,<sup>18</sup> L. Nicod.<sup>12</sup> <sup>1</sup>CHU, Grenoble, France; <sup>2</sup>CHU, Nantes, France; <sup>3</sup>Hôpital Foch, Suresnes, France; <sup>4</sup>AP Marseille, Marseille, France; <sup>5</sup>CHU, Strasbourg, France; <sup>6</sup>Hôpital Marie Lannelongue, Le Plessis Robinson, France; <sup>7</sup>CHU, Bordeaux, France; <sup>8</sup>HEGP, Paris, France; <sup>9</sup>HCL, Lyon, France; <sup>10</sup>Hôpital Bichat, Paris, France; <sup>11</sup>CHU, Toulouse, France; <sup>12</sup>CHU Lausanne-Genève, Lausanne, Switzerland; <sup>13</sup>University Hospital, Zurich, Switzerland; <sup>14</sup>Hôpital Erasme, Bruxelles, Belgium; <sup>15</sup>Finovatis, Lyon, France; <sup>16</sup>Biomax, Planegg, Germany; <sup>17</sup>Novadiscovery, Lyon, France; <sup>18</sup>European Institute of Systems Biology and Medicine, Lyon, France.

**(601) Suppression of Spleen Tyrosine Kinase Attenuated Obliterative Bronchiolitis Associated Lymphoid Neogenesis after Lung Transplantation;** Y. Matsuda,<sup>1</sup> X. Wang,<sup>2</sup> M. Liu,<sup>1</sup> M. Sato,<sup>1</sup> G. Zehong,<sup>1</sup> H. Oishi,<sup>1</sup> S. Keshavjee,<sup>1</sup> C.-W. Chow.<sup>2</sup> <sup>1</sup>Department of Thoracic Surgery, University of Toronto, Toronto, ON, Canada; <sup>2</sup>Department of Respiriology, University of Toronto, Toronto, ON, Canada.

**(602) YKL-40 Production Is Increased in the Lung during Aspergillus Colonization and BOS after Lung Transplantation;** S.S. Weigt, X. Wang, S. Numnez, A. Derhovanessian, M.Y. Shino, A. Gregson, J.P. Lynch III, R. Saggari, D.J. Ross, A. Ardehali, R. Elashoff, J.A. Belperio. David Geffen School of Medicine at UCLA, Los Angeles, CA.

**(603) Eosinophilia Associated Chronic Lung Allograft Dysfunction: A New Phenotype?;** F. Piégay,<sup>1,2</sup> J. Tractel,<sup>1</sup> F. Philit,<sup>1</sup> F. Tronc,<sup>1,2</sup> J.-F. Mornex.<sup>1,2,3</sup> <sup>1</sup>Hospices Civils de Lyon, Lyon, France; <sup>2</sup>Université Lyon 1, Lyon, France; <sup>3</sup>UMR754 Retrovirus et Pathologie Comparée, INRA, Lyon, France.

**(604) Restrictive Allograft Syndrome CT Findings Are a Recent Feature of Chronic Lung Allograft Dysfunction;** D. Gamondes,<sup>1</sup> F. Philit,<sup>1</sup> F. Tronc,<sup>1,2</sup> Didier Revel,<sup>1,2,3</sup> J.-F. Mornex.<sup>1,2,4</sup> <sup>1</sup>Hospices Civils de Lyon, Lyon, France; <sup>2</sup>Université Lyon 1, Lyon, France; <sup>3</sup>CREATIS, Inserm, CNRS, Lyon, France; <sup>4</sup>UMR754, INRA, Lyon, France.

**(605) Lung Transplantation for Pulmonary Lymphangiomyomatosis: Single-Centre Experience;** J. Salman,<sup>1</sup> C. Kuehn,<sup>1</sup> I. Tudorache,<sup>1</sup> M. Avsar,<sup>1</sup> C. Fegbeutel,<sup>1</sup> A. Haverich,<sup>1</sup> J. Gottlieb,<sup>2</sup> G. Warnecke.<sup>1</sup> <sup>1</sup>Department of Cardiothoracic, Transplantation and Vascular Surgery, Hannover, Germany; <sup>2</sup>Department of Pneumology, Hannover, Germany.

**(606) C1-Esterase-Inhibitor Counteracts Severe Primary Graft Dysfunction in Lung Transplantation;** W. Sommer,<sup>1</sup> I. Tudorache,<sup>1</sup> C. Kühn,<sup>1</sup> M. Avsar,<sup>1</sup> J. Gottlieb,<sup>2</sup> A. Haverich,<sup>1</sup> G. Warnecke.<sup>1</sup> <sup>1</sup>Cardiothoracic Surgery, Hannover Medical School, Hannover, Germany; <sup>2</sup>Department of Pneumology, Hannover Medical School, Hannover, Germany.

## MECHANICAL CIRCULATORY SUPPORT

**(607) Severity of End Organ Damage as a Predictor of Outcomes after Implantation of Continuous Flow Left Ventricular Assist Devices (LVAD);** Z.C. Landis, B. Soleimani, E.R. Stephenson, A. El-Banayosy, W.E.



Pae. Heart and Vascular Institute, Penn State Hershey Medical Center, Hershey, PA.

**(608) Overall Outcomes of Patients with Left Ventricular Assist Devices (LVADs) in Acute Rehabilitation Facility: How Safe Are These Patients at Rehabilitation Facilities?;** K.C. McCants, P.S. Combs, P. Raheja, S. Rhode, K. Vessels, A. Lenneman, E. Birks. Advanced Heart Failure, University of Louisville & Jewish Hospital, Louisville, KY.

**(609) Weighted Gene Coexpression Network Analysis (WGCNA) Modeling of Multiorgan Dysfunction Syndrome after Mechanical Circulatory Support Therapy;** N. Wisniewski,<sup>1</sup> M. Cadeiras,<sup>1</sup> G. Bondar,<sup>1</sup> R.K. Cheng,<sup>1</sup> K. Shahzad,<sup>2</sup> D. Onat,<sup>3</sup> F. Latif,<sup>3</sup> Y. Korin,<sup>4</sup> E. Reed,<sup>4</sup> R. Fakhro,<sup>1</sup> M.C. Deng.<sup>1</sup> <sup>1</sup>Medicine, Division of Cardiology, UCLA Medical Center, Los Angeles, CA; <sup>2</sup>Medicine, East Carolina University, Greenville, NC; <sup>3</sup>Medicine, Columbia University Medical Center, New York, NY; <sup>4</sup>Pathology, UCLA Medical Center, Los Angeles, CA.

**(610) A Novel Method of Predicting Aortic Valve Opening through LVAD Power Waveform Analysis;** G.A. Wright, S.P. McCandless, T. Orr, B.B. Reid, A.K. Carter, D. Budge, W.T. Caine, R.A. Merchel, S.E. Clayton, S. Stoker, R.A. Alharethi, A.G. Kfoury. Artificial Heart Program, Intermountain Heart Institute, Intermountain Medical Center, Salt Lake City, UT.

**(611) Hemolysis and Pump Thrombus in Continuous Flow Left Ventricular Assist Device Recipients Does Not Affect Survival;** B.A. Whitson,<sup>1</sup> P. Eckman,<sup>2</sup> F. Kamdar,<sup>2</sup> M. Colvin-Adams,<sup>2</sup> K.K. Liao,<sup>2</sup> M. Pritzker,<sup>2</sup> R. John.<sup>2</sup> <sup>1</sup>The Ohio State University Wexner Medical Center, Columbus, OH; <sup>2</sup>The University of Minnesota, Minneapolis, MN.

**(612) Cost Comparison of Continuous-Flow Left Ventricular Assist Devices as Destination Therapy in Patients Over/Under Age 70;** R.J. Koene, B. Milavitz, J.D. Roberts, S.N. Adatya, E. Tone, R. John, P.M. Eckman. Department of Medicine – Cardiovascular Division, University of Minnesota, Minneapolis, MN.

**(613) Hemodynamic Assessment in Patients on Chronic Continuous Flow Left Ventricular Assist Device Support;** T. Hasin,<sup>1</sup> S.D. Schettle,<sup>2</sup> J. Nativi-Nicolau,<sup>4</sup> S.J. Park,<sup>3</sup> B.A. Borlaug,<sup>2</sup> N.L. Pereira,<sup>2</sup> B.S. Edwards,<sup>2</sup> A.L. Clavell,<sup>2</sup> L.D. Joyce,<sup>3</sup> J.M. Stulak,<sup>3</sup> R.C. Daly,<sup>3</sup> S.S. Kushwaha.<sup>2</sup> <sup>1</sup>Cardiovascular Division, Rabin Medical Center, Petach Tikva, Israel; <sup>2</sup>Division of Cardiovascular Diseases, Mayo Clinic, Rochester; <sup>3</sup>Division of Cardiothoracic Surgery, Mayo Clinic, Rochester; <sup>4</sup>Division of Cardiology, University of Utah, Salt Lake City.

**(614) Left Ventricular Assist Device Placement in Very Obese Patients: Proceed with Caution;** S. Osaki,<sup>1</sup> M.R. Johnson,<sup>2</sup> P.S. Rahko,<sup>2</sup> M.A. Murray,<sup>1</sup> J.H. Blabaum,<sup>1</sup> E.B. Lushaj,<sup>1</sup> S. Ulschmid,<sup>1</sup> L. Lozonschi,<sup>1</sup> T. Kohmoto.<sup>1</sup> <sup>1</sup>Surgery, Division of Cardiothoracic Surgery, University of Wisconsin, Madison, WI; <sup>2</sup>Medicine, Heart Failure and Transplant Cardiology, University of Wisconsin, Madison, WI.

**(615) Prolactin – A New Marker for ECMO-Related Mortality;** A. Neumann,<sup>1</sup> D. Hilfiker-Kleiner,<sup>2</sup> C. Kühn,<sup>1</sup> C. Fegbeutel,<sup>1</sup> A. Hilfiker,<sup>1</sup> A. Haverich,<sup>1</sup> C. Bara.<sup>1</sup> <sup>1</sup>Department of Cardiac, Thoracic, Transplantation, and Vascular Surgery, Medical School Hannover, Hannover, Germany; <sup>2</sup>Department of Cardiology and Angiology, Medical School Hannover, Hannover, Germany.

**(616) Acquired Aortic Insufficiency with 2nd Versus 3rd Generation Continuous Flow Left Ventricular Assist Device;** D. Spiegelstein,<sup>2</sup> C.M. Rosner,<sup>1</sup> S.S. Desai,<sup>1</sup> L.G. Edwards,<sup>1</sup> T. Elliott,<sup>1</sup> N.A. Burton,<sup>2</sup> A.J. Rongione.<sup>2</sup> <sup>1</sup>Heart Failure / Transplant Program, Inova Heart and Vascular Institute at Inova Fairfax Hospital, Falls Church, VA; <sup>2</sup>Cardiac Surgery, Inova Heart and Vascular Institute at Inova Fairfax Hospital, Falls Church, VA.

**(617) Fifteen Year Experience of Bridging to Heart Transplantation with Ventricular Assist Devices;** M. Berman, J. Parameshwar, C. Lewis, P. Lincoln, C. Sudarshan, N. Sukumaran, P. Catarino, D. Jenkins, J. Dunning, S. Tsui. Cardiothoracic Transplantation, Papworth Hospital, Cambridge, United Kingdom.

**(618) Durability of DeVega Tricuspid Valve Annuloplasty for Severe Tricuspid Regurgitation at the Time of Continuous-Flow LVAD Implantation;** S.A. Akhter, R. Salabat, M.J. Russo, T.B. Valeroso, J.D. Rich, V. Jeevanandam. Surgery, University of Chicago Medical Center, Chicago, IL.

**(619) The Hemodynamic Effects of the MEGA Intra-Aortic Balloon Counterpulsation Pump;** A. Majithia, M. Jumean, H. Shih, C.D. Kimmelstiel, A. Weintraub, D.T. Pham, M.S. Kiernan, D. Denofrio, N.K. Kapur. Cardiology, Tufts Medical Center, Boston, MA.

**(620) Quantitative Three Dimensional Echocardiographic Assessment of the Right Ventricle Can Identify Risk of Right Ventricular Failure in Patients Undergoing Left Ventricular Assist Device Surgery;** A.L. French, M.S. Kiernan, D. DeNofrio, D.T. Pham, N.K. Kapur, N.G. Pandian, A.R. Patel. Tufts Medical Center, Boston, MA.

**(621) Type 2 Cardiorenal Syndrome in the Left Ventricular Assist Device (LVAD) Population;** S. Feitel,<sup>1</sup> J. Patel,<sup>1</sup> P. Pirlamarla,<sup>1</sup> J. Whittier,<sup>1</sup> E. Gongora,<sup>1</sup> T. Rowe,<sup>2</sup> S. Hankins,<sup>1</sup> H.J. Eisen.<sup>1</sup> <sup>1</sup>Division of Cardiology, Drexel University College of Medicine, Philadelphia, PA; <sup>2</sup>Center for Advanced Heart Failure Care, Hahnemann University Hospital, Philadelphia, PA.

**(622) Whole Blood Gene Expression of Multiorgan Dysfunction (MOD) after LVAD Implantation;** G. Bondar,<sup>1</sup> M. Cadeiras,<sup>1</sup> N. Wisniewski,<sup>1</sup> R.K. Cheng,<sup>1</sup> K. Shahzad,<sup>2</sup> D. Onat,<sup>3</sup> F. Latif,<sup>3</sup> E. Chang,<sup>1</sup> M.C. Deng.<sup>1</sup> <sup>1</sup>Medicine, Division of Cardiology, UCLA Medical Center, Los Angeles, CA; <sup>2</sup>Medicine, East Carolina University, Greenville, NC; <sup>3</sup>Medicine, Columbia University Medical Center, New York, NY.

**(623) Acuity Adaptable Patient Care Unit Shortens Length of Hospital Stay after Ventricular Assist Device Placement;** S. Osaki,<sup>1</sup> N.M. Edwards,<sup>2</sup> M.R. Johnson,<sup>3</sup> M.A. Murray,<sup>1</sup> J.H. Blabaum,<sup>1</sup> S. Ulschmid,<sup>1</sup> L. Lozonschi,<sup>1</sup> T. Kohmoto.<sup>1</sup> <sup>1</sup>Surgery, Cardiothoracic Surgery, University of Wisconsin, Madison, WI; <sup>2</sup>Cardiac Surgery, St. Peter's Hospital, Albany, NY; <sup>3</sup>Medicine, Heart Failure and Transplant Medicine, University of Wisconsin, Madison, WI.

**(624) Catheter Ablation of Ventricular Arrhythmias in Patients Supported by Left Ventricular Assist Device;** A.R. Garan, J. Han, N. Nahumi, M. Yuzefpolskaya, P. Colombo, W. Whang, J. Morrow, H. Garan, U.P. Jorde, N. Uriel. Cardiology, Columbia University Medical Center, New York, NY.

**(625) Endovascular Application of the CircuLite® Synergy® Circulatory Support System;** S. Kar,<sup>1</sup> J. Granada,<sup>2</sup> G.H. Yi,<sup>2</sup> R. Farnan,<sup>3</sup> J. Budris,<sup>3</sup> D. Burkhoff.<sup>4</sup> <sup>1</sup>Cedars Sinai Medical Center, Los Angeles, CA; <sup>2</sup>Skirball Center for Cardiovascular Research, Orangeburg, NY; <sup>3</sup>CircuLite, Inc., Saddle Brook, NJ; <sup>4</sup>Columbia University, New York, NY.

**(626) Genomics of Myocardial Recovery in Patients with Mechanical Circulatory Support;** H. Miltung, A. Kassner, C. Oezpeker, M. Morhuis, B. Bohms, J. Boergemann, J. Gummert. Clinic of Thoracic and Cardiovascular Surgery, Erich & Hanna Klessmann-Institute, Ruhr-University Bochum, Heart & Diabetescenter NRW, Bad Oeynhausen, Germany.

**(627) A Quantitative Assessment of Left Ventricular Assist Device Inflow Cannula Position with Contrast Enhanced Gated Cardiac Multislice Computed Tomography and Its Clinical Correlation;** P.A. Alvarez,<sup>1</sup> M. Kassi,<sup>1</sup> M. Loebe,<sup>2</sup> J. Estep,<sup>3</sup> A. Bhimaraj,<sup>3</sup> S.M. Chang.<sup>3</sup> <sup>1</sup>Medicine, The Methodist Hospital, Houston, TX; <sup>2</sup>Surgery, The Methodist Hospital, Houston, TX; <sup>3</sup>Cardiology, The Methodist Hospital, Houston, TX.

**(628) Contemporary Experience with Percutaneous and Surgical Right Ventricular Assist Devices;** J. Um, T. Ryan, M. Moulton. UNMC, Omaha.

**(629) Does Acuity of Presentation Impact the Incidence of Right Ventricular Failure Following Left Ventricular Assist Device Implantation?;** D. Kalavrouzotis,<sup>1</sup> M.Z. Tong,<sup>1</sup> D. Nagpal,<sup>1</sup> S. Lee,<sup>2</sup> E.G. Soltesz,<sup>1</sup> N. Moazami.<sup>1</sup> <sup>1</sup>Department of Thoracic and Cardiovascular Surgery, Cleveland Clinic, Cleveland, OH; <sup>2</sup>Department of Cardiovascular Medicine, Cleveland Clinic, Cleveland, OH.

**(630) This abstract has been moved to Friday Poster Session 3**



- (631) Enhanced Ca<sup>2+</sup> Influx through Cardiac L-Type Ca<sup>2+</sup> Channels Maintains the Systolic Ca<sup>2+</sup> Transient in Cardiac Unloading;** A.P. Schworer,<sup>1</sup> A.M. Bernhardt,<sup>2</sup> T. Eschenhagen,<sup>3</sup> H. Reichenspurner,<sup>2</sup> H. Ehmke.<sup>1</sup>  
<sup>1</sup>Department of Cellular and Integrative Physiology, University Hospital Hamburg-Eppendorf, Hamburg, Germany; <sup>2</sup>Department of Cardiovascular Surgery, University Heart Center Hamburg, Hamburg, Germany; <sup>3</sup>Institute of Experimental and Clinical Pharmacology and Toxicology, University Hospital Hamburg-Eppendorf, Hamburg, Germany.
- (632) Transapical Left Ventricular Vent (TLVV) during Artero-Venous ECMO Support: A Bridge to Solution in Acute Cardiogenic Shock;** M. Attisani, P. Centofanti, M.W. La Torre, M. Boffini, G. Marchetto, D. Ricci, A. Baronetto, M. Ribezzo, M.T. Cascarano, P. Abruzzese, M. Rinaldi. Cardio-Thoracic Surgery, Cardio-Thoracic Surgery, University of Turin, Turin, Italy.
- (633) WITHDRAWN**
- (634) Characteristics and Survival of Patients with the Total Artificial Heart Implanted for Indications Other Than Biventricular Failure;** K.L. Thanavaro,<sup>1</sup> D.G. Tang,<sup>2</sup> R.H. Cooke,<sup>1</sup> A.C. Mankad,<sup>1</sup> M.L. Hess,<sup>1</sup> V. Kasirajan,<sup>2</sup> K.B. Shah.<sup>1</sup> <sup>1</sup>Department of Internal Medicine, Division of Cardiology, VCU Medical Center, Richmond, VA; <sup>2</sup>Department of Cardiothoracic Surgery, VCU Medical Center, Richmond, VA.
- (635) Renal Dysfunction Does Not Contraindicate Ventricular Assist Device as Destination Therapy or as Bridge to Single Heart or Combined Heart and Kidney Transplantation;** A. Ruzza,<sup>1</sup> F. Esmailian,<sup>1</sup> R. Vespignani,<sup>1</sup> R. Yanagida,<sup>3</sup> M. Awad,<sup>1</sup> J. Mirocha,<sup>1</sup> D. Ramzy,<sup>1</sup> J. Moriguchi,<sup>1</sup> A. Trento,<sup>1</sup> L.S.C. Czer.<sup>1,2</sup> <sup>1</sup>Division of Cardiothoracic Surgery, Cedars-Sinai Heart Institute, Cedars Sinai Medical Center, Los Angeles, CA; <sup>2</sup>Division of Cardiology and the Comprehensive Transplant Center, Cedars-Sinai Heart Institute, Cedars Sinai Medical Center, Los Angeles, CA; <sup>3</sup>Division of Cardiothoracic Surgery, Department of Surgery, University of Kentucky, Lexington, KY.
- (636) QRS and QT Interval Changes and Ventricular Arrhythmias Following Continuous Flow Mechanical Unloading of the Failing Human Heart;** A. Saidi, S.G. Drakos, C.H. Selzman, A.G. Kfoury, C.G. Yen, B.B. Reid, S. Mckellar, W. Caine, R. Alharethi, J. Nativi-Nicolau, O. Wever-Pinzon, D. Budge, F. Bader, J. Stehlik, N. Akoum. UTAH Cardiac Transplant Program, Salt Lake City, UT.
- (637) A Novel, Risk Stratification Model Using Bayesian Networks for Continuous Flow Left Ventricular Assist Device 90-Day Survival;** N.A. Loghmanpour,<sup>1</sup> M.K. Kanwar,<sup>2</sup> Y. Wang,<sup>1</sup> T.A. Snyder,<sup>3</sup> D.A. Horstmanshof,<sup>3</sup> J.W. Long,<sup>3</sup> J. Gorcsan,<sup>4</sup> J.F. Antaki,<sup>1</sup> S. Murali.<sup>2</sup> <sup>1</sup>Biomedical Engineering, Carnegie Mellon University, Pittsburgh, PA; <sup>2</sup>Cardiology, Allegheny General Hospital, Pittsburgh, PA; <sup>3</sup>Advanced Cardiac Care, Integris Baptist Medical Center, Oklahoma City, OK; <sup>4</sup>Cardiology, University of Pittsburgh Medical Center, Pittsburgh, PA.
- (638) Continuous Flow Left Ventricular Assist Devices Improve Survival in Reactive but Not Fixed Type 2 Pulmonary Hypertension Compared with Medical Therapy;** G. Kumarasinghe, T. Hunter, D. Robson, P. Ros, E. Kotlyar, E. Granger, P. Jansz, K. Dhital, P. Spratt, A. Keogh, P. Macdonald, A. Jabbour, C. Hayward. Heart and Lung Transplant Unit, St. Vincent's Hospital, Sydney, NSW, Australia.
- (639) Effect of Body Position on Continuous Flow Left Ventricular Assist Device Flow Dynamics;** K. Muthiah,<sup>1,2,3</sup> S. Gupta,<sup>1,2</sup> D. Robson,<sup>1</sup> R. Walker,<sup>1</sup> P.S. Macdonald,<sup>1,2,3</sup> P. Jansz,<sup>1</sup> C.S. Hayward.<sup>1,2,3</sup> <sup>1</sup>Heart Failure and Transplant Unit, St. Vincent's Hospital, Sydney, Australia; <sup>2</sup>University of New South Wales, Sydney, Australia; <sup>3</sup>Victor Chang Cardiac Research Institute, Sydney, Australia.
- (640) Gastrointestinal Bleeding Was Rare with Centrifugal Type Continuous Flow Left Ventricular Assist Device EVAHEART;** Y. Ichihara, T. Nishinaka, M. Komagamine, Y. Yamada, T. Miyamoto, K. Suzuki, H. Tsukui, S. Saito, K. Yamazaki. Cardiovascular Surgery, Tokyo Women's Medical University, Tokyo, Japan.

- (641) Potential Application of the CircuLite® Synergy® Circulatory Support System in the Treatment of Pulmonary Arterial Hypertension;** B. Meyns,<sup>1</sup> F. Rega,<sup>1</sup> A. Simon,<sup>2</sup> W. Kerckhoffs,<sup>3</sup> E. Keysseltz,<sup>3</sup> O. Marseille,<sup>3</sup> M. Martin,<sup>3</sup> J. Budris,<sup>4</sup> D. Burkhoff.<sup>4</sup> <sup>1</sup>K.U.Leuven Gasthuisberg University Hospital, Leuven, Belgium; <sup>2</sup>Harefield Hospital, Harefield, United Kingdom; <sup>3</sup>CircuLite, GmbH, Aachen, Germany; <sup>4</sup>CircuLite, Inc., Saddle Brook, NJ.
- (642) Continuous-Flow Ventricular Assist Devices Impact on Failing Heart's Vasculature;** C.G. Yen,<sup>1,2</sup> N.A. Diakos,<sup>1,2</sup> J. Stehlik,<sup>1</sup> C.H. Selzman,<sup>1,2</sup> A.G. Koufry,<sup>1</sup> B.B. Reid,<sup>1</sup> M. Everitt,<sup>1</sup> O. Wever-Pinzon,<sup>1</sup> C. Myrick,<sup>1</sup> M. Salama,<sup>1</sup> E. Hammond,<sup>1</sup> J.D. Symons,<sup>2</sup> D.Y. Li,<sup>2</sup> S.G. Drakos.<sup>1,2</sup> <sup>1</sup>UTAH Cardiac Transplant Program, Salt Lake City, UT; <sup>2</sup>University of Utah Molecular Medicine, Salt Lake City, UT.
- (643) Assessment of Right Ventricle before the Implantation of Left Ventricular Assist Device by Echocardiographic Parameters (ARVADE);** N. Aissaoui,<sup>1,2</sup> L. Paluszkiwicz,<sup>1</sup> G. Martin Gorria,<sup>1</sup> M. Morshuis,<sup>1</sup> B. Diebold,<sup>2</sup> S. Joe Elie,<sup>2</sup> J. Gummert.<sup>1</sup> <sup>1</sup>Heart and Diabetes Center, Bad Oeynhausen, Germany; <sup>2</sup>HEGP, Paris, France.
- (644) Measurement of Blood Pressure during Support with a Continuous-Flow Left Ventricular Assist Device in the Outpatient Setting;** L.A. Coyle, C. Gallagher, J. Maier, G. Bhat, P. Pappas, A. Tatoes. Cardiovascular Surgery, Advocate Christ Medical Center, Oaklawn, IL.
- (645) Predicting RV Failure after LVAD Implantation: Utility of Echocardiographic Strain and Defining RV Failure;** C.B. Link,<sup>1</sup> R. Kormos,<sup>2</sup> K. Jackson,<sup>3</sup> J. Teuteberg,<sup>1,2</sup> J. Bhama,<sup>2</sup> C. Bermudez,<sup>2</sup> M.A. Simon.<sup>1,2</sup> <sup>1</sup>Department of Medicine, University of Pittsburgh Medical Center, Pittsburgh, PA; <sup>2</sup>Heart and Vascular Institute, University of Pittsburgh Medical Center, Pittsburgh, PA; <sup>3</sup>School of Medicine, University of Pittsburgh, Pittsburgh, PA.
- (646) The Positive Impact of Pre-Operative VAD Education in the Reduction of Hospital Length of Stay;** K.A. Meehan, J. Brown, G.L. Kathleen, A. Adin-Christian, S. Strnad, R. Laskowski, R. Paliga, R.A. Gordon, E.C. McGee. Bluhm Cardiovascular Institute, Northwestern Memorial Hospital, Chicago, IL.
- (647) Clinical Outcomes for INTERMACS Profile 1 Patient Implanted with the Total Artificial Heart;** K.B. Shah,<sup>1</sup> K.L. Thanavaro,<sup>1</sup> D.G. Tang,<sup>2</sup> V. Kasirajan.<sup>2</sup> <sup>1</sup>Division of Cardiology, Virginia Commonwealth University, Richmond; <sup>2</sup>Division of Cardiothoracic Surgery, Virginia Commonwealth University, Richmond.
- (648) Utility of Routine Right Heart Catheterization after LVAD Implantation;** D. Spiegelstein,<sup>2</sup> C.M. Rosner,<sup>1</sup> S.S. Desai,<sup>1</sup> L.G. Edwards,<sup>1</sup> T. Elliott,<sup>1</sup> N.A. Burton,<sup>2</sup> A.J. Rongione.<sup>2</sup> <sup>1</sup>Heart Failure/Heart Transplant, Inova Heart and Vascular Institute at Inova Fairfax Hospital, Falls Church, VA; <sup>2</sup>Cardiac Surgery, Inova Heart and Vascular Institute at Inova Fairfax Hospital, Falls Church, VA.
- (649) Improved Postoperative Clinical Outcomes after Ventricular Assist Device Implantation in Patients Older Than 60 Years of Age at the University of Wisconsin Hospital and Clinics;** E.B. Lushaj, Y. Kotani, S. Osaki, L. Lozoschi, N.M. Edwards, T. Kohmoto. Surgery, University of Wisconsin, Madison, WI.
- (650) Low Rate of Allosensitization Associated with the Syncardia Total Artificial Heart and the Heartmate II LVAD;** D.G. Tang, G.B. Reddy, M.P. Flattery, K.B. Shah, V. Kasirajan. Virginia Commonwealth University, Richmond, VA.

## PEDIATRICS

- (651) Congenital Heart Disease, HLA Sensitization, and Heart Transplantation;** D.A. Dodd,<sup>1</sup> B. Mettler.<sup>2</sup> <sup>1</sup>Pediatric Cardiology, Vanderbilt University, Nashville, TN; <sup>2</sup>Pediatric CT Surgery, Vanderbilt University, Nashville, TN.

**(652) Effect of Initial Surgical Palliation on HLA Sensitization and Outcomes in Children Transplanted for Hypoplastic Left Heart Syndrome (HLHS);** C. Ideen,<sup>1</sup> E. Albers,<sup>2</sup> Y. Law,<sup>2</sup> S. Law,<sup>2</sup> P. Warner,<sup>3</sup> D.M. McMullan,<sup>2</sup> L. Permut,<sup>2</sup> M. Kemna,<sup>2</sup> <sup>1</sup>University of Washington, School of Medicine, Seattle; <sup>2</sup>Seattle Children's Hospital, Seattle; <sup>3</sup>Puget Sound Blood Center, Seattle.

**(653) Risk Factors for the Development of Late Pulmonary Complications Following Pediatric Heart Transplant;** T. Steinfeld,<sup>1</sup> H. Preston,<sup>1</sup> K. Mach,<sup>1</sup> A. Shelswell,<sup>1</sup> J. Teskey,<sup>1</sup> S. Mathur,<sup>1</sup> S. Sollazzo,<sup>1,2,3,4</sup> A.I. Dipchand,<sup>3,4</sup> R. Deliva,<sup>1,2,3</sup> <sup>1</sup>Department of Physical Therapy, University of Toronto, Toronto, ON, Canada; <sup>2</sup>Department of Physiotherapy, Hospital for Sick Children, Toronto, ON, Canada; <sup>3</sup>SickKids Transplant and Regenerative Medicine Centre, Hospital for Sick Children, Toronto, ON, Canada; <sup>4</sup>Labatt Family Heart Centre, Hospital for Sick Children, Toronto, ON, Canada.

**(654) A Novel Echocardiographic Measurement in Pediatric Heart Transplant Recipients with Dilated Cardiomyopathy: Can We Maximize the Donor Supply?;** E. Hahn,<sup>1</sup> W.A. Zuckerman,<sup>1</sup> M.E. Richmond,<sup>1</sup> J.M. Chen,<sup>2</sup> R.K. Singh,<sup>1</sup> L.J. Addonizio.<sup>1</sup> <sup>1</sup>Division of Pediatric Cardiology, Department of Pediatrics, Columbia University College of Physicians and Surgeons, New York, NY; <sup>2</sup>Division of Pediatric Cardiothoracic Surgery, Columbia University College of Physicians and Surgeons, New York, NY.

**(655) Statin Therapy after Pediatric Heart Transplantation Is Safe, Effective and Protects Against Rejection and PTLD;** S.C. Greenway,<sup>1</sup> C. Manlihot,<sup>2</sup> M. Khoury,<sup>2</sup> B.W. McCrindle,<sup>2</sup> A.I. Dipchand,<sup>2</sup> <sup>1</sup>Cardiology, Alberta Children's Hospital, Calgary, AB, Canada; <sup>2</sup>Labatt Family Heart Centre, The Hospital for Sick Children, Toronto, ON, Canada.

**(656) Decreased Coronary Flow Reserve Measured with Doppler Flow Wire Technique Was Associated with Stenotic Myocardial Microvasculopathy in Pediatric Patients after Heart Transplantation;** H. Ide,<sup>1</sup> T. Ueno,<sup>1</sup> S. Kogaki,<sup>2</sup> N. Fukushima,<sup>1</sup> Y. Sawa.<sup>1</sup> <sup>1</sup>Cardiovascular Surgery, Osaka University Medical School, Suita, Osaka, Japan; <sup>2</sup>Paediatrics, Osaka University Medical School, Suita, Osaka, Japan.

**(657) Long-Term Heart Failure Management in Children with Dilated Cardiomyopathy;** P. Rusconi,<sup>1</sup> N. Sasaki,<sup>1</sup> T. Bueno,<sup>2</sup> V.E. Reid,<sup>2</sup> W.G. Harmon,<sup>1</sup> S. Sandhu.<sup>1</sup> <sup>1</sup>Pediatrics, University of Miami Miller School of Medicine, Miami, FL; <sup>2</sup>Jackson Memorial Hospital, Miami, FL.

**(658) Atopy, Eosinophilia, Complete Blood Count (CBC) and the Risk of Rejection in Pediatric Heart Transplant Recipients;** K. Arbon,<sup>1</sup> E. Albers,<sup>2</sup> S. Law,<sup>2</sup> M. Kemna,<sup>2</sup> L. Permut,<sup>3</sup> Y.M. Law.<sup>2</sup> <sup>1</sup>University of Washington School of Medicine, Seattle, WA; <sup>2</sup>Pediatrics, Seattle Children's Hospital, University of Washington, Seattle, WA; <sup>3</sup>Surgery, Seattle Children's Hospital, University of Washington, Seattle, WA.

**(659) Outcomes with High Pre-Transplant PRA in Pediatric Heart Transplantation at a Single Center;** D.A. Dodd,<sup>1</sup> B. Mettler.<sup>2</sup> <sup>1</sup>Pediatric Cardiology, Vanderbilt University, Nashville, TN; <sup>2</sup>Pediatric CT Surgery, Vanderbilt University, Nashville, TN.

**(660) Predicting Myocardial Recovery in Children with Dilated Cardiomyopathy;** S.C. West,<sup>1</sup> M. Seckeler,<sup>2</sup> S. Hallowell,<sup>3</sup> C.H. Saunders,<sup>3</sup> K.A. Jayakumar,<sup>4</sup> D.S. Schneider.<sup>3</sup> <sup>1</sup>Pediatric Cardiology, Children's Hospital of Pittsburgh, Pittsburgh, PA; <sup>2</sup>Pediatric Cardiology, Cincinnati Children's Hospital, Cincinnati, OH; <sup>3</sup>Pediatrics, University of Virginia Children's Hospital, Charlottesville, VA; <sup>4</sup>Pediatrics, Sanger Heart and Vascular Institute, Charlotte, NC.

**(661) Does Surgeon Training or Hospital (Pediatric vs. Adult) Affect Survival after Heart Transplant in Adults with Congenital Heart Disease?;** D. Boucek,<sup>1,2</sup> A.T. Yetman,<sup>2</sup> K.D. Brunisholz,<sup>1,3</sup> A.G. Kfoury,<sup>1,3</sup> J. Stehlik,<sup>1,2</sup> E.M. Gilbert,<sup>1,2</sup> C.H. Selzman,<sup>1,2</sup> A.K. Kaza,<sup>1,2</sup> A. Eckhauser,<sup>1,2</sup> R. Alharethi,<sup>1,3</sup> D. Budge,<sup>1,3</sup> J.N. Nativi,<sup>1,2</sup> S.G. Drakos,<sup>1,2</sup> K.M. Molina,<sup>1,2</sup> M.D. Everitt.<sup>1,2</sup> <sup>1</sup>UTAH Cardiac Transplant Program, Salt Lake City, UT; <sup>2</sup>University of Utah, Salt Lake City, UT; <sup>3</sup>Intermountain Medical Center, Salt Lake City, UT.

**(662) Non-Depleting Induction Immunosuppression Is Associated with Less Clinically Significant Acute Cellular Rejection in Pediatric Heart Transplantation Recipients;** K.D. Jeffers, J.N. Scheel, L.A. Vricella, K.M. Shermock, L. McNamara, C.R. Ensor. The Johns Hopkins Hospital, Baltimore, MD.

**(663) Costs of Transplantation across a Positive Crossmatch;** S.C. West,<sup>1</sup> S.A. Webber,<sup>2</sup> S.A. Miller,<sup>1</sup> P.D. Wearden,<sup>3</sup> V.O. Morell,<sup>3</sup> B. Feingold.<sup>1</sup> <sup>1</sup>Pediatric Cardiology, Children's Hospital of Pittsburgh of UPMC, Pittsburgh, PA; <sup>2</sup>Pediatrics, Vanderbilt University, Nashville, TN; <sup>3</sup>Cardiothoracic Surgery, Children's Hospital of Pittsburgh of UPMC, Pittsburgh, PA.

**(664) Correlation of B-Type Natriuretic Peptide (BNP) with Echocardiographic and Catheterization Parameters in Pediatric Heart Recipients;** B. Haileselassie,<sup>1</sup> J. Allen,<sup>1</sup> B. Soriano, A. Bhat, R. Boucek, M. Kemna,<sup>1</sup> S. Law,<sup>1</sup> E. Albers,<sup>1</sup> M. McMullan,<sup>2</sup> Y. Law.<sup>1</sup> <sup>1</sup>Pediatrics, Seattle Childrens Hospital, University of Washington, Seattle, WA; <sup>2</sup>Surgery, Seattle Childrens Hospital, University of Washington, Seattle, WA.

## PATHOLOGY

**(665) Long-Term Survival after Heart Transplantation Depends on Proper Outward Remodeling of Epicardial Arteries with Cardiac Allograft Vasculopathy;** M.M.H. Huibers,<sup>1</sup> J. Kaldewey,<sup>1</sup> A. Huisman,<sup>1</sup> K. Timmermans,<sup>2</sup> M.B. Leenders,<sup>3</sup> M.E.J. Schippers,<sup>1</sup> A. Vink,<sup>1</sup> J.R. Lahpor,<sup>4</sup> H.J.H. Kirkels,<sup>5</sup> C. Klöpping,<sup>5</sup> N. de Jonge,<sup>5</sup> R.A. de Weger.<sup>1</sup> <sup>1</sup>Pathology, University Medical Center Utrecht, Utrecht, Netherlands; <sup>2</sup>Anesthesiology & Intensive Care Medicine, Radboud University Nijmegen Medical Center, Nijmegen, Gelderland, Netherlands; <sup>3</sup>Gastroenterology & Hepatology, University Medical Center Utrecht, Utrecht, Netherlands; <sup>4</sup>Cardio Thoracic Surgery, University Medical Center Utrecht, Utrecht, Netherlands; <sup>5</sup>Cardiology, University Medical Center Utrecht, Utrecht, Netherlands.

**(666) Changes of Plasma microRNAs in Heart Transplantation Patients Do Not Reflect MicroRNA Changes in the Cardiac Allograft Vasculopathy Vessel Wall;** M.M.H. Huibers,<sup>1</sup> H. Vroman,<sup>1</sup> J. van Kuik,<sup>1</sup> E. Siera-de Koning,<sup>1</sup> N. de Jonge,<sup>2</sup> R.A. de Weger.<sup>1</sup> <sup>1</sup>Pathology, University Medical Center Utrecht, Utrecht, Netherlands; <sup>2</sup>Cardiology, University Medical Center Utrecht, Utrecht, Netherlands.

**(667) Microvascular Remodeling on Endomyocardial Biopsy and Coronary Flow Reserve by Transthoracic Doppler Echocardiography in Heart Transplant Patients: A Clinical-Pathological Study;** M. Fedrigo, F. Tona, B. Schiavon, G. Feltrin, G. Toscano, C. Castellani, S. Illiceto, G. Gerosa, G. Thiene, M. Valente, A. Angelini. Department of Cardiac, Thoracic and Vascular Science, University of Padua, Padua, Italy.

**(668) Fibroblast Growth Factor 23 Is a Promising Marker of Myocardial Pathology;** V. Polyakova,<sup>1</sup> M. Richter,<sup>1</sup> T. Kubin,<sup>2</sup> T. Walther.<sup>1</sup> <sup>1</sup>Heart Surgery, Kerckhoff-Clinic, Bad Nauheim, Germany; <sup>2</sup>Cardiac Development and Remodelling, Max-Planck-Institute, Bad Nauheim, Germany.

**(669) A Specific Mechanism for Late Loss of Cardiac Allograft: The Antibody Mediated Rejection (AMR) as a Major Factor of Cardiac Allograft Vasculopathy (CAV);** C. Toquet,<sup>1</sup> A. Loupy,<sup>2</sup> P. Rouvier,<sup>3</sup> S. Varnous,<sup>3</sup> A. Cazes,<sup>2</sup> M. Tible,<sup>2</sup> T. Beuscart,<sup>2</sup> X. Jouven,<sup>2</sup> P. Bruneval,<sup>2</sup> J.P. Duong Van Huyen.<sup>2</sup> <sup>1</sup>CHU Nantes, Nantes, France; <sup>2</sup>University Paris Descartes, Paris, France; <sup>3</sup>Hopital La Pitie, Paris, France.

**(670) C4d Immunostaining Is an Independent Predictor of Graft Dysfunction, Cardiac Allograft Vasculopathy and Death in Heart Transplant Recipients;** A. Luk,<sup>1</sup> C. Alba,<sup>1</sup> J. Butany,<sup>2</sup> K. Tinckam,<sup>2</sup> D.H. Delgado,<sup>1</sup> H.J. Ross.<sup>1</sup> <sup>1</sup>Division of Cardiology, Department of Medicine, University Health Network, Toronto, ON, Canada; <sup>2</sup>Departments of Laboratory Medicine and Pathobiology and Medicine, University of Toronto, Toronto, ON, Canada.

**(671) Histopathologic Features of Explanted Lungs Supported by Veno-Venous Extracorporeal Membrane Oxygenation;** C.F. Evans,<sup>1</sup> Z.N. Kon,<sup>1</sup> B.P. Wehman,<sup>1</sup> M. Gibber,<sup>1</sup> A.T. Iacono,<sup>2</sup> A. Burke,<sup>3</sup> B.P. Griffith.<sup>1</sup>

<sup>1</sup>Division of Cardiac Surgery, Department of Surgery, University of Maryland Medical Center, Baltimore, MD; <sup>2</sup>Division of Pulmonary and Critical Care Medicine, Department of Medicine, University of Maryland Medical Center, Baltimore, MD; <sup>3</sup>Department of Pathology, University of Maryland Medical Center, Baltimore, MD.

**(672) Outward Remodeling of Coronary Arteries in Cardiac Allograft Vasculopathy Is Reduced Compared to Native Atherosclerosis;** D.V. Miller, C. German, S.B. Oberton, M.P. Revelo, J. Stehlik, E.M. Gilbert, J.N. Nativi, R. Alharethi, D. Budge, M.D. Everitt, K.M. Molina, S.G. Drakos, M.E.H. Hammond, A.G. Kfoury. UTAH Cardiac Transplant Program, Salt Lake City, UT.

**(673) Pathologic Findings in Explanted Pulmonary Allografts;** L. Xu,<sup>1</sup> C. Drachenberg,<sup>1</sup> A. Iacono,<sup>2</sup> A. Burke.<sup>1</sup> <sup>1</sup>Pathology, University of Maryland, Baltimore, MD; <sup>2</sup>Pulmonary Medicine, University of Maryland, Baltimore, MD.

## BASIC SCIENCE

**(674) Anti-IL6R Attenuates Humoral Responses to Allograft in a Mouse Model of Allo-sensitization;** G. Wu, N.-N. Chai, A. Chen, S. Jordan, A. Klein. Comprehensive Transplant Center, Cedars-Sinai Medical Center, Los Angeles, CA.

**(675) In Vitro Modeling of Duchenne Muscular Dystrophy (DMD) Cardiomyopathy Using Human Induced Pluripotent Stem Cells (hiPSC);** F. Kamdar,<sup>1,2</sup> M.J. Doyle,<sup>2</sup> C. Chapman,<sup>2</sup> J. Lohr,<sup>2</sup> N. Koyano Nakagawa,<sup>2</sup> D.J. Garry.<sup>1,2</sup> <sup>1</sup>Division of Cardiology, University of Minnesota, Minneapolis; <sup>2</sup>Lillehei Heart Institute, University of Minnesota, Minneapolis.

**(676) T Cell Responses in Lung Transplantation – Role of Alloantigen Priming and Regulation on Development of Transplant Arteriosclerosis in a Humanized Mouse Model;** A.-K. Knöfel,<sup>1</sup> N. Frank,<sup>1</sup> N. Madrahimov,<sup>1</sup> J. Salman,<sup>1</sup> W. Sommer,<sup>1</sup> K. Jansson,<sup>1</sup> P. Ziehme,<sup>1</sup> D. Jonigk,<sup>2</sup> M. Avsar,<sup>1</sup> A. Haverich,<sup>1</sup> G. Warnecke.<sup>1</sup> <sup>1</sup>HTTV, Medical School of Hannover, Hannover, Germany; <sup>2</sup>Pathology, Medical School of Hannover, Hannover, Germany.

**(677) Rapid Tolerance Induction for Solid Organ Transplantation by Myeloid Progenitor Cells;** J. Domen,<sup>1</sup> Y. Li,<sup>1</sup> L. Sun,<sup>1</sup> P. Simpson,<sup>2</sup> K. Gandy.<sup>2</sup> <sup>1</sup>Cardiac Surgery, Children's Mercy Hospital and Clinics, Kansas City, MO; <sup>2</sup>Dept of Pediatrics, Medical College of Wisconsin, Milwaukee, WI.

**(678) Targeting Steroid Resistant Peripheral Blood Pro-Inflammatory CD28null T Cells by Inhibiting CD137 Expression: Relevance to BOS;** G. Hodge,<sup>1,2</sup> S. Hodge,<sup>1,2</sup> J. Ahern,<sup>1</sup> C.-L. Holmes-Liew,<sup>1,2,3</sup> P.N. Reynolds,<sup>1,2</sup> M. Holmes.<sup>1,2,3</sup> <sup>1</sup>Lung Research, Hanson Institute and Thoracic Medicine, Royal Adelaide Hospital, Adelaide, South Australia, Australia; <sup>2</sup>University of Adelaide, Adelaide, Australia; <sup>3</sup>South Australian Lung Transplant Service, Adelaide, Australia.

**(679) Optimal Lung Inflation Techniques under the Current Standard Lung Protection Protocol in a Rat Lung Transplantation Model;** Y. Tanaka, N. Shigemura, K. Noda, T. Kawamura, C.A. Bermudez. Department of Cardiothoracic Surgery, University of Pittsburgh Medical Center, Pittsburgh, PA.

**(680) Protective Effect of Plasmin in Marginal Donor Lungs in an Ex Vivo Lung Perfusion Model;** H. Motoyama, F. Chen, A. Ohsumi, K. Hijiya, K. Okita, K. Kondo, D. Nakajima, J. Sakamoto, T. Yamada, A. Aoyama, M. Sato, T. Bando, H. Date. Thoracic Surgery, Graduate School of Medicine, Kyoto University, Kyoto, Japan.

**(681) Effect of Ex-Vivo Lung Perfusion (EVLV) on Metabolomic Profile of Human Lungs;** T. Egan,<sup>1</sup> B. Dong,<sup>1</sup> A. Tikunov,<sup>2</sup> C. Semelka,<sup>2</sup> J. Blackwell,<sup>1</sup> W. Simmons,<sup>1</sup> P.-F. Kuan,<sup>3</sup> J. Macdonald.<sup>2</sup> <sup>1</sup>Surgery, University of North Carolina, Chapel Hill, NC; <sup>2</sup>Bioengineering, University of North Carolina, Chapel Hill, NC; <sup>3</sup>Gillings Global School of Public Health, University of North Carolina, Chapel Hill, NC.

**(682) Cardiac Transplantation Using Hearts from Donation after Circulatory Death (Dcd) Donors – A Viable Source of Organs?;** A. Iyer,<sup>1,2</sup> L. Gao,<sup>1</sup> A. Doyle,<sup>1</sup> G. Kumarasinghe,<sup>1,2</sup> A. Jabbour,<sup>1,2</sup> M. Hicks,<sup>1</sup> P. Jansz,<sup>2</sup> K. Dhital,<sup>2</sup> P. Macdonald.<sup>1,2</sup> <sup>1</sup>Heart Transplantation Lab, Victor Chang Cardiac Research Institute, Sydney, Australia; <sup>2</sup>Heart & Lung Transplant Program, St Vincent's Hospital, Sydney, Australia.

**(683) The Role of Human Umbilical Cord Mesenchymal Stem Cells in Attenuating Ischemia-Reperfusion Injury in Rat Lung Transplantation Model;** W. Mao, J. Chen. Department of Cardiothoracic Surgery, Wuxi People's Hospital, Nanjing Medical University, Wuxi, Jiangsu, China.

**(684) Modifications of the Skeletal Ryanodine Receptor Type 1 and Exercise Intolerance in Heart Failure;** E. Rullman,<sup>1,2</sup> D.C. Andersson,<sup>1,2</sup> M. Melin,<sup>1,2</sup> S. Reiken,<sup>3,4</sup> D. Mancini,<sup>3</sup> A.R. Marks,<sup>3,4</sup> L.H. Lund,<sup>1,2</sup> T. Gustafsson.<sup>1,2</sup> <sup>1</sup>Medicine, Karolinska Institutet, Stockholm, Sweden; <sup>2</sup>Karolinska University Hospital, Stockholm, Sweden; <sup>3</sup>Medicine, Columbia University College of Physicians and Surgeons, New York; <sup>4</sup>Physiology and Cellular Biophysics, Columbia University College of Physicians and Surgeons, New York.

**(685) Resveratrol Attenuates Stimulated T Cells Activation and Proliferation: A Novel Therapy Against Cellular Rejection in Cardiac Transplantation;** J. Nagendran,<sup>1</sup> C. Bleackley,<sup>2</sup> D.B. Ross,<sup>1</sup> L.J. West,<sup>3</sup> J.R.B. Dyck,<sup>3</sup> J. Nagendran.<sup>1</sup> <sup>1</sup>Surgery, University of Alberta, Edmonton, AB, Canada; <sup>2</sup>Biochemistry, University of Alberta, Edmonton, AB, Canada; <sup>3</sup>Pediatrics, University of Alberta, Edmonton, AB, Canada.

**(686) A Novel Humanized Model To Study the Development of Obliterative Airway Disease;** X. Hua,<sup>1</sup> T. Deuse,<sup>1</sup> M. Stubbendorff,<sup>1</sup> F. Laenger,<sup>2</sup> R. Robbins,<sup>3</sup> H. Reichenspurner,<sup>1</sup> S. Schrepfer.<sup>1,3</sup> <sup>1</sup>TSI-Lab, Cardiovascular Surgery, University Heart Center Hamburg-Eppendorf, Hamburg, Germany; <sup>2</sup>Pathology, University Medical School Hannover, Hannover, Germany; <sup>3</sup>CT Surgery, Stanford University School of Medicine, Stanford.

**(687) Blood Group A Transgenic Mice: A Model for ABO-Incompatible (ABOi) Heart Transplantation (HTx);** A. Kratochvil,<sup>1</sup> B. Motyka,<sup>1</sup> F. Aizouki,<sup>1</sup> S. Wang,<sup>1</sup> K. Tao,<sup>1</sup> S. Tollenaar,<sup>1</sup> J. Bennett,<sup>1</sup> T. Marshall,<sup>1</sup> A.J.F. d'Apice,<sup>2</sup> P.J. Cowan,<sup>2</sup> L.J. West.<sup>1</sup> <sup>1</sup>University of Alberta, Edmonton, Canada; <sup>2</sup>St Vincent's Hospital, Melbourne, Australia.

**(688) Tacrolimus Causes Airway Mucociliary Clearance Impairment;** M.P. Silva,<sup>1</sup> S.F. Soto,<sup>3</sup> T.T.K. Limonete,<sup>4</sup> F.M. Almeida,<sup>2</sup> F.B. Jatene,<sup>1</sup> P.M. Pêgo-Fernandes,<sup>1</sup> R. Pazetti.<sup>1</sup> <sup>1</sup>Thoracic Surgery Department, Heart Institute (InCor) – Faculdade de Medicina da Universidade de São Paulo, São Paulo, Brazil; <sup>2</sup>Pathophysiology Department, Faculdade de Medicina da Universidade de São Paulo, São Paulo, Brazil; <sup>3</sup>Medical Clinic Department, Faculdade de Medicina da Universidade de São Paulo, São Paulo, Brazil.

**(689) Integrative Omics of Aspiration in Lung Transplantation;** D.C. Neujahr,<sup>1</sup> K. Uppal,<sup>2</sup> C. Lockard,<sup>1</sup> K. Lee,<sup>3</sup> V. Tran,<sup>2</sup> D.P. Jones,<sup>2</sup> P. Youngia.<sup>2</sup> <sup>1</sup>Emory Transplant Center, Emory University School of Medicine, Atlanta, GA; <sup>2</sup>Emory Department of Medicine, Emory University School of Medicine, Atlanta, Ga; <sup>3</sup>Department of Industrial Engineering, Hanyang University, Seoul, Korea.

**(690) Hypoxia-Inducible Transcription Factor Target Genes VEGF and TGF-β Modulate Transplant Arteriosclerosis in a Murine Aortic Allograft Model;** C. Heim,<sup>1</sup> S. Jililova,<sup>1</sup> Z. Wang,<sup>2</sup> B. Motsch,<sup>1</sup> N. Koch,<sup>1</sup> M. Ramsperger,<sup>1</sup> N. Burzlaff,<sup>3</sup> M. Weyand,<sup>1</sup> W. Bernhardt,<sup>2</sup> K.U. Eckardt,<sup>2</sup> S. Ensminger.<sup>4</sup> <sup>1</sup>Department of Cardiac Surgery, University of Erlangen-Nuremberg, Erlangen, Germany; <sup>2</sup>Department of Nephrology, University of Erlangen-Nuremberg, Erlangen, Germany; <sup>3</sup>Department of Inorganic and Analytical Chemistry, University of Erlangen-Nuremberg, Erlangen, Germany; <sup>4</sup>Department of Cardiac Surgery, Heart and Diabetes Centre NRW, Bad Oeynhausen, Germany.

**(691) Ex Vivo Intracoronary Gene Transfer of Adeno Associated Virus Serotype 2 Is Superior to Serotypes 8 and 9 in Transfecting Heart Transplants in the Rat;** A. Raissadati,<sup>1</sup> J.J. Jokinen,<sup>1,2</sup> S.O. Syrjälä,<sup>1</sup> R. Tuuminen,<sup>1</sup> R. Krebs,<sup>1</sup> R. Arnaudova,<sup>1</sup> M.A. Keränen,<sup>1</sup> A. Anisimov,<sup>3</sup>



J. Soronen,<sup>3</sup> K. Pajusola,<sup>3</sup> K. Alitalo,<sup>3</sup> A.I. Nykänen,<sup>1,2</sup> K. Lemström.<sup>1,2</sup>  
<sup>1</sup>Transplantation Laboratory, Haartman Institute, University of Helsinki and HUSLAB, Helsinki University Central Hospital, Helsinki, Finland; <sup>2</sup>Department of Cardiothoracic Surgery, University of Helsinki and Helsinki University Central Hospital, Helsinki, Finland; <sup>3</sup>Molecular/Cancer Biology Program, Institute for Molecular Medicine Finland and Helsinki University Central Hospital, Research Program Unit, Biomedicum Helsinki, University of Helsinki, Helsinki, Finland.

## PULMONARY HYPERTENSION

**(692) Plasma Adiponectin in Patients Pulmonary Arterial Hypertension;** N. Selimovic,<sup>1</sup> B. Rundqvist,<sup>1</sup> S.E. Bartfy,<sup>1</sup> B. Andersson,<sup>1</sup> S. Söderberg,<sup>2</sup> <sup>1</sup>Dept. of Cardiology, Sahlgrenska University Hospital, Gothenburg, Sweden; <sup>2</sup>Dept. of Cardiology, Norland's University Hospital, Umeå, Sweden.

**(693) Specific Therapy Modulate Circulating Levels of Adiponectin in Patients with Pulmonary Arterial Hypertension;** N. Selimovic,<sup>1</sup> B. Rundqvist,<sup>1</sup> S.-E. Bartfy,<sup>1</sup> B. Andersson,<sup>1</sup> S. Söderberg.<sup>2</sup> <sup>1</sup>Dept. of Cardiology, Sahlgrenska University Hospital, Gothenburg, Sweden; <sup>2</sup>Dept. of Cardiology, Norrlands University Hospital, Umeå, Sweden.

**(694) The Gradient between Diastolic Pulmonary Arterial Pressure and Pulmonary Wedge Pressure Is Important in the Evaluation of Post-Capillary Pulmonary Hypertension;** S. Stettler,<sup>1</sup> M. Prella,<sup>2</sup> J.-D. Aubert,<sup>2</sup> L. Nicod.<sup>2</sup> <sup>1</sup>Biology and Medicine Faculty, University of Lausanne, Lausanne, VD, Switzerland; <sup>2</sup>Pneumology Unit, Internal Medicine Department, University Hospital, Lausanne, VD, Switzerland.

**(695) Adjusting N-Terminal Pro-Brain Type Natriuretic Peptide Levels for Ventricular Mass Improves Prediction of Right Atrial Pressure and Cardiac Index in Patients with Pulmonary Arterial Hypertension;** A. Raina, S.K.R. Soma, D. Raguvveer, S. Prabhakar, R. Biederman. Cardiovascular Institute, Allegheny General Hospital, Pittsburgh, PA.

**(696) Gender Differences in Response to PAH Therapy: 6MWD and Time to Clinical Worsening;** J. Rusiecki,<sup>1</sup> J. Cleavland,<sup>2</sup> D. Lam,<sup>2</sup> H. Champion.<sup>1</sup> <sup>1</sup>University of Pittsburgh Medical Center, Pittsburgh, PA; <sup>2</sup>United Therapeutics Corp, Pittsburgh, PA.

**(697) Pre-Clinical Testing of Aerosolized Inhaled Milirone Using a Vibrating Mesh Nebulizer;** N. Haglund,<sup>1</sup> M. Luethge,<sup>2</sup> M. Duryee,<sup>2</sup> C. Hunter,<sup>2</sup> Y. Alnouti,<sup>2</sup> T. Corcoran,<sup>3</sup> J. Beck,<sup>2</sup> J. Um,<sup>2</sup> I. Dumitru,<sup>2</sup> S. Maltais,<sup>1</sup> D. Lenihan.<sup>1</sup> <sup>1</sup>Vanderbilt University, Nashville, TN; <sup>2</sup>University of Nebraska Medical Center, Omaha, NE; <sup>3</sup>University of Pittsburgh, Pittsburgh, PA.

## GENERAL POSTER SESSION 3<sup>(516)</sup>

Friday, April 26, 2013

**NOTE:** Poster presenters and poster moderators will be present in the poster hall from 5:30 pm – 6:30 pm

## HEART POST TRANSPLANT COMPLICATIONS

**(698) Cancer in the Norwegian HTx Population; Risk Factors, Incidence and Mortality Compared to General Population;** E. Gude,<sup>1</sup> B. Aagnes,<sup>2</sup> S. Tretli,<sup>2</sup> L. Gullestad,<sup>1</sup> S. Arora,<sup>1</sup> A. Fiane,<sup>3</sup> A. Andreassen.<sup>1</sup> <sup>1</sup>Dept. of Cardiology, Oslo University Hospital Rikshospitalet, Oslo, Norway; <sup>2</sup>Dept. of Research, Cancer Registry of Norway, Institute of Population-Based Research, Oslo, Norway; <sup>3</sup>Dept. of Cardiothoracic Surgery, Oslo University Hospital Rikshospitalet, Oslo, Norway.

**(699) The Impact of Donor Renal Function on Cardiac Allograft Survival: Insights into Reno-Cardiac Interactions;** M.A. Brisco,<sup>1</sup> O. Laur,<sup>2</sup> A. Kula,<sup>2</sup> T. Gilliland,<sup>2</sup> D.L. Jacoby,<sup>2</sup> S.G. Coca,<sup>2</sup> W.H.W. Tang,<sup>3</sup> J.M. Testani.<sup>2</sup> <sup>1</sup>Cardiovascular Division, Department of Medicine, Perelman School of Medicine at the University of Pennsylvania, Philadelphia, PA; <sup>2</sup>Department of Medicine, Yale University School of Medicine, New Haven, CT; <sup>3</sup>Department of Medicine, Cleveland Clinic, Cleveland, OH.

**(700) Risk Factors and Response to Therapy in Heart and Lung Transplant Recipients with Post-Transplant Lymphoproliferative Disease;** G. Kumarasinghe,<sup>1</sup> O. Lavee,<sup>1</sup> A. Parker,<sup>1</sup> A. Keogh,<sup>1</sup> C. Hayward,<sup>1</sup> E. Kotlyar,<sup>1</sup> A. Jabbour,<sup>1</sup> A. Havryk,<sup>1</sup> M. Malouf,<sup>1</sup> M. Pliit,<sup>1</sup> A. Glanville,<sup>1</sup> P. Macdonald,<sup>1</sup> J. Moore.<sup>1</sup> <sup>1</sup>Heart and Lung Transplant Unit, St. Vincent's Hospital, Sydney, NSW, Australia; <sup>2</sup>Dept of Haematology, St. Vincent's Hospital, Sydney, NSW, Australia.

**(701) Clinical and Echocardiographic Presentation of Rejection Episodes Following Heart Transplantation;** N.L. Sudini,<sup>1</sup> J. Huo,<sup>1</sup> S. Pan,<sup>1</sup> J. Montoya,<sup>4</sup> S. Leon,<sup>4</sup> T. Vu,<sup>1</sup> R.E. Beygui,<sup>2</sup> B. Vrtovec,<sup>3</sup> J.C. Wu,<sup>1</sup> M. Pham,<sup>1</sup> K. Kush,<sup>1</sup> G. Berry,<sup>5</sup> S. Hunt,<sup>1</sup> F. Haddad.<sup>1</sup> <sup>1</sup>Cardiovascular Medicine, Stanford University Medical Center, Stanford, CA; <sup>2</sup>Cardiothoracic Surgery, Stanford University Medical Center, Stanford, CA; <sup>3</sup>Cardiology, Stanford University Medical Center, Stanford, CA; <sup>4</sup>Infectious Diseases, Stanford University Medical Center, Stanford, CA; <sup>5</sup>Pathology, Stanford University Medical Center, Stanford, CA.

**(702) Chronic Anemia Is Not a Predictor for Poor Outcome after Heart Transplantation;** M. Kittleson, J. Patel, M. Rafiei, A. Osborne, J. Yabuno, D. Chang, B. Azarbal, L. Czer, M. Hamilton, J. Kobashigawa. Cedars-Sinai Heart Institute, Los Angeles, CA.

**(703) Early Inflammatory Predictors of Post-Transplant Major Adverse Cardiac Events;** C.A. Labarrere,<sup>1</sup> J.R. Woods,<sup>2</sup> J.W. Hardin,<sup>3</sup> B.R. Jaeger,<sup>4</sup> M. Zembala,<sup>5</sup> M.C. Deng,<sup>6</sup> P.C. Kirlin,<sup>7</sup> D.E. Pitts.<sup>7</sup> <sup>1</sup>CBL Partners for Life, Noblesville, IN; <sup>2</sup>Methodist Research Institute, Indiana University Health, Indianapolis, IN; <sup>3</sup>Epidemiology and Biostatistics, University of South Carolina, Noblesville, SC; <sup>4</sup>Dr. Stein und Kollegen, Mönchengladbach, Germany; <sup>5</sup>Silesian Center for Heart Diseases, Zabrze, Poland; <sup>6</sup>Ronald Reagan UCLA Medical Center, Los Angeles, CA; <sup>7</sup>St Vincent Heart Center of Indiana, Indianapolis, IN.

**(704) End of an Era: Reduced Severity of Tricuspid Regurgitation in Cardiac Transplant Recipients Managed with Molecular Diagnostic Testing;** S. Feitell,<sup>1</sup> J. Patel,<sup>1</sup> P. Pirlamarla,<sup>1</sup> J. Whittier,<sup>1</sup> E. Gongora,<sup>1</sup> T. Rowe,<sup>2</sup> S. Hankins,<sup>1</sup> H.J. Eisen.<sup>1</sup> <sup>1</sup>Division of Cardiology/Department of Medicine, Drexel University College of Medicine, Philadelphia, PA; <sup>2</sup>Center for Advanced Heart Failure Care, Hahnemann University Hospital, Philadelphia, PA.

**(705) Role of Donor-Recipient Match in Determining the Risk for Primary Graft Failure after Heart Transplantation;** C. Lonetti, V. Manfredini, L. Potena, V. Pece, M. Masetti, S. Martin-Suarez, E. Pilato, A. Loforte, G. Magnani, F. Grigioni, G. Arpesella, A. Branzi. Cardiovascular Department, University of Bologna, Bologna, Italy.

**(706) Natural History of Tricuspid Valve Regurgitation (TR) Diagnosed Immediately after Heart Transplant;** G. Zanotti,<sup>1</sup> L. Shaw,<sup>2</sup> A. Castleberry,<sup>1</sup> J. Schroder,<sup>1</sup> E. Velazquez,<sup>3</sup> M. Swaminathan,<sup>4</sup> J. Rogers,<sup>3</sup> C. Milano.<sup>1</sup> <sup>1</sup>Surgery, Duke University Medical Center, Durham, NC; <sup>2</sup>DCRI, Duke University, Durham, NC; <sup>3</sup>Medicine – Cardiology, Duke University Medical Center, Durham, NC; <sup>4</sup>Anesthesiology, Duke University Medical Center, Durham, NC.

**(707) Significance of Persistent EBV Viral Load in Pediatric Heart Transplant Recipients;** B.B. Das, A. Barnes, D. Fixler. Division of Cardiology, Dept of Pediatrics, Children's Medical Center, UT Southwestern Medical Center, Dallas, TX.

**(708) Are the Clinical Implications of Lactic Acidosis Similar Post-Cardiac Transplantation Versus Post-LVAD Implantation?;** S.B. Wachter, J. Nixon, S.B. Oberton, A.G. Kfoury, D. Budge, J. Nativi, J. Stehlik, R. Alharethi, C. Selzman, B. Reid, E.M. Gilbert. UTAH Cardiac Transplant Program, Salt Lake City, UT.



**(709) Extra-Corporeal Membrane Oxygenation Support in Cardiac Transplantation;** H.B. Bittner,<sup>1</sup> J. Garbade,<sup>2</sup> S. Lehmann,<sup>2</sup> M.J. Barten,<sup>2</sup> F.W. Mohr.<sup>2</sup> <sup>1</sup>Florida Hospital Orland, Transplant Institute, Orlando, FL; <sup>2</sup>Cardiovascular Surgery and Thoracic Transplantation, Heart Center of the University of Leipzig, Leipzig, Germany.

**(710) Pus Bonum Et Laudabile? – Wound Healing Complications after Heart Transplantation in the 21st Century;** M. Groemmer,<sup>1</sup> A.Z. Aliabadi,<sup>1</sup> O. Salameh,<sup>1</sup> M. Kohl,<sup>2</sup> D. Wiedemann,<sup>1</sup> G. Laufer,<sup>1</sup> A.O. Zuckermann.<sup>1</sup> <sup>1</sup>Cardiac Surgery, Medical University of Vienna, Vienna, Austria; <sup>2</sup>Medical Statistics University of Vienna, Vienna, Austria.

**(711) Impact of Sex Mismatch on Overall and Cardiac Survivals in Male Heart Recipients: A 21-Year French Experience;** E. Vermes, A. Sirinelli, J.F. Marliere, A. Mirza, M. Aupart. Cardiac Surgery, University Hospital of Trousseau, Tours, France.

**(712) Risk Factors of Renal Dysfunction Following Cardiac Transplantation;** K. Lachance,<sup>1,2</sup> M. Carrier,<sup>1,3</sup> A. Mansour,<sup>4</sup> A. Ducharme,<sup>1,3</sup> N. Racine,<sup>1,3</sup> M. Liszkowski,<sup>1,3</sup> M. White,<sup>1,3</sup> S. de Denuis.<sup>1,2</sup> <sup>1</sup>Montréal Heart Institute, Montréal, QC, Canada; <sup>2</sup>Faculty of Pharmacy, Université de Montréal, Montréal, QC, Canada; <sup>3</sup>Faculty of Medicine, Université de Montréal, Montréal, QC, Canada; <sup>4</sup>Montréal Heart Institute Coordinating Center, Montréal, QC, Canada.

**(713) Recipient Cytokine Levels Are Associated with Primary Cardiac Allograft Failure;** M. Ishida, K. Toda, S. Miyagawa, H. Nishi, Y. Yoshikawa, S. Fukushima, D. Yoshioka, T. Saito, K. Kubota, H. Fukushima, Y. Shirakawa, T. Kuratani, Y. Sawa. Cardiovascular Surgery, Osaka University Graduate School of Medicine, Suita, Osaka, Japan.

**(714) Cardiac Surgery Is Successful in Heart Transplant Recipients;** T.R. Holmes, C.S. Hayward, P. Macdonald, P. Spratt, P. Jansz, K. Dhital, E. Granger. Heart Lung Transplant Unit, St Vincent's Hospital, Sydney, NSW, Australia.

**(715) Assessment of Right Ventricular Systolic Function in Heart Transplant Patients: Correlation between Echocardiography and Cardiac Magnetic Resonance Imaging. Investigation of the Accuracy and Reliability of Echocardiography;** E. Simsek,<sup>1</sup> S. Nalbantgil,<sup>1</sup> N. Ceylan,<sup>2</sup> M. Zoghi,<sup>1</sup> Ç. Engin,<sup>1</sup> T. Yagdi,<sup>3</sup> M. Özbaran.<sup>3</sup> <sup>1</sup>Cardiology, Ege University School of Medicine, Izmir, Turkey; <sup>2</sup>Radiology, Ege University School of Medicine, Izmir, Turkey; <sup>3</sup>Cardiovascular Surgery, Ege University School of Medicine, Izmir, Turkey.

**(716) Growth Differentiation Factor 15 (GDF-15) Is Related to Anemia and Iron Metabolism in Heart Allograft Recipients;** P. Przybylowski,<sup>1</sup> J. Malyszko,<sup>2</sup> J.S. Malyszko.<sup>2</sup> <sup>1</sup>Department of Cardiovascular Surgery and Transplantation, Jagiellonian University, Krakow, Poland; <sup>2</sup>Department of Nephrology and Transplantation, Białystok Medical University, Białystok, Poland.

**(717) Are There Differences in the Development of Proteinuria after Everolimus Initiation and Calcineurin Withdrawal or Not in Heart Transplantation?;** M.J. Paniagua-Martín, E. Barge-Caballero, R. Marzoa-Rivas, S. Chávez-Leal, M. López Pérez, A. Barrio Rodríguez, Z. Grille-Cancela, C. Naya-Leira, P. Blanco-Canosa, M.G. Crespo-Leiro. Advanced Heart Failure and Heart Transplant Unit, Hospital Universitario A Coruña, A Coruña, A Coruña, Spain.

**(718) Patterns of Acute Cellular Rejection the First Year after Heart Transplantation: A Single Center Retrospective Study at Skåne University Hospital in Lund 1988-2010;** C. Söderlund,<sup>2</sup> J. Öhman,<sup>1</sup> J. Nilsson,<sup>3</sup> T. Higgins,<sup>4</sup> L. Johansson,<sup>5</sup> B. Kornhall,<sup>2</sup> G. Rådegran.<sup>2</sup> <sup>1</sup>Department of Cardiology, Clinical Sciences, Lund University, Lund, Sweden; <sup>2</sup>The Haemodynamic Lab, The Clinic for Heart Failure & Valvular Disease, Skåne University Hospital, Department of Cardiology, Clinical Sciences, Lund University, Lund, Sweden; <sup>3</sup>Department of Thoracic Surgery, Anesthesiology and Intensive Care, Skåne University Hospital, Lund University, Lund, Sweden; <sup>4</sup>Children's Heart Centre and Pediatric Surgery, Skåne University Hospital, Lund University, Lund, Sweden; <sup>5</sup>Department of Pathology, Skåne University Hospital, Lund University, Lund, Sweden.

**(719) Primary Graft Failure after Heart Transplantation: Risk Factors Analysis and Long-Term Results;** R. Marco, B. Massimo, A. Matteo, P. Daniela, R. Mauro. Cardiovascular Surgery, University of Turin, Torino, TO, Italy.

**(720) Tricuspid Regurgitation after Cardiac Transplantation Does Not Affect Long-Term Survival;** A. Ferrara, Y. Abu-Omar, P. Curry, C. Sudarshan, J. Parameshwar, C. Lewis, J. Dunning, S. Tsui, S. Nair. Department of Transplantation, Papworth NHS Foundation Trust, Cambridge, United Kingdom.

**(721) Effects of Anti-HLA Antibodies Present before Heart Transplantation on Survival, Acute Cellular Rejection and Coronary Allograft Vasculopathy: A Single Center Experience;** J.M. Eschborn,<sup>1</sup> D. Kemper,<sup>1</sup> C. Schönemann,<sup>2</sup> C. Knosalla,<sup>1</sup> R. Hetzer,<sup>1</sup> N.E. Hiemann.<sup>1</sup> <sup>1</sup>Department of Cardiothoracic and Vascular Surgery, Deutsches Herzzentrum Berlin, Berlin, Germany; <sup>2</sup>Institute of Transfusion Medicine, Charité University Medicine Berlin, Berlin, Germany.

**(722) ABO-Incompatible Heart Transplantation: Necessity or Possibility?;** S. Gautier, V. Poptsov, R. Saitgarev, D. Shumakov, V. Zakharevich, A. Kormer, T. Khalilulin, O. Shevchenko, A. Kupriyanova, A. Goltz. Heart Transplantation and Coronary Surgery, Federal V.Shumakov Research Center of Transplantation and Artificial Organs, Moscow, Russian Federation.

**(723) Early Extubation in Operating Room after Heart Transplantation;** V.N. Poptsov, E.A. Spirina, O.U. Vinogradova. Anaesthesiology and Intensive Care, Shumakov Federal Research Centre of Transplantation and Artificial Organs, Moscow, Russian Federation.

**(724) Incidence of Proteinuria after Initiation of Everolimus in Heart Transplantation. May It Have Repercussion on Renal Function?;** M.J. Paniagua-Martín, E. Barge-Caballero, R. Marzoa-Rivas, S. Chávez-Leal, M. López Pérez, A. Barrio Rodríguez, Z. Grille-Cancela, C. Naya-Leira, P. Blanco-Canosa, M.G. Crespo-Leiro. Advanced Heart Failure and Heart Transplant Unit, Hospital Universitario A Coruña, A Coruña, A Coruña, Spain.

**(725) Renin-Angiotensin System (RAS) Blockade Reduces Proteinuria in Heart Transplant Recipients: An Observational, Longitudinal Analysis;** C.K. Shakowski,<sup>1</sup> R.L. Page II,<sup>2</sup> S. Shakar,<sup>3</sup> A. Brieke,<sup>3</sup> E.E. Wolfel,<sup>3</sup> L. Allen,<sup>3</sup> A. Ambardekar,<sup>3</sup> J. Lindenfeld.<sup>3</sup> <sup>1</sup>Pharmacy, University of Colorado Hospital, Aurora, CO; <sup>2</sup>Clinical Pharmacy, University of Colorado Skaggs School of Pharmacy, Aurora, CO; <sup>3</sup>Medicine, University of Colorado School of Medicine, Aurora, CO.

**(726) Office and Home Systolic Blood Pressures Are Underestimated in Heart Transplant Recipients;** C.L. Aquilante,<sup>1</sup> R.L. Page II,<sup>2</sup> A. Vu,<sup>1</sup> N. Roscoe,<sup>1</sup> E.E. Wolfel,<sup>3</sup> J. Lindenfeld.<sup>3</sup> <sup>1</sup>Pharmaceutical Sciences, University of Colorado Skaggs School of Pharmacy and Pharmaceutical Sciences, Aurora, CO; <sup>2</sup>Clinical Pharmacy, University of Colorado Skaggs School of Pharmacy and Pharmaceutical Sciences, Aurora, CO; <sup>3</sup>Division of Cardiology, University of Colorado School of Medicine, Aurora, CO.

**(727) Longer and Shorter Hospital Stay after Heart Transplant Both Risk Factors for Suboptimal Outcome;** M. Kittleson, J. Patel, M. Rafiei, A. Osborne, M. Tittle, D.H. Chang, L. Czer, F. Esmailian, A. Trento, J. Kobashigawa. Cedars-Sinai Heart Institute, Los Angeles, CA.

**(728) Histomorphometric Analysis of Myocardial Fibrosis after Heart Transplantation;** S. Kretschmer, N.E. Hiemann, R. Hetzer, R. Meyer. Deutsches Herzzentrum Berlin, Berlin, Germany.

## LUNG FAILURE, DIAGNOSTICS, THERAPEUTICS

**(729) Interleukin-17 Tissue Expression Correlates with Severity of Acute and Chronic Allograft Rejection in Rat Orthotopic Lung Transplantation;** F. Calabrese,<sup>1</sup> N. Nannini,<sup>1</sup> F. Lunardi,<sup>1</sup> M. Vadori,<sup>2</sup> E. Cozzi,<sup>2</sup> F. Rea.<sup>1</sup> <sup>1</sup>Department of Cardiac, Thoracic and Vascular Sciences, University of Padova, Padova, Italy; <sup>2</sup>Department of Medical and Surgical Sciences, University of Padova, Padova, Italy.

**(730) Gastroparesis after Lung Transplantation: Prevalence, Reversibility and Relation with Outcome;** J. Smit,<sup>1</sup> A.W.J.M. Glaudemans,<sup>2</sup> W. van der Bij,<sup>1</sup> M.E. Erasmus,<sup>1</sup> E.A.M. Verschuuren.<sup>1</sup> <sup>1</sup>Pulmonary Diseases, University Medical Center Groningen, University of Groningen, Groningen, Netherlands; <sup>2</sup>Nuclear Medicine & Molecular Imaging, University Medical Center Groningen, University of Groningen, Groningen, Netherlands.

**(731) Lung Transplant Recipients Suspected of Antibody Mediated Rejection Treated with Plasmapheresis Have a Poor Prognosis;** C.G. Dirks,<sup>1</sup> M.B. Damholt,<sup>2</sup> W. Szpirt,<sup>3</sup> H. Bruunsgaard,<sup>4</sup> C.B. Andersen,<sup>1</sup> J. Carlsen,<sup>1</sup> M. Perch,<sup>1</sup> L. Mared,<sup>1</sup> M. Iversen.<sup>1</sup> <sup>1</sup>Department of Cardiology, Unit of Lung Transplantation, Rigshospitalet Copenhagen University Hospital, Copenhagen, Denmark; <sup>2</sup>Department of Nephrology, Rigshospitalet Copenhagen University Hospital, Copenhagen, Denmark; <sup>3</sup>Department of Clinical Immunology, Rigshospitalet Copenhagen University Hospital, Copenhagen, Denmark; <sup>4</sup>Department of Pathology, Rigshospitalet Copenhagen University Hospital, Copenhagen, Denmark.

**(732) Predictors of Need of Renal Replacement Therapy among Lung Transplant Patients Admitted to the Medical Intensive Care Unit;** A. Banga, D. Sahoo, M. Budev, M. Sasidhar. Respiratory Institute, Cleveland Clinic Foundation, Cleveland, OH.

**(733) Clamshell Incision vs. Sternal-Sparing Incision in Lung Transplantation;** G. Arndt,<sup>1,2</sup> E. Granger,<sup>1,2</sup> A. Glanville,<sup>1</sup> M. Malouf.<sup>1</sup> <sup>1</sup>Heart Lung Transplant Unit, St Vincent's Hospital, Darlinghurst, NSW, Australia; <sup>2</sup>Faculty of Medicine, University of New South Wales, Kensington, NSW, Australia.

**(734) Airway Complications after Lung Transplantation: Incidence, Risk Factors, Management and Outcome;** Y. de Reus,<sup>1</sup> D.J. Slebos,<sup>1</sup> E. Verschuuren,<sup>1</sup> M. Erasmus,<sup>2</sup> C. Van De Wauwer,<sup>2</sup> W. van der Bij.<sup>1</sup> <sup>1</sup>Pulmonary Diseases, University Medical Center, University of Groningen, Groningen, Netherlands; <sup>2</sup>Pulmonary Diseases, University Medical Center, University of Groningen, Groningen, Netherlands.

**(735) Clinical Predictors and Outcome Implications of 30-Day Hospital Readmission in Lung Transplant Recipients;** A.A. Osho,<sup>1</sup> A.W. Castleberry,<sup>2</sup> L.D. Snyder,<sup>3</sup> S.M. Palmer,<sup>3</sup> S.S. Lin,<sup>2</sup> R.D. Davis,<sup>2</sup> M.G. Hartwig.<sup>2</sup> <sup>1</sup>School of Medicine, Duke University Medical Center, Durham, NC; <sup>2</sup>Department of Surgery, Duke University Medical Center, Durham, NC; <sup>3</sup>Department of Medicine, Duke University Medical Center, Durham, NC.

**(736) Managing Bronchial Anastomotic Complications – The Influence of Aspergillosis;** L.A. Kenny, S. Robert, G. Sarwar, S.C. Clark. Cardiothoracic Directorate, Freeman Hospital, Newcastle upon Tyne, United Kingdom.

**(737) Contemporary Outcomes of Lung Transplantation Using Extracorporeal Membrane Oxygenation as Bridge;** C.A. Bermudez,<sup>1</sup> S. Norihisa,<sup>1</sup> Z. Diana,<sup>2</sup> D.D. Annette,<sup>3</sup> B. Jay,<sup>1</sup> C. Maria,<sup>2</sup> P. Joseph,<sup>2</sup> G. Cynthia,<sup>2</sup> P. Sappington,<sup>2</sup> D. Jonathan.<sup>1</sup> <sup>1</sup>Cardiothoracic Surgery, UPMC, Pittsburgh; <sup>2</sup>Pulmonary and Critical Care Medicine, UPMC, Pittsburgh; <sup>3</sup>Acute and Tertiary Care -School of Nursing, University of Pittsburgh, Pittsburgh.

**(738) Clinical Outcomes in Elderly Lung Transplant Recipients 70 Years and Older;** B.A. Bruckner,<sup>1</sup> T. Motomura,<sup>1</sup> T.S. Kaleekal,<sup>2</sup> S.S. Jyothula,<sup>2</sup> S. Scheinin,<sup>1</sup> R.R. Bunge,<sup>1</sup> N. Tangirala,<sup>2</sup> M. Loebe,<sup>1</sup> H. Seethamraju.<sup>2</sup> <sup>1</sup>Cardiovascular Surgery/Thoracic Transplant, The Methodist Hospital DeBakey Heart & Vascular Center, Houston, TX; <sup>2</sup>Pulmonary and Critical Care, The Methodist Hospital, Houston, TX.

**(739) Lobar Lung Transplantation – Is It Comparable to Standard Lung Transplantation?;** A. Slama, A. Hoda, T. Klivkovits, A. Scheed, K. Hötzenacker, J. Matilla, G. Lang, S. Taghavi, W. Klepetko, C. Aigner. Thoracic Surgery, Medical University of Vienna, Vienna, Austria.

**(740) This abstract has been moved to Wednesday Poster Session 1**

**(741) Lung Transplant Outcomes for High-Risk Patients (LAS≥50) with Idiopathic Pulmonary Fibrosis (IPF);** S. Osaki,<sup>1</sup> K.C. Meyer,<sup>2</sup> J.D. Maloney,<sup>1</sup> R.D. Cornwell,<sup>2</sup> N.C. DeOliveira.<sup>1</sup> <sup>1</sup>Surgery, Division of Cardiothoracic Surgery,

University of Wisconsin, Madison, WI; <sup>2</sup>Medicine, Section of Pulmonary and Critical Care Medicine, University of Wisconsin, Madison, WI.

**(742) Outcomes after Lung Transplantation for Cystic Fibrosis: A Single Center Experience;** J. Morisset, L. Lands, A. Yiannopoulos, C. Bergeron, P. Ferraro, C. Poirier. Centre Hospitalier de l'Université de Montréal, Montréal, Canada.

**(743) Prevalence and Severity of Diverticular Disease in the Post-Lung Transplant Population – A Single Center's Experience;** L.K. Thomas,<sup>1</sup> E. Lowery,<sup>1</sup> J. Saucedo,<sup>2</sup> B. Canavan,<sup>1</sup> E. Mahoney,<sup>1</sup> C. Wigfield.<sup>2</sup> <sup>1</sup>Department of Internal Medicine, Division of Pulmonology and Critical Care, Loyola University Medical Center, Maywood, IL; <sup>2</sup>Department of Thoracic and Cardiovascular Surgery, Loyola University Medical Center, Maywood, IL; <sup>3</sup>Loyola University Stritch School of Medicine, Maywood, IL.

**(744) An Analysis of the Characteristics of Lung Transplant Patients That Develop Heparin Induced Thrombocytopenia Type II (HIT) after Transplant;** A. Ataya,<sup>1</sup> R. Fadul,<sup>1</sup> A. Tang,<sup>1</sup> M. Gomes,<sup>3</sup> G. Pettersson,<sup>2</sup> K. McCurry,<sup>2</sup> D.P. Mason,<sup>2</sup> S. Murthy,<sup>2</sup> D. Johnston,<sup>2</sup> A. Mehta,<sup>1</sup> O. Akindipe,<sup>1</sup> C. Lane,<sup>1</sup> M. Budev.<sup>1</sup> <sup>1</sup>Respiratory Institute, Cleveland Clinic Foundation, Cleveland, OH; <sup>2</sup>Thoracic and Cardiovascular Surgery, Cleveland Clinic Foundation, Cleveland, OH; <sup>3</sup>Vascular Medicine Institute, Cleveland Clinic Foundation, Cleveland, OH.

**(745) Diffuse Alveolar Damage as an Isolated Finding after Lung Transplantation: Beneficial Effect of Corticotherapy;** F. Stephan,<sup>1</sup> C. Diarra,<sup>1</sup> T. Kortchinsky,<sup>1</sup> E. Fadel,<sup>3</sup> V. de Montpreville.<sup>2</sup> <sup>1</sup>Reanimation Adulte, Centre Chirurgial Marie Lannelongue, Le Plessis Robinson, France; <sup>2</sup>Service d'Anatomopathologie, Centre Chirurgial Marie Lannelongue, Le Plessis Robinson, France; <sup>3</sup>Dept de Chirurgie Thoracique et Vasculaire, Centre Chirurgial Marie Lannelongue, Le Plessis Robinson, France.

**(746) Primary Graft Dysfunction Mimic – Pulmonary Vein Thrombosis in the Postoperative Lung Transplant Patient;** T. Kaleekal, J. Soma, B. Mankidy, S. Scheinin, M. Loebe, H. Seethamraju. The Methodist Hospital, Houston, TX.

**(747) Lung Transplantation Outcomes in “Older” Patients: Risk vs. Benefit?;** S. Ibrahim, A. Omer, R. Saggarr, J. Hurley, R. Bremner, E. Kuo, J. Huang, S.A. Hashimi, M. Smith, R. Walia. Heart-Lung Institute-Thoracic Transplantation, St. Joseph Hospital & Medical Center, Phoenix, AZ.

**(748) Thrombocytosis More Common in Acute Rejection or Infection in the First 30 Days Post Lung Transplantation;** K.F. Catlyn,<sup>1</sup> J.C. Salgado,<sup>1</sup> I. Timofte,<sup>2</sup> C. Eagan,<sup>1</sup> W. Swafford,<sup>1</sup> M.A. Baz.<sup>1</sup> <sup>1</sup>Medicine - Division of Pulmonary, Critical Care and Sleep Medicine, University of Florida, Gainesville, FL; <sup>2</sup>Medicine – Division of Pulmonary, Allergy and Critical Care Medicine, University of Pittsburgh, Pittsburgh, PA.

**(749) Left Ventricular Dysfunction after Lung Transplantation in Pulmonary Hypertension Patients;** S. Gupta, F. Torres, P. Irukulla, S. Bollineni, V. Kaza. Pulmonary/Critical Care, UT Southwestern Medical Center, Dallas, TX.

**(750) Prolonged Mechanical Ventilation in Lung Transplant Recipients: Predictive Factors and Outcomes;** C. Gomez,<sup>1,2</sup> C. Doddoli,<sup>2,3</sup> B. Coltey,<sup>1</sup> N. Dufeu,<sup>1</sup> S. Dizier,<sup>4</sup> P.-A. Thomas,<sup>2,3</sup> L. Papazian,<sup>2,4</sup> M. Reynaud.<sup>1,2</sup> <sup>1</sup>Pulmonary Medicine, Lung Transplant Team, North Hospital, Aix-Marseille University, France, Metropolitan; <sup>2</sup>URMITE-CNRS-IRD UMR 6236, University of Aix-Marseille, Marseille, France, Metropolitan; <sup>3</sup>Thoracic Surgery, Lung Transplant Team, North Hospital, Aix-Marseille University, France, Metropolitan; <sup>4</sup>Intensive Care Unit, Lung Transplant Team, North Hospital, Aix-Marseille University, France, Metropolitan.

**(751) Effects of Hyperglycemia on Primary Graft Dysfunction in Lung Transplantation;** W. Weir,<sup>1</sup> M.K. Han,<sup>2</sup> T.Y. Shih,<sup>1</sup> R.M. Reddy,<sup>1</sup> K.M. Chan,<sup>2</sup> A.C. Chang,<sup>1</sup> J. Lin.<sup>1</sup> <sup>1</sup>Section of Thoracic Surgery, Dept of Surgery, University of Michigan, Ann Arbor, MI; <sup>2</sup>Division of Pulmonary Critical Care Medicine, University of Michigan, Ann Arbor, MI.

**(752) Retrospective Review of PRES in Lung Transplantation;** A.M. Allred,<sup>1</sup> V. Kaza.<sup>2</sup> <sup>1</sup>Department of Anesthesiology and Pain Management, UT Southwestern, Dallas, TX; <sup>2</sup>Department of Pulmonary Critical Care, UT Southwestern, Dallas, TX.

**(753) Hypogammaglobulinaemia Post-Lung Transplant Is Associated with Deficient B Cell Function;** S.T. Yerkovich,<sup>1,2</sup> L. Franz,<sup>1</sup> M. Grant,<sup>1</sup> P.M.A. Hopkins,<sup>1,2</sup> D.C. Chambers.<sup>1,2</sup> <sup>1</sup>Queensland Lung Transplant Service, The Prince Charles Hospital, Brisbane, QLD, Australia; <sup>2</sup>School of Medicine, The University of Queensland, Brisbane, Qld, Australia.

**(754) Increasing Creatine Phosphokinase and Myoglobin Levels Predict the Development of Acute Renal Failure Immediately after Combined Heart-Lung Transplantation;** J. Salman,<sup>1</sup> A. Bertram,<sup>3</sup> C. Kuehn,<sup>1</sup> I. Tudorache,<sup>1</sup> M. Avsar,<sup>1</sup> A.-K. Koefel,<sup>1</sup> W. Sommer,<sup>1</sup> J. Gottlieb,<sup>2</sup> A. Haverich,<sup>1</sup> G. Warnecke.<sup>1</sup> <sup>1</sup>Department of Cardiothoracic, Transplantation and Vascular Surgery, Hannover, Germany; <sup>2</sup>Department of Pneumology, Hannover, Germany; <sup>3</sup>Department of Nephrology, Hannover, Germany.

## MECHANICAL CIRCULATORY SUPPORT

**(755) Open Chest Epicardial Ablation of Ventricular Tachycardia Early after Left Ventricular Assist Device Implantation;** F. Raissi Shabari,<sup>1</sup> J. Yousef,<sup>1</sup> W. Cohn,<sup>1</sup> I. Gregoric,<sup>2</sup> O.H. Frazier,<sup>1</sup> J. Cheng,<sup>1</sup> N. Mathuria.<sup>1</sup> <sup>1</sup>Texas Heart Institute, Houston, TX; <sup>2</sup>University of Texas Houston, Houston, TX.

**(756) Substantial Recovery of Renal Function Is Uncommon Early Post Cardiac Transplant Irrespective of Pre-Transplant LVAD Support;** M.A. Brisco,<sup>1</sup> E. Vorovich,<sup>1</sup> M.R. Molina,<sup>1</sup> J.M. Testani.<sup>2</sup> <sup>1</sup>Cardiovascular Division, Department of Medicine, Perelman School of Medicine at the University of Pennsylvania, Philadelphia, PA; <sup>2</sup>Department of Medicine, Yale University School of Medicine, New Haven, CT.

**(757) Impact of Early Adverse Events (AE's) on Later Mortality in Patients Supported by Continuous-Flow Ventricular Assist Devices (CF-VAD);** K. Jackson,<sup>1</sup> C. McAnaney,<sup>1</sup> J. Teuteberg,<sup>2</sup> M.A. Dew,<sup>1</sup> J. Bhamra,<sup>2</sup> C. Bermudez,<sup>2</sup> R. Ramani,<sup>2</sup> D. McNamara,<sup>2</sup> R. Kormos.<sup>2</sup> <sup>1</sup>University of Pittsburgh School of Medicine, Pittsburgh, PA; <sup>2</sup>Heart and Vascular Institute, University of Pittsburgh, Pittsburgh, PA.

**(758) Clinical Scores and Echocardiography for Right Ventricular Failure Risk Prediction after Implantation of Continuous-Flow Left Ventricular Assist Devices;** A.P. Kalogeropoulos, S. Siwamogsatham, J.F. Weinberger, A.A. Kelkar, V.V. Georgiopolou, A. Pekarek, K.M. Wittersheim, D. Gupta, R.T. Cole, S.R. Laskar, D.Q. Nguyen, D.B. Sims, J. Butler, J.D. Vega. Emory University, Atlanta, GA.

**(759) Does Red Blood Cell Fragility Predict the Degree of Post-LVAD Hemolysis?;** J.L. Madden,<sup>1</sup> S.G. Drakos,<sup>2</sup> J. Stehlik,<sup>2</sup> S.H. McKellar,<sup>1</sup> M.T. Rondina,<sup>3</sup> A.S. Weyrich,<sup>4</sup> C.H. Selzman.<sup>1</sup> <sup>1</sup>Cardiothoracic Surgery, University of Utah Hospitals & Clinics, Salt Lake City, UT; <sup>2</sup>Cardiology, University of Utah Hospitals & Clinics, Salt Lake City, UT; <sup>3</sup>Internal Medicine, University of Utah Hospitals & Clinics, Salt Lake City, UT; <sup>4</sup>Bioscience, University of Utah Hospitals & Clinics, Salt Lake City, UT.

**(760) Pre-Operative Velocity Vector Imaging To Predict the Need for Right Ventricular Support in Patients Undergoing Left Ventricular Assist Device Implantation;** L. Wang,<sup>1</sup> C.G. Gidea,<sup>2</sup> D.A. Baran,<sup>2</sup> J. Pieretti,<sup>2</sup> C.Y. Guerrero-Miranda,<sup>2</sup> J.A. Weiss,<sup>2</sup> M. Camacho,<sup>2</sup> C. Chen,<sup>3</sup> T. Martin,<sup>2</sup> M.J. Zucker.<sup>2</sup> <sup>1</sup>Division of Cardiology, Massachusetts General Hospital, Boston, MA; <sup>2</sup>Heart Failure and Transplant Program, Newark Beth Israel Medical Center, Newark, NJ; <sup>3</sup>Division of Cardiology, Newark Beth Israel Medical Center, Newark, NJ.

**(761) Implantable Ventricular Assist Device Use in the Immunosuppressed Patient;** S. Jones, Y. Naka, T. Ota, Z. Khalpey, L. Margolis, S. Naroji, H. Yerebakan, N. Uriel, P. Colombo, U. Jorde, H. Takayama. Cardiac Surgery, Columbia University, New York.

**(762) The Effect of Continuous Flow Left Ventricular Assist Device (CF-LVAD) Implantation on Serum Uric Acid Levels;** A.N. Rosenbaum,<sup>1</sup> S. Duval,<sup>2</sup> M.B. Khan,<sup>3</sup> M. Pritzker,<sup>1</sup> R. John,<sup>4</sup> P.M. Eckman.<sup>1</sup> <sup>1</sup>Department of Medicine, Cardiovascular Division, University of Minnesota, Minneapolis, MN; <sup>2</sup>Lillehei Clinical Research Unit and Cardiovascular Division, University of Minnesota Medical School, Minneapolis, MN; <sup>3</sup>Department of Internal Medicine, Good Samaritan Hospital, Cincinnati, OH; <sup>4</sup>Department of Surgery, Division of Cardiothoracic Surgery, University of Minnesota, Minneapolis, MN.

**(763) Impact of Continuous and Pulsatile-Flow Left Ventricular Assist Devices on Post-Transplant Rejection;** M. Urban,<sup>1</sup> O. Szarszoi,<sup>1</sup> J. Pirk,<sup>1</sup> H. Riha,<sup>2</sup> I. Netuka.<sup>1</sup> <sup>1</sup>Cardiac Surgery, Institute for Clinical and Experimental Medicine, Prague, Czech Republic; <sup>2</sup>Anesthesiology and Critical Care, Institute for Clinical and Experimental Medicine, Prague, Czech Republic.

**(764) Improvement in Severe Kidney Dysfunction after Implantation of Continuous-Flow Left Ventricular Assist Devices;** S. Saxena,<sup>1</sup> J. Um,<sup>2</sup> I. Dumitru,<sup>1</sup> B. Cookman,<sup>1</sup> S. Pilmaier,<sup>1</sup> T. Ryan,<sup>2</sup> S. Yannone,<sup>2</sup> M. Moulton,<sup>2</sup> B. Lowes,<sup>1</sup> E. Raichlin.<sup>1</sup> <sup>1</sup>Cardiology, University of Nebraska Medical Center, Omaha, NE; <sup>2</sup>Surgery-Cardiovascular & Thoracic Surgery, University of Nebraska Medical Center, Omaha, NE.

**(765) Elevated Levels of Inflammation in Patients on Long-Term Continuous Flow Left Ventricular Assist Device (CF-LVAD) Support;** L. Grosman-Rimon, D.Z.I. Cherney, M.A. McDonald, S. Pollock Bar-Ziv, L. Tumiat, A. Mociornita, A. Ghashghai, A. Chruscinski, V. Rao. Cardiovascular Surgery, Toronto General Hospital, Toronto, ON, Canada; The Graduate Department of Exercise Sciences, University of Toronto, Toronto, ON, Canada; Department of Surgery, University of Toronto, Toronto, ON, Canada.

**(766) Renal Replacement Therapy in Patients Undergoing Continuous-Flow Left Ventricular Assist Devices (LVADs);** O. Alsaied, A. Lacey, P. Eckman, S. Adaty, M. Colvin-Adams, K. Liao, R. John. University of Minnesota, Minneapolis, MN.

**(767) Use of Antibiotic Beads in the Treatment of Left Ventricular Assist Device Infections;** J. Kretlow, S.A. Izaddoost,<sup>1</sup> J. Ho,<sup>2</sup> O.H. Frazier.<sup>2</sup> <sup>1</sup>Division of Plastic Surgery, Baylor College of Medicine, Houston, TX; <sup>2</sup>Center for Cardiac Support, Texas Heart Institute at St. Luke's Episcopal Hospital, Houston, TX.

**(768) Echocardiographic Parameters Associated with Clinical Heart Failure Due to Partial Left Ventricular Unloading in Patients with Continuous-Flow LVAD;** R.P. Vivo,<sup>1,2</sup> M. Aldeiri,<sup>1</sup> A.M. Cordero-Reyes,<sup>1</sup> S.R. Krim,<sup>3</sup> B.H. Trachtenberg,<sup>1</sup> A. Bhimaraj,<sup>1</sup> G. Torre-Amione,<sup>1</sup> B.A. Bruckner,<sup>1</sup> M. Loebe,<sup>1</sup> J.D. Estep.<sup>1</sup> <sup>1</sup>Cardiology, Methodist DeBakey Heart & Vascular Center, Houston, TX; <sup>2</sup>Cardiology, University of Texas Medical Branch, Galveston, TX; <sup>3</sup>Cardiology, John Ochsner Heart and Vascular Institute, New Orleans, LA.

**(769) Regional Structural Uniformity of Left Ventricular Remodeling in Patients with Advanced Non Ischemic Cardiomyopathy;** S.F. Passi,<sup>1,2</sup> N.A. Diakos,<sup>1,2</sup> A.G. Kfoury,<sup>1</sup> C.H. Selzman,<sup>1,2</sup> C.-G. Yen,<sup>1,2</sup> B.B. Reid,<sup>1,2</sup> M. Salama,<sup>2</sup> O. Wever-Pinzon,<sup>1</sup> D.V. Miller,<sup>1,2</sup> E.M. Gilbert,<sup>1,2</sup> D. Budge,<sup>1,2</sup> J. Nativi-Nicolau,<sup>1,2</sup> M. Everitt,<sup>1,2</sup> E.H. Hammond,<sup>1,2</sup> D.Y. Li,<sup>2</sup> J. Stehlik,<sup>1,2</sup> S.G. Drakos.<sup>1,2</sup> <sup>1</sup>UTAH Cardiac Transplant Program, Salt Lake City, UT; <sup>2</sup>University of Utah Molecular Medicine, Salt Lake City, UT.

**(770) Favorable Outcomes Using Long-Term Implantable Left Ventricular Assist Devices in Patients Sixty Five Years of Age and Older;** J.A. Morgan,<sup>1</sup> R.J. Brewer,<sup>1</sup> J. Borgi,<sup>1</sup> A. Tsiouris,<sup>1</sup> H.W. Nemei,<sup>1</sup> S.E. Henry,<sup>1</sup> C.T. Williams,<sup>2</sup> D.E. Lanfear,<sup>2</sup> C. Tita,<sup>2</sup> M. Velez,<sup>2</sup> Y. Selektor,<sup>2</sup> G. Paone.<sup>1</sup> <sup>1</sup>Cardiothoracic Surgery, Henry Ford Hospital, Detroit, MI; <sup>2</sup>Cardiology, Henry Ford Hospital, Detroit, MI.

**(771) Aortic Insufficiency and Clinical Outcomes in Patients Undergoing Aortic Valve Procedures at the Time of Continuous Flow Left Ventricular Assist Device Implantation;** N. Nahumi,<sup>1</sup> D. Bejar,<sup>1</sup> N. Uriel,<sup>1</sup> S. Thomas,<sup>1</sup> J. Han,<sup>1</sup> A. Garan,<sup>1</sup> M. Yuzefpolskaya,<sup>1</sup> P. Colombo,<sup>1</sup> M. Casenghi,<sup>1</sup>



P. Reyfman,<sup>1</sup> T. Ota,<sup>2</sup> H. Takayama,<sup>2</sup> Y. Naka,<sup>2</sup> U. Jorde.<sup>1</sup> <sup>1</sup>Division of Cardiology, Columbia University, New York, NY; <sup>2</sup>Division of Cardiothoracic Surgery, Columbia University, New York, NY.

**(772) Predicting Outcomes of Patients with Ventricular Assist Devices Who Suffer Neurological Injuries;** D.S. Ikeda,<sup>1</sup> C.J. Powers,<sup>1</sup> E. Sauvageau,<sup>1</sup> S. Bansal,<sup>2</sup> S. Emani,<sup>3</sup> Y. Ravi,<sup>2</sup> C.B. Sai-Sudhakar.<sup>2</sup> <sup>1</sup>Department of Neurological Surgery, Wexner Medical Center The Ohio State University, Columbus, OH; <sup>2</sup>Division of Cardiac Surgery, Wexner Medical Center at The Ohio State University, Columbus, OH; <sup>3</sup>Division of Cardiology, Wexner Medical Center at The Ohio State University, Columbus, OH.

**(773) Factors Modifying Risk of Bleeding in Patients with Continuous Flow Left Ventricular Assist Devices;** N. Tricarico, M. Davis, D. Gailani, H. Casanova, S. Leung, N. Haglund, M. Keebler, S. Maltais, D. Lenihan. Vanderbilt University, Nashville, TN.

**(774) Micro-RNA-451 and Measures of Hemolysis Associated with Left Ventricular Assist Device Implantation;** R.C. Givens,<sup>1</sup> D. Moore,<sup>1</sup> H. Akashi,<sup>1</sup> T. Kato,<sup>1</sup> Y. Naka,<sup>2</sup> H. Takayama,<sup>2</sup> D.M. Mancini,<sup>1</sup> P.C. Schulze.<sup>1</sup> <sup>1</sup>Medicine, Columbia University Medical Center, New York, NY; <sup>2</sup>Surgery, Columbia University Medical Center, New York, NY.

**(775) Pathological Analysis of the Aortic Valve after Long-Term Mechanical Circulatory Support;** H. Hata,<sup>1</sup> T. Fujita,<sup>1</sup> Y. Shimahara,<sup>1</sup> S. Sato,<sup>1</sup> M. Yanase,<sup>2</sup> O. Seguchi,<sup>2</sup> Y. Murata,<sup>2</sup> H. Ishibashi-Ueda,<sup>3</sup> T. Nakatani,<sup>2</sup> J. Kobayashi.<sup>1</sup> <sup>1</sup>Cardiovascular Surgery, National Cerebral and Cardiovascular Center, Suita, Osaka, Japan; <sup>2</sup>Transplantation, National Cerebral and Cardiovascular Center, Suita, Osaka, Japan; <sup>3</sup>Pathology, National Cerebral and Cardiovascular Center, Suita, Osaka, Japan.

**(776) Do Racial and Sex Disparities Exist in Clinical Characteristics and Outcomes for Patients Undergoing Left Ventricular Assist Device Implantation?** J.M. Stulak,<sup>1</sup> S. Deo,<sup>1</sup> J. Cowger,<sup>2</sup> K.D. Aaronson,<sup>2</sup> S.J. Park,<sup>1</sup> L.J. Joyce,<sup>1</sup> R.C. Daly,<sup>1</sup> F.D. Pagan.<sup>2</sup> <sup>1</sup>Cardiovascular Surgery, Mayo Clinic College of Medicine, Rochester, MN; <sup>2</sup>Cardiac Surgery, University of Michigan Health System, Ann Arbor, MI.

**(630) Predictive Value of Pulmonary Vascular Remodeling Indices after LVAD Implantation;** S. Okada,<sup>1</sup> J.O. Robertson,<sup>1</sup> A. Itoh,<sup>1</sup> S. Prasad,<sup>1</sup> G.A. Ewald,<sup>2</sup> S.M. Joseph,<sup>2</sup> M.R. Moon,<sup>1</sup> R.J. Damiano,<sup>1</sup> S.C. Silvestry.<sup>1</sup> <sup>1</sup>Surgery (Division of Cardiothoracic Surgery), Washington University, St. Louis, MO; <sup>2</sup>Medicine (Division of Cardiology), Washington University, St. Louis, MO.

**(777) Pressure and Flow Sequelae to Kinking of the HeartWare HVAD® Outflow Graft;** M. Connellan, K. Muthiah, D. Robson, E. Granger, K. Dhital, P. Spratt, C. Hayward, P. Jansz. Cardiac Failure and Transplant Unit, St Vincent's Hospital, Darlinghurst, NSW, Australia.

**(778) Right Ventricular Failure Following Left Ventricular Assist Device Implantation; the Myth Is in the Management;** K.L. Eleuteri, B. Soleimani, W. Pae, E. Stephenson, A. El-Banayosy. Penn State Hershey Medical Center, Hershey, PA.

**(779) Bacteremia after Implantation of Continuous Flow Devices: Associated Factors and Long-Term Outcomes;** S.J. Forest, P. Friedmann, D.J. Goldstein. Cardiovascular and Thoracic Surgery, Montefiore Medical Center, Bronx, NY.

**(780) Routine Delayed Sternal Closure after Left Ventricular Assist Device Implantation with Vacuum Assisted Device;** R. Yanagida,<sup>1</sup> N. Rajagopalan,<sup>2</sup> T.A. Tribble,<sup>1</sup> M.A. Bradley,<sup>1</sup> C.W. Hoopes.<sup>1</sup> <sup>1</sup>Division of Cardiothoracic Surgery, University of Kentucky, Lexington, KY; <sup>2</sup>Division of Cardiology, University of Kentucky, Lexington, KY.

**(781) Bridge-to-Decision LVAD Support Using the Impella 5.0 Via a Right Subclavian Artery Approach;** A. Bansal,<sup>1</sup> J.K. Bhamra,<sup>2</sup> H. Patel,<sup>1</sup> S. Desai,<sup>1</sup> S. Mandras,<sup>1</sup> U. Ahmad,<sup>1</sup> S. Laudun,<sup>1</sup> R. Patel,<sup>1</sup> J. Reily,<sup>1</sup> H. Ventura,<sup>1</sup> E. Parrino.<sup>1</sup> <sup>1</sup>Department of Surgery, Section of Cardiothoracic Surgery, Ochsner Clinic Foundation, New Orleans, LA; <sup>2</sup>Department of Cardiothoracic Surgery, University of Pittsburgh Medical Center, Pittsburgh, PA.

**(782) Evaluation of Left Ventricular Assist Device Inflow Cannula Contact with Ventricular Wall on Cardiac CT;** D. Abramov, G. Weigold, G. Weissman, G. Ruiz, H. Mark, L. Cooper, A. Griffin, S. Boyce, S.S. Najjar. Department of Cardiology, Washington Hospital Center, Washington, DC.

**(783) Abnormally High Levels of Inflammatory Markers in Recipients of Continuous Flow Left Ventricular Assist Devices;** L. Grosman-Rimon, D. Cherney, S. Pollock Bar-Ziv, M. McDonald, L. Tumiati, A. Mociornita, A. Ghashghai, A. Chruscinski, V. Rao. Cardiovascular Surgery, Toronto General Hospital, Toronto, ON, Canada; The Graduate Department of Exercise Sciences, University of Toronto, Toronto, ON, Canada; Department of Surgery, University of Toronto, Toronto, ON, Canada.

**(784) Outcome of Patients with Right Ventricular Failure on Milrinone after Left Ventricular Assist Device Implantation;** J.A. Morgan,<sup>1</sup> R.J. Brewer,<sup>1</sup> H.W. Nemei,<sup>1</sup> S.E. Henry,<sup>1</sup> C.T. Williams,<sup>2</sup> D.E. Lanfear,<sup>2</sup> C. Tita,<sup>2</sup> M. Velez,<sup>2</sup> Y. Selektor,<sup>2</sup> G. Paone.<sup>1</sup> <sup>1</sup>Cardiothoracic Surgery, Henry Ford Hospital, Detroit, MI; <sup>2</sup>Cardiology, Henry Ford Hospital, Detroit, MI.

**(785) LVAD Explant to Recovery in Females Following Prolonged Support;** C.A. Cheyne, D. Shannon, W.M. Hallinan, L. Chen. Artificial Heart Program, University of Rochester Medical Center, Rochester, NY.

**(786) Alternative Approaches for the Surgical Treatment of Significant Mitral Regurgitation in Advanced Heart Failure;** A.M. Ganapathi,<sup>1</sup> M.A. Schechter,<sup>1</sup> X. Wang,<sup>1</sup> C.A. Milano,<sup>1</sup> D.D. Glower,<sup>1</sup> J.G. Rogers,<sup>2</sup> C.B. Patel,<sup>2</sup> J.N. Schroder.<sup>1</sup> <sup>1</sup>Department of Cardiovascular and Thoracic Surgery, Duke University Medical Center, Durham, NC; <sup>2</sup>Department of Cardiology, Duke University Medical Center, Durham, NC.

**(787) The Use of the Impella Device in Patients with Postcardiotomy Cardiogenic Shock;** A. Lemaire, G. Batsides, T. Prendergast, P. Scholz, A. Spotnitz, A.M. Lozano, L.Y. Lee. Surgery, Robert Wood Johnson University Hospital, New Brunswick, NJ.

**(788) Myocardial Recovery after Ventricular Unloading with Pulsatile-Versus Continuous-Flow Assist Device;** F.M. Wagner, S. Hakmi, C. Oelschner, M. Kubik, T. Deuse, H. Reichenspurner. Cardiovascular Surgery, University Heart Center Hamburg, Hamburg, Germany.

**(789) Candida Bloodstream Infection in Left Ventricular Assist Device Recipients;** T. Riaz,<sup>1</sup> J.J.C. Nienaber,<sup>1</sup> L.M. Baddour,<sup>1</sup> R.C. Walker,<sup>1</sup> S.J. Park,<sup>2</sup> M.R. Sohail.<sup>1</sup> <sup>1</sup>Division of Infectious Diseases, Mayo Clinic College of Medicine, Rochester, MN; <sup>2</sup>Division of Cardiovascular Surgery, Mayo Clinic College of Medicine, Rochester, MN.

**(790) Proposal for Advanced Life Support Algorithm in Unresponsive Hospitalized LVAD Patients;** M. Yuzefpolskaya,<sup>1</sup> N. Uriel,<sup>1</sup> H. Takayama,<sup>1</sup> M. Flannery,<sup>1</sup> Y. Naka,<sup>2</sup> U.P. Jorde,<sup>1</sup> P.C. Colombo.<sup>1</sup> <sup>1</sup>Medicine, Columbia University, New York, NY; <sup>2</sup>Surgery, Columbia University, New York, NY.

**(791) Age Is No Boundary to Long-Term Survival on Permanent MCS: A Multicentre Experience;** V. Tarzia,<sup>1</sup> T. Bottio,<sup>1</sup> U. Livi,<sup>2</sup> M. Maiani,<sup>2</sup> G. Di Giammarco,<sup>3</sup> G. Sani,<sup>4</sup> M. Maccherini,<sup>5</sup> M. Rinaldi,<sup>6</sup> F. Alamanni,<sup>7</sup> M. De Bonis,<sup>8</sup> F. Gazzoli,<sup>9</sup> A. Renzulli,<sup>10</sup> G. Arpesella,<sup>11</sup> G. Gerosa.<sup>1</sup> <sup>1</sup>Department of Cardiac, Thoracic and Vascular Sciences, Cardiac Surgery, University of Padova, Padova, Italy; <sup>2</sup>Cardiac Surgery, University of Udine, Udine, Italy; <sup>3</sup>Cardiac Surgery, University of Chieti, Chieti, Italy; <sup>4</sup>Cardiac Surgery, University of Florence, Florence, Italy; <sup>5</sup>Cardiac Surgery, University of Siena, Siena, Italy; <sup>6</sup>Cardiac Surgery, University of Turin, Turin, Italy; <sup>7</sup>Cardiac Surgery CCFM, University of Milan, Milan, Italy; <sup>8</sup>Cardiac Surgery, San Raffaele Hospital, Milan, Italy; <sup>9</sup>Cardiac Surgery, Policlinico San Matteo, Pavia, Italy; <sup>10</sup>Cardiac Surgery, Magna Grecia University, Catanzaro, Italy; <sup>11</sup>Cardiac Surgery, University of Bologna, Bologna, Italy.

**(792) Temporary RVAD Support after LVAD – Longterm Outcome;** C.C.O. Oezpeker, M.M.S. Schoenbrodt, S.S.E. Ensminger, J.J.G. Gummert, M.M.M. Morshuis. Department of Thoracic and Cardiovascular Surgery, Heart and Diabetes Center NRW, Ruhr University Bochum, Bad Oeynhausen, North-Rhine Westphalia, Germany.



**(793) Prolonged Mechanical Circulatory Support – 1000 Days with a Left Ventricular Assist Device;** C. Oezpeker, S. Oemer, M. Schoenbrodt, K. Hakim, L. Kizner, J. Boergemann, H. Milting, S. Ensminger, J. Gummert, M. Morshuis. Clinic for Thoracic and Cardiovascular Surgery, Ruhr-University Bochum, Heart & Diabetes Center NRW, Bad Oeynhausen, Germany.

**(794) Biopsy Proven Liver Fibrosis and Outcomes in Patients Supported with a Continuous-Flow Left Ventricular Assist Device;** S. Lee,<sup>1</sup> M. Halkar,<sup>2</sup> D. Nagpal,<sup>3</sup> M. Bennett,<sup>1</sup> N.N. Zein,<sup>4</sup> N. Moazami,<sup>3</sup> R.C. Starling.<sup>1</sup> <sup>1</sup>Section of Heart Failure and Cardiac Transplant Medicine, Cleveland Clinic, Cleveland, OH; <sup>2</sup>Internal Medicine, Cleveland Clinic, Cleveland, OH; <sup>3</sup>Cardiothoracic Surgery, Cleveland Clinic, Cleveland, OH; <sup>4</sup>Digestive Disease Institute, Cleveland Clinic, Cleveland, OH.

**(795) Home Discharge and Out-of-Hospital Follow-Up of Total Artificial Heart Patients Supported by a Portable Driver;** A. El Banayosy,<sup>1</sup> M. Morshuis,<sup>2</sup> M. Slepian,<sup>3</sup> L. Arusoglu,<sup>3</sup> J. Gummert.<sup>3</sup> <sup>1</sup>Heart and Vascular Institute, Penn State Hershey Medical Center, Hershey, PA; <sup>2</sup>Cardiology, University of Arizona, Tucson, AZ; <sup>3</sup>Cardiac Surgery, Heart Center NRW, Bad Oeynhausen, Germany.

**(796) Continuous Flow Left Ventricular Assist Device Patients Are Not at Higher Risk of Gastrointestinal Bleeding with More Aggressive Anticoagulation;** J.W. Smith, K. Shively, N.A. Mokadam. Cardiothoracic Surgery, University of Washington, Seattle, WA.

**(797) Patient Directed Termination of Cardiac Mechanical Support: Is This Assisted Suicide?;** E.E. Suarez,<sup>1</sup> C. Bruce,<sup>2</sup> H.L. Gordon,<sup>2</sup> M. Loebe,<sup>1</sup> R.R. Bunge,<sup>1</sup> B.A. Bruckner.<sup>1</sup> <sup>1</sup>Cardiovascular Surgery/Thoracic Transplant, The Methodist Hospital, Houston, TX; <sup>2</sup>Center for Medical Ethics and Health Policy, Baylor College of Medicine, Houston, TX.

**(798) Impact of Right Ventricular Performance Load Dependency on Preoperative Prediction of Postoperative Right Heart Function in Patients Who Need a Left Ventricular Assist Device;** M. Dandel, E. Potapov, T. Krabatsch, A. Stepanenko, C. Knosalla, R. Hetzer. Deutsches herzzentrum Berlin, Berlin, Germany.

**(799) Unmarried Left Ventricular Assist Device (LVAD) Recipients Are More Likely To Experience Adverse Events;** J.M. Vader,<sup>1</sup> S. LaRue,<sup>1</sup> G. Ewald,<sup>1</sup> S. Silvestry,<sup>2</sup> S. Prasad,<sup>2</sup> S. Joseph.<sup>1</sup> <sup>1</sup>Internal Medicine, Cardiovascular Division, Washington University, St Louis, MO; <sup>2</sup>Surgery, Division of Cardiothoracic Surgery, Washington University, St Louis, MO.

**(800) Continuous Flow Left Ventricular Devices Significantly Unload the Pulmonary Vasculature Regardless of the Severity of Mitral Regurgitation;** S.M. Prasad,<sup>1</sup> A. Itoh,<sup>1</sup> G.A. Ewald,<sup>2</sup> S.M. Joseph,<sup>2</sup> S.C. Silvestry.<sup>1</sup> <sup>1</sup>Cardiothoracic Surgery, Washington University/Barnes-Jewish Hospital, St. Louis, MO; <sup>2</sup>Cardiology, Washington University/Barnes-Jewish Hospital, St. Louis, MO.

## PEDIATRICS

**(801) Gene Expression Profiling in Pediatric Heart Transplant Rejection;** K.R. Knecht,<sup>1</sup> S.L. MacLeod,<sup>1</sup> C.A. Hobbs,<sup>1</sup> M. Li,<sup>1</sup> V. Raj,<sup>2</sup> R.W. Morrow.<sup>1</sup> <sup>1</sup>Pediatrics, University of Arkansas for Medical Sciences, Little Rock, AR; <sup>2</sup>Research Genetics, University of Arkansas for Medical Sciences, Little Rock, AR.

**(802) Is Ventricular Assist Device an Effective Tool To Support Children with a Failing Cardiac Graft?;** I. Adachi,<sup>1</sup> M.S. Khan,<sup>1</sup> E.D. McKenzie,<sup>1</sup> J.S. Heinle,<sup>1</sup> C.M. Mery,<sup>1</sup> A.G. Cabrera,<sup>2</sup> A. Jeewa,<sup>2</sup> S.W. Denfield,<sup>2</sup> W.J. Dreyer,<sup>2</sup> J.F. Price,<sup>2</sup> C.D. Fraser, Jr.<sup>1</sup> <sup>1</sup>Congenital Heart Surgery, Texas Children's Hospital, Baylor College of Medicine, Houston, TX; <sup>2</sup>Pediatric Cardiology, Texas Children's Hospital, Baylor College of Medicine, Houston, TX.

**(803) Psychiatric Diagnoses and the Use of Psychiatric Medication in Pediatric Ventricular Assist Device Recipients;** D.S. Lefkowitz,<sup>1</sup> R.S. Novosel,<sup>1</sup> Z. Mohamad,<sup>1</sup> A. Scharko,<sup>1</sup> K.Y. Lin,<sup>1,2</sup> R.E. Shaddy,<sup>1,2</sup>

S.M. Paridon,<sup>1,2</sup> K. Miller,<sup>1</sup> B.D. Kaufman,<sup>1,2</sup> J.W. Gaynor,<sup>1,2</sup> J.W. Rossano.<sup>1,2</sup> <sup>1</sup>Children's Hospital of Philadelphia, Philadelphia, PA; <sup>2</sup>University of Pennsylvania School of Medicine, Philadelphia, PA.

**(804) Pediatric Outpatient VAD Experience at Stanford;** A. Lin, E. Liu, M. Keating, K. Maeda, S. Hollander, D. Rosenthal. Pediatric Cardiology, Lucile Packard Children's Hospital, Palo Alto, CA.

**(805) A Novel Scoring System for Recovery after VAD Implantation in Children: Initial Feasibility;** M. Ploutz, S. Hollander, O. Reinhartz, K. Maeda, J. Yeh, D. Rosenthal. Pediatric Cardiology, Stanford University, Lucile Packard Children's Hospital, Palo Alto, CA.

**(806) US Trends in Pediatric VAD Utilization: Analysis of Organ Procurement and Transplant Network Data;** C.S. Almond, V. Yarlagadda, C. VanderPluym, S. Rajagopal, B. Millian, K. Daly, T.P. Singh, F. Fynn-Thompson, K. Gauvreau. Cardiology, Boston Children's Hospital, Boston, MA.

**(807) Pediatric Ventricular Assist Device Use as a Bridge to Transplantation Does Not Affect Long-Term Quality of Life;** D.S. Ezon, M.S. Khan, I. Adachi, A. Jeewa, S. Morris, C. Nagy, D. Morales, J.S. Heinle. Heart Center, Baylor College of Medicine, Texas Children's Hospital, Houston, TX.

**(808) Low Dose Factor Eight Inhibitor Bypassing Activity (FEIBA) for Incessant Bleeding in Pediatric Patients on Mechanical Circulatory Support (MCS);** K. Maeda,<sup>1</sup> R. Asija,<sup>2</sup> S. Hollander,<sup>2</sup> G. Williams,<sup>3</sup> J. Yeh,<sup>2</sup> D. Rosenthal,<sup>2</sup> O. Reinhartz.<sup>1</sup> <sup>1</sup>Cardiothoracic Surgery, Stanford University, Stanford, CA; <sup>2</sup>Pediatric Cardiology, Stanford University, Stanford, CA; <sup>3</sup>Anesthesiology, Stanford University, Stanford, CA.

**(809) Allosensitization in Children Supported with Ventricular Assist Devices;** A. Jeewa,<sup>1</sup> R.H. Kerman,<sup>1</sup> J.G. Saltarelli,<sup>1</sup> E. McKissick,<sup>1</sup> A.J. Eaton,<sup>1</sup> N. Woolley,<sup>1</sup> S. Denfield,<sup>1</sup> E.D. McKenzie,<sup>1</sup> I. Adachi,<sup>1</sup> J. Price,<sup>1</sup> A. Cabrera,<sup>1</sup> J. Hanna,<sup>2</sup> C. Gates,<sup>2</sup> M.S. Khan,<sup>2</sup> W. Dreyer.<sup>1</sup> <sup>1</sup>Baylor College of Medicine, Houston, TX; <sup>2</sup>Texas Children's Hospital, Houston, TX.

**(810) Thrombosis and Bleeding Complications in Pediatric Patients with Ventricular Assist Devices;** J. Conway,<sup>1</sup> C. Manliot,<sup>1</sup> A.I. Dipchand,<sup>1</sup> B. McCrindle,<sup>1</sup> T. Humpl.<sup>2</sup> <sup>1</sup>Department of Pediatrics, Division of Cardiology, The Hospital for Sick Children, Toronto, ON, Canada; <sup>2</sup>Department of Pediatrics and Critical Care Medicine, The Hospital for Sick Children, Toronto, ON, Canada.

**(811) Characterization of the Lung Microbiome in Pediatric Lung Transplant Recipients;** R.A. Luna,<sup>1</sup> M. Sagar,<sup>2</sup> S.A. Crabtree,<sup>2</sup> E.B. Hollister,<sup>1</sup> J.K. Runge,<sup>1</sup> Y. Shang,<sup>1</sup> J.S. Heinle,<sup>3</sup> E.D. McKenzie,<sup>3</sup> G.B. Mallory,<sup>2</sup> M.G. Schechter.<sup>2</sup> <sup>1</sup>Microbiome Center, Department of Pathology, Immunology, Texas Children's Hospital, Houston, TX; <sup>2</sup>Pulmonology, Texas Children's Hospital, Houston, TX; <sup>3</sup>Cardiovascular Surgery, Texas Children's Hospital, Houston, TX.

**(812) Early Echocardiographic Predictors of Alveolar Capillary Dysplasia: A Case-Control Study;** R. Arcinue,<sup>1</sup> T. Stavroudis,<sup>1</sup> S. Noori,<sup>1</sup> S. Bhombal,<sup>1,2</sup> J. Szmuskovicz,<sup>2</sup> P. Friedlich.<sup>1</sup> <sup>1</sup>Center for Fetal and Neonatal Medicine, Children's Hospital Los Angeles, Los Angeles, CA; <sup>2</sup>Pediatric Cardiology, Children's Hospital Los Angeles, Los Angeles, CA.

**(813) Anti-Fungal Prophylaxis in Pediatric Lung Transplantation – An International Multi-Center Survey;** L. Mead,<sup>1</sup> L.A. Danziger-Isakov,<sup>2</sup> M.G. Michaels,<sup>3</sup> S.B. Goldfarb,<sup>4</sup> A.R. Glanville,<sup>1</sup> C. Benden.<sup>5</sup> <sup>1</sup>St Vincent's Hospital, Sydney, Australia; <sup>2</sup>Cincinnati Children's Hospital, Cincinnati, OH; <sup>3</sup>Children's Hospital of Pittsburgh, Pittsburgh, PA; <sup>4</sup>The Children's Hospital of Philadelphia, Philadelphia, PA; <sup>5</sup>University Hospital Zurich, Zurich, Switzerland.

**(814) Buying Time: The Use of Extracorporeal Membrane Oxygenation as a Bridge to Lung Transplantation in Pediatric Patients;** G. Casswell,<sup>1</sup> D. Pilcher,<sup>2</sup> R. Martin,<sup>1</sup> V. Pelligrino,<sup>2</sup> S. Marasco,<sup>1</sup> C. Robertson,<sup>3</sup> W. Butt,<sup>4</sup> G.I. Snell,<sup>1</sup> G.P. Westall.<sup>1</sup> <sup>1</sup>Lung Transplant Service, The Alfred Hospital, Melbourne, Australia; <sup>2</sup>Intensive Care Unit, The Alfred, Melbourne, Australia; <sup>3</sup>Department of Respiratory Medicine, Royal Children's Hospital, Melbourne, Australia; <sup>4</sup>Intensive Care Unit, Royal Children's Hospital, Melbourne, Australia.

**(815) A Single Center Transition of Care Model from Pediatric Heart to Adult Services;** S. Adams, M. Wigger. Heart Transplant, Vanderbilt, Nashville, TN.

**(816) Calcineurin Inhibitor-Free Immunosuppression in Pediatric Heart Transplantation Recipients: Sirolimus as a Primary Immunosuppressive Agent;** R.W. Loar,<sup>1</sup> D.A. Mauriello,<sup>2</sup> P.W. O'Leary,<sup>2</sup> D.J. Driscoll,<sup>2</sup> S.S. Kushwaha,<sup>3</sup> J.N. Johnson.<sup>2</sup> <sup>1</sup>Pediatric and Adolescent Medicine, Mayo Clinic, Rochester, MN; <sup>2</sup>Pediatric Cardiology, Mayo Clinic, Rochester, MN; <sup>3</sup>Cardiovascular Diseases, Mayo Clinic, Rochester, MN.

## PHARMACY/PHARMACOLOGY

**(817) SLC01B1 Genotype Influences the Drug-Drug Interaction between Cyclosporine and Pravastatin;** C.L. Aquilante,<sup>1</sup> R.L. Page II,<sup>2</sup> A. Brieke,<sup>3</sup> C.W. Hopley,<sup>1</sup> U. Christians,<sup>4</sup> K.L. Hoffman,<sup>4</sup> B. Schniedewind.<sup>4</sup> <sup>1</sup>Department of Pharmaceutical Sciences, University of Colorado Skaggs School of Pharmacy and Pharmaceutical Sciences, Aurora, CO; <sup>2</sup>Department of Clinical Pharmacy, University of Colorado Skaggs School of Pharmacy and Pharmaceutical Sciences, Aurora, CO; <sup>3</sup>Division of Cardiology, University of Colorado School of Medicine, Aurora, CO; <sup>4</sup>Department of Anesthesiology, University of Colorado School of Medicine, Aurora, CO.

**(818) This abstract has been moved to Thursday Poster Session 2**

**(819) Time To Reach Therapeutic Tacrolimus Levels after Pediatric Heart Transplant;** B. Taylor,<sup>1</sup> B. Moffett,<sup>2</sup> S. Denfield,<sup>3</sup> W.J. Dreyer,<sup>3</sup> J. Price,<sup>3</sup> A. Cabrera,<sup>3</sup> C. Gates,<sup>3</sup> A. Jeewa.<sup>3</sup> <sup>1</sup>Pharmacy, Cincinnati Children's Hospital, Cincinnati, OH; <sup>2</sup>Pharmacy, Texas Children's Hospital, Houston, TX; <sup>3</sup>Pediatric Cardiology, Baylor College of Medicine, Texas Children's Hospital, Houston, TX.

**(820) Can Plasma NGAL Predict Renal Response to Conversion from Calcineurin Inhibitor- to Everolimus Based Immunosuppression after Cardiac Transplantation?;** F. Gustafsson,<sup>1</sup> E. Gude,<sup>2</sup> V. Sigurdardottir,<sup>3</sup> P. Auksrust,<sup>2</sup> D. Solbu,<sup>4</sup> J.P. Goetze,<sup>1</sup> L. Gullestad.<sup>2</sup> <sup>1</sup>Dept. of Cardiology, Rigshospitalet, Copenhagen, Denmark; <sup>2</sup>Oslo University Hospital, Oslo, Norway; <sup>3</sup>Sahlgrenska University Hospital, Gothenburg, Sweden; <sup>4</sup>Novartis, Oslo, Norway.

**(821) Eptifibatide in the Treatment of Continuous Flow Left Ventricular Assist Device Thrombosis: A Case Series;** M.M. Bradbury,<sup>1</sup> R.M. Smith,<sup>2</sup> M.G. Binetti,<sup>3</sup> N.A. Burton,<sup>4</sup> S.S. Desai.<sup>3</sup> <sup>1</sup>Inova Fairfax Hospital, Falls Church, VA; <sup>2</sup>Walter Reed National Military Medical Center, Bethesda, MD; <sup>3</sup>Department of Heart Transplant, Inova Fairfax Hospital, Falls Church, VA; <sup>4</sup>Department of Cardiothoracic Surgery, Inova Fairfax Hospital, Falls Church, VA.

**(822) Sildenafil in LVAD Is Safe and Well Tolerated;** A. Ravichandran,<sup>1</sup> J. Davis,<sup>1</sup> R. Garcia-Cortes,<sup>1</sup> J. Parker,<sup>1</sup> S. Larue,<sup>1</sup> E. Novak,<sup>1</sup> P. Sunil,<sup>2</sup> J. Schilling,<sup>1</sup> G. Ewald,<sup>1</sup> S. Silvestry,<sup>2</sup> S. Joseph.<sup>1</sup> <sup>1</sup>Cardiovascular Division, Internal Medicine, Washington University School of Medicine, Saint Louis, MO; <sup>2</sup>Department of Surgery, Washington University School of Medicine, Saint Louis, MO.

**(823) Management of Anticoagulation in Patients with Mechanical Circulatory Support Using a Physician-Based Versus a Pharmacist Directed Anticoagulation Clinic-Based Strategy;** J.J. Teuteberg,<sup>1</sup> R.L. Kormos,<sup>1</sup> K. Lockard,<sup>1</sup> N. Kunz,<sup>1</sup> C. Allen,<sup>1</sup> A. Scanlon,<sup>1</sup> S. Weaver,<sup>1</sup> D. Hall,<sup>2</sup> C. Bermudez,<sup>1</sup> M.A. Shullo.<sup>2</sup> <sup>1</sup>Heart and Vascular Institute, University of Pittsburgh, Pittsburgh, PA; <sup>2</sup>Pharmacy and Therapeutics, University of Pittsburgh, Pittsburgh, PA.

**(824) Alpha-1 Proteinase Inhibitors Post-Lung Transplantation: A Single Center Experience;** B.R. Ravichandran, A.A. Feist, M.M. Magana, S. Reed, J.R. Lane, G. Yung. UC San Diego Health System, San Diego, CA.

**(825) The CYP3A Enzyme Inhibitor Diltiazem, Rather Than Genetic Polymorphisms, Is Associated with Everolimus Concentrations in Lung Transplant Recipients;** K.E. Schoeppler,<sup>1</sup> C.L. Aquilante,<sup>2</sup> T.H. Kiser,<sup>2</sup>

D.N. Fish,<sup>2</sup> M.R. Zamora.<sup>3</sup> <sup>1</sup>Pharmacy, University of Colorado Hospital, Aurora, CO; <sup>2</sup>University of Colorado Skaggs School of Pharmacy and Pharmaceutical Sciences, Aurora, CO; <sup>3</sup>Pulmonary Sciences and Critical Care Medicine, University of Colorado Anschutz Medical Campus, Aurora, CO.

## BASIC SCIENCE

**(826) Reduction of Obliterative Bronchiolitis (OB) by Prolyl-Hydroxylase-Inhibitors Activating Hypoxia-Inducible Transcription Factors in an Experimental Mouse Model;** C. Heim,<sup>1</sup> B. Motsch,<sup>1</sup> W. Bernhardt,<sup>2</sup> S. Jalilova,<sup>1</sup> N. Koch,<sup>1</sup> M. Ramsperger-Gleixner,<sup>1</sup> N. Burzlaff,<sup>3</sup> M. Weyand,<sup>1</sup> K.U. Eckardt,<sup>2</sup> S. Ensminger.<sup>1,4</sup> <sup>1</sup>Department of Cardiac Surgery, University Erlangen-Nuremberg, Erlangen, Germany; <sup>2</sup>Department of Nephrology, University Erlangen-Nuremberg, Erlangen, Germany; <sup>3</sup>Department of Inorganic and Analytical Chemistry, University Erlangen-Nuremberg, Erlangen, Germany; <sup>4</sup>Department of Thoracic and Cardiovascular Surgery, Heart and Diabetes Center NRW, Bad Oeynhausen, Germany.

**(827) Potential Role of XB130 in the Regulation of Airway Epithelium Repair and Regeneration after Transplantation;** J. Zhao,<sup>1,2</sup> X. Bai,<sup>1</sup> Y. Wang,<sup>1</sup> S. Keshavjee,<sup>1,3</sup> M. Liu.<sup>1,3</sup> <sup>1</sup>Latner Thoracic Surgery Research Laboratories, Toronto General Research Institute University Health Network, Toronto, Canada; <sup>2</sup>Department of Thoracic Surgery, Tangdu Hospital, Forth Military Medical University, Xi'an, China; <sup>3</sup>Department of Surgery, University of Toronto, Toronto, Canada.

**(828) Metabolomic Profile of Rat Lung Tissue after Death: Effect of Delayed Post-Mortem O2-Ventilation;** T. Egan,<sup>1</sup> B. Dong,<sup>1</sup> A. Tikunov,<sup>2</sup> C. Semelka,<sup>2</sup> P.-F. Kuan,<sup>3</sup> J. Macdonald.<sup>2</sup> <sup>1</sup>Surgery, University of North Carolina at Chapel Hill, Chapel Hill, NC; <sup>2</sup>Biomedical Engineering, University of North Carolina at Chapel Hill, Chapel Hill, NC; <sup>3</sup>Biostatistics, Gillings Global School of Public Health, UNC, Chapel Hill, NC.

**(829) Regulatory T Cells (Tregs) in Neonatal Tolerance: Allogeneic Tregs Regulate the Neonatal Immune System and Prolong Heart Graft Survival;** R.A. Bascom, K. Tao, S.L. Tollenaar, L.J. West. University of Alberta, Edmonton, Canada.

**(830) Transendothelial Migration of Leukocytes after Methylene Blue Treatment: Influence on Adhesion Molecules;** I. Kanzler, N. Bogert, U.A. Stock, A. Moritz, A. Beiras-Fernandez. Cardiothoracic and Vascular Surgery, JW Goethe University, Frankfurt, Germany.

**(831) IL-17 Regulate the Polarization of Macrophages To Promote the Development of Obliterative Bronchiolitis in Murine Trachea Transplantation Model;** X. Zhou,<sup>1,2</sup> Q. Meng,<sup>1,2</sup> J. Wang,<sup>1</sup> H. Cao,<sup>1</sup> Q. Shi,<sup>1</sup> Y. Ni,<sup>1</sup> Z. Liu,<sup>1</sup> H. Fan.<sup>1,2</sup> <sup>1</sup>Cardiac Surgery, Shanghai East Hospital, Tongji University School of Medicine, Shanghai, China; <sup>2</sup>Research Center for Translational Medicine, Tongji University School of Medicine, Shanghai, China.

**(832) Mitigating Lung Ischemia-Reperfusion Injury in Miniature Swine;** M.L.L. Madariaga,<sup>1</sup> S. Sihag,<sup>1</sup> J.D. Gottschall,<sup>1</sup> E.A. Farkash,<sup>2</sup> M.S. Haas,<sup>4</sup> M.C. Carroll,<sup>3</sup> J.S. Allan.<sup>1</sup> <sup>1</sup>Cardiothoracic Transplantation Laboratory, Transplantation Biology Research Center, Massachusetts General Hospital and Harvard Medical School, Boston, MA; <sup>2</sup>Department of Pathology, Massachusetts General Hospital and Harvard Medical School, Boston, MA; <sup>3</sup>Department of Immunology, Harvard Medical School, Boston, MA.

**(833) Human Leukocyte Antigen-6 Inhibits Human Coronary Artery Smooth Muscle Cell Proliferation;** A.G. Mociornita,<sup>1</sup> L.C. Tumiati,<sup>1</sup> P.C. Papageorgiou,<sup>1</sup> L. Grosman,<sup>1</sup> A. Ghashghai,<sup>1</sup> H.J. Ross,<sup>1</sup> R.-K. Li,<sup>2</sup> D.H. Delgado,<sup>1</sup> V. Rao.<sup>1</sup> <sup>1</sup>Peter Munk Cardiac Centre, Toronto General Hospital, Toronto, ON, Canada; <sup>2</sup>Toronto General Research Institute, Toronto, ON, Canada.

**(834) Dynamic Changes in Dominant Antigen Responses Following Primary CMV Infection in Lung Transplant Recipients;** M.R. Pipeling,<sup>1</sup> I.D. Popescu,<sup>1</sup> J.B. Orens,<sup>2</sup> J.M. Pilewski,<sup>1</sup> J.F. McDyer.<sup>1</sup> <sup>1</sup>University of Pittsburgh, Pittsburgh, PA; <sup>2</sup>Johns Hopkins University School of Medicine, Baltimore, MD.

**(835) Infant B Cell Signaling after ABO-Incompatible Heart Transplantation (ABOi HTx): Defining the Role of the Inhibitory Molecule CD22;** K. Derkatz, E. Dijke, B. Motyka, L. West. Pediatrics, University of Alberta, Edmonton, AB, Canada.

**(836) Left Internal Thoracic Artery (LITA) Anastomoses with Coronary Microcirculation in Rat: Vineberg Procedure Revisited;** O.M. Villet,<sup>1,2</sup> Y. Imanishi,<sup>2,3</sup> E. Kankuri,<sup>2</sup> A. Siltanen,<sup>2</sup> T. Pättilä,<sup>1</sup> A. Vento,<sup>1</sup> A. Harjula.<sup>1</sup>  
<sup>1</sup>Department of Cardiothoracic Surgery, Helsinki University Meilahti Hospital, Helsinki, Finland; <sup>2</sup>Department of Pharmacology, University of Helsinki, Helsinki, Finland; <sup>3</sup>Department of Cardiovascular Surgery, Osaka City University, Osaka, Japan.

**(837) Development and Evaluation of a Novel Combined Perfusion Decellularization Heart-Lung Model;** A. Weymann,<sup>1</sup> B. Schmack,<sup>1</sup> S. Korkmaz,<sup>1</sup> S. Li,<sup>1</sup> T. Radovits,<sup>1,2</sup> P. Soós,<sup>1,2</sup> M. Karck,<sup>1</sup> G. Szabó.<sup>1</sup> <sup>1</sup>Cardiac Surgery, University of Heidelberg, Heidelberg, Germany; <sup>2</sup>Heart Center, Semmelweis University, Budapest, Hungary.

**(838) Impact of Enoximone on Ischemia Reperfusion Injury-Induced Myocardial Mitochondria Damage;** S.P. Sommer, S. Sommer, M. Leistner, I. Aleksic, T. Walles, C. Schimmer, R.G. Leyh. Thoracic and Cardiovascular Surgery, University Hospital Würzburg, Comprehensive Heart Failure Center, University Hospital Würzburg, Würzburg, Germany

**(839) Does Age Matter? Immunogenic and Biologic Differences between Young and Old Mesenchymal Stromal Cells;** M. Stubbendorff,<sup>1</sup> T. Deuse,<sup>1</sup> X. Hua,<sup>1</sup> C. Lange,<sup>2</sup> H. Reichenspurner,<sup>1</sup> R.C. Robbins,<sup>3</sup> S. Schrepfer.<sup>1,3</sup> <sup>1</sup>TSI-Lab, Cardiovascular Surgery, University Heart Center Hamburg-Eppendorf, Hamburg, Germany; <sup>2</sup>Bone Marrow Transplantation, University Medical Center, Hamburg, Germany; <sup>3</sup>CT Surgery, Stanford University School of Medicine, Hamburg, Germany.

**(840) Human Leukocyte Antigen-G Inhibits Neutrophil Adhesion to Coronary Artery Endothelial Cells Injured by Tumor Necrosis Factor Alpha;** A.G. Mociornita,<sup>1</sup> L.C. Tumiati,<sup>1</sup> P.C. Papageorgiou,<sup>1</sup> L. Grosman-Rimon,<sup>1</sup> A. Ghashghai,<sup>1</sup> H.J. Ross,<sup>1</sup> R.-K. Li,<sup>2</sup> D.H. Delgado,<sup>1</sup> V. Rao.<sup>1</sup> <sup>1</sup>Peter Munk Cardiac Centre, Toronto General Hospital, University Health Network, Toronto, ON, Canada; <sup>2</sup>Toronto General Research Institute, Toronto General Hospital, Toronto, ON, Canada.

**(841) A New Lung Preservation Technique through Bronchial Artery Perfusion on Ex-Vivo Lung;** Y. Tanaka, N. Shigemura, K. Noda, C.A. Bermudez. Department of Cardiothoracic Surgery, University of Pittsburgh Medical Center, Pittsburgh, PA.

**(842) Serum Amyloid A (SAA) Is a Sensitive Surrogate Marker for IL-6R Blockage by Therapeutic IL6R Antibody: A Study in a Mouse Model of Allosensitization;** G. Wu, N.-N. Chai, A. Chen, S. Jordan, A. Klein. Comprehensive Transplant Center, Cedars-Sinai Medical Center, Los Angeles, CA.

## PULMONARY HYPERTENSION

**(843) Refinement of Perioperative Management in Lung Transplantation in Patients with Pulmonary Hypertension: A Single Center Experience;** P. Nierlich, B. Ghanim, P. Jaksch, S. Taghavi, C. Aigner, G. Lang, W. Klepetko. Division of Thoracic Surgery, Department of Surgery, General Hospital Vienna, Medical University Vienna, Vienna, Austria.

**(844) PDT Targeting Pulmonary Hypertension: Implications Prevention and Treatment by Photodynamic Therapy;** Y. Zhao,<sup>1</sup> J. Peng,<sup>1</sup> J. Zhao,<sup>1</sup> Z. Yun,<sup>1</sup> L. Wu,<sup>1</sup> E. Moriyama,<sup>2</sup> M. Liu,<sup>1</sup> B. Wilson,<sup>2</sup> M. de Perrot.<sup>3</sup> <sup>1</sup>Latner Thoracic Surgery Research Laboratories, University Health Network, Toronto, ON, Canada; <sup>2</sup>Division of Biophysics and Imaging, Princess Margaret Hospital, Toronto, ON, Canada; <sup>3</sup>Division of Thoracic Surgery, Toronto General Hospital, Toronto, ON, Canada.

**(845) Treatment Outcomes in Pulmonary Arterial Hypertension (PAH) Associated with Systemic Sclerosis (SscL) in Matched Groups Using Either Bosentan or Sildenafil Monotherapy;** R.M. Crackett,<sup>1</sup> A. Hall,<sup>1</sup> M.B. Day,<sup>1</sup> J.R. Desoza,<sup>1</sup> T. Small,<sup>1</sup> A.J. Fisher,<sup>1,2</sup> J.L. Lordan,<sup>1</sup> G. MacGowan,<sup>1</sup> P.A. Corris.<sup>1,2</sup> <sup>1</sup>National Pulmonary Hypertension Service (Newcastle), Newcastle Hospitals NHS Foundation Trust, Newcastle upon Tyne, United Kingdom; <sup>2</sup>Institute of Cellular Medicine, Newcastle University, Newcastle upon Tyne, United Kingdom.

**(846) Assessment of Right Ventricular Pressure-Volume Relationships Using 256-Slice CT in an Experimental Model of Acute Pulmonary Hypertension;** B. Schmack,<sup>1</sup> A. Weymann,<sup>1</sup> K.U. Klein,<sup>2</sup> S. Boehme,<sup>2</sup> W. Stiller,<sup>3</sup> E. Hartmann,<sup>4</sup> S. Stadfeld,<sup>1</sup> J. Mayer,<sup>3</sup> K. Markstaller,<sup>2</sup> H.U. Kauczor,<sup>1</sup> M. Karck,<sup>1</sup> G. Szabo.<sup>1</sup> <sup>1</sup>Department of Cardiac Surgery, University Hospital Heidelberg, Heidelberg, Germany; <sup>2</sup>Department of Anesthesiology, Vienna General Hospital, Vienna, Austria; <sup>3</sup>Department of Radiology, University Hospital Heidelberg, Heidelberg, Germany; <sup>4</sup>Anesthesiology, University Hospital Mainz, Mainz, Germany.

**(847) Rising NT-proBNP Is More Reflective of an Enlarging Right Ventricle Than of Changing RVEF in PAH;** A. Hamadah,<sup>1</sup> G.C. Kane,<sup>2</sup> R.P. Frantz.<sup>2</sup> <sup>1</sup>Department of Internal Medicine, Mayo Clinic College of Medicine, Rochester, MN; <sup>2</sup>Division of Cardiovascular Diseases, Mayo Clinic College of Medicine, Rochester, MN.

**(848) Pro-Inflammatory HDL Result from Altered HDL Oxidized Lipid Mediators in Both Idiopathic and Associated Types of Pulmonary Arterial Hypertension;** D.J. Ross,<sup>1</sup> G. Hough,<sup>2</sup> K. Navab,<sup>4</sup> J. Aboulhosn,<sup>2</sup> B.J. Van Lenten,<sup>2</sup> A. Ardehali,<sup>4</sup> M. Eghbali,<sup>4</sup> S. Umar,<sup>4</sup> A.M. Fogelman,<sup>2</sup> M. Navab.<sup>2</sup> <sup>1</sup>Pulmonary and Critical Care, David Geffen School of Medicine at UCLA, Los Angeles, CA; <sup>2</sup>Cardiology, David Geffen School of Medicine at UCLA, Los Angeles, CA; <sup>3</sup>Cardiothoracic Surgery, David Geffen School of Medicine at UCLA, Los Angeles, CA; <sup>4</sup>Anesthesiology, Ronald Reagan UCLA Medical Center, Los Angeles, CA.

**(849) Pulmonary Hypertension Following Maze Surgery for Atrial Fibrillation;** E.L. Hardegree, E.R. Fenstad, R.J. Le, S.H. Sheldon, J.M. Stulak, S.S. Kushwaha. Mayo Clinic, Rochester, MN.

**(850) Pulmonary Hypertension Associated to Sarcoidosis: Data from the Swiss PH Registry;** G. Verdi,<sup>1</sup> H. Stricker,<sup>2</sup> J.D. Aubert.<sup>3</sup> <sup>1</sup>Faculté de Biologie et Médecine, Université de Lausanne, Lausanne, Switzerland; <sup>2</sup>Medicina Interna, Ospedale La Carita, Locarno, Switzerland; <sup>3</sup>Service de Pneumologie et Centre de Transplantation, CHUV et Université de Lausanne, Lausanne, Switzerland.

**(851) Utility of Electrocardiogram in the Assessment and Monitoring of Pediatric Pulmonary Hypertension;** K.C. Lau, D.B. Frank, B.D. Hanna, A.R. Patel. Department of Pediatrics, Division of Cardiology, The Children's Hospital of Philadelphia, Philadelphia, PA.

**(852) Pulmonary Endarterectomy in Patients with Borderline Pulmonary Hypertension;** M. Berman,<sup>1</sup> D. Taboada,<sup>2</sup> K. Sheares,<sup>2</sup> J. Pepke-Zaba,<sup>2</sup> T. Carmen,<sup>2</sup> J. Dunning,<sup>1</sup> S. Tsui,<sup>1</sup> D. Jenkins.<sup>1</sup> <sup>1</sup>Cardiothoracic Surgery, Papworth Hospital, Cambridge, United Kingdom; <sup>2</sup>Pulmonary Vascular Diseases Unit, Papworth Hospital, Cambridge, United Kingdom.

**(853) Functional and Quality of Life Improvements in Treated Patients with Chronic Thromboembolic Pulmonary Hypertension;** M.V. Thakrar,<sup>1,3</sup> A. Hall,<sup>1</sup> R. Crackett,<sup>1</sup> M. Day,<sup>1</sup> G. MacGowan,<sup>1</sup> J.L. Lordan,<sup>1</sup> A.J. Fisher,<sup>1,4</sup> C. Tracey,<sup>2</sup> J. Pepke-Zaba,<sup>2</sup> P.A. Corris.<sup>1,4</sup> <sup>1</sup>Pulmonary Vascular Disease Unit, Freeman Hospital, Newcastle-upon-Tyne Hospitals, Newcastle-upon-Tyne, United Kingdom; <sup>2</sup>Pulmonary Vascular Disease Unit, Papworth Hospital, Cambridge, United Kingdom; <sup>3</sup>Southern Alberta Pulmonary Hypertension Clinic, University of Calgary, Calgary, AB, Canada; <sup>4</sup>Institute of Cellular Medicine, University of Newcastle, Newcastle, United Kingdom.

**(854) Clinical Outcomes and Activation of Circulating Endothelial Progenitor Cells Following Application of ASD Occluder in Patients with Flow-Induced Pulmonary Hypertension;** C.-H. Hsu,<sup>1</sup> J.-N. Roan,<sup>2</sup>



C.-F. Lam,<sup>3</sup> <sup>1</sup>Department of Internal Medicine, National Cheng Kung University Medical College and Hospital, Tainan, Taiwan; <sup>2</sup>Department of Surgery, National Cheng Kung University Medical College and Hospital, Tainan, Taiwan; <sup>3</sup>Department of Anesthesiology, National Cheng Kung University Medical College and Hospital, Tainan, Taiwan.

**(855) Targeting Anti-Oxidant and Anti-Proliferative Pathways in Pulmonary Hypertension Secondary to Heart Failure. Is One Better Than the Other?**; Y. Ravi,<sup>1</sup> S. Emani,<sup>2</sup> K. Selvendiran,<sup>3</sup> S. Naidu,<sup>2</sup> P. Kuppusamy,<sup>2</sup> C.B. Sai-Sudhakar.<sup>1</sup> <sup>1</sup>Surgery, The Ohio State University, Columbus, OH; <sup>2</sup>Internal Medicine, The Ohio State University, Columbus, OH; <sup>3</sup>Obstetrics and Gynecology, The Ohio State University, Columbus.

**(856) Pulmonary Arterial Bed Reperfusion Induces Regression of Distal Vasculopathy in a Chronic Thromboembolic Pulmonary Hypertension Piglet Model**; D. Boulate,<sup>1,2</sup> J. Guihaire,<sup>1,2</sup> P. Dorfmueller,<sup>1,2</sup> B. Decante,<sup>1,2</sup> P. Darteville,<sup>1,2</sup> E. Fadel,<sup>1,2</sup> O. Mercier.<sup>1,2</sup> <sup>1</sup>Surgical Research Lab, Centre Chirurgical Marie Lannelongue, Le Plessis Robinson, France; <sup>2</sup>INSERM U999, le Plessis Robinson, France.

**(857) Systemic Analysis of Metabolic Products and Related Gene Expression in Human Lung of Pulmonary Arterial Hypertension Using Ultrahigh Performance Liquid Chromatography and Microarray**; Y. Zhao,<sup>1</sup> J. Chen,<sup>1</sup> C. Lu,<sup>1</sup> M. Hsin,<sup>1</sup> M. Mura,<sup>2</sup> R. Zamel,<sup>1</sup> T. Machuca,<sup>1</sup> T. Waddell,<sup>3</sup> M. Liu,<sup>1</sup> S. Keshavjee,<sup>3</sup> J. Granton,<sup>2</sup> M. de Perrot.<sup>3</sup> <sup>1</sup>Thoracic Surgery Labs, University of Health Network, Toronto, ON, Canada; <sup>2</sup>Pulmonary Hypertension Program, Toronto General Hospital, 9N-961, Toronto, ON, Canada; <sup>3</sup>Division of Thoracic Surgery, Toronto General Hospital, 9N-961, Toronto, ON, Canada.

**(858) Benefit of Combined Therapy with Nicorandil and Colchicine in Reversing Monocrotaline-Induced Rat Pulmonary Arterial Hypertension**; F.-Y. Lee,<sup>1</sup> H.-I. Lu,<sup>1</sup> Y.-Y. Zhen,<sup>2</sup> S. Leu,<sup>3</sup> Y.-L. Chen,<sup>2</sup> T.-H. Tsai,<sup>2</sup> S.-Y. Chung,<sup>2</sup> S. Chua,<sup>2</sup> J.-J. Sheu,<sup>1</sup> S.-Y. Hsu,<sup>4</sup> C.-H. Yen,<sup>5</sup> H.-W. Chang,<sup>6</sup> C.-K. Sun,<sup>7</sup> H.-K. Yip.<sup>2,3</sup> <sup>1</sup>Division of Thoracic and Cardiovascular Surgery, Department of Surgery, Kaohsiung Chang Gung Memorial Hospital, Kaohsiung, Taiwan; <sup>2</sup>Division of Cardiology, Department of Internal Medicine, Kaohsiung Chang Gung Memorial Hospital, Kaohsiung, Taiwan; <sup>3</sup>Center for Translational Research in Biomedical Sciences, Kaohsiung Chang Gung Memorial Hospital, Kaohsiung, Taiwan; <sup>4</sup>Department of Anatomy, Graduate Institute of Biomedical Sciences, Chang Gung University Medical College, Tao-Yuan, Taiwan; <sup>5</sup>Department of Biological Science and Technology, National Pingtung University of Science and Technology, Pingtung, Taiwan; <sup>6</sup>Basic Science, Nursing Department, Meiho University, Pingtung, Taiwan; <sup>7</sup>Department of Emergency Medicine, E-Da Hospital, I-Shou University, Kaohsiung, Taiwan.

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**(859) Bilateral Thoracic Sympathetic Block for Refractory Ventricular Tachycardia after Left Ventricular Assist Device**; R.J. Cogswell,<sup>1</sup> E. Missov,<sup>1</sup> J. Hutchins,<sup>2</sup> P. Eckman,<sup>1</sup> W. Adkisson.<sup>1</sup> <sup>1</sup>Cardiology, University of Minnesota, Minneapolis, MN; <sup>2</sup>Anesthesia, University of Minnesota, Minneapolis, MN.

**(860) Injury Specific Ex Vivo Treatment of the Donor Lung: Pulmonary Thrombolysis Followed by Successful Lung Transplantation**; T.N. Machuca, M.K. Hsin, H. Ott, M. Chen, M. Cypel, T.K. Waddell, S. Keshavjee. University of Toronto, Toronto, ON, Canada.

**(861) Efficacy of a Left Ventricular Assist Device (LVAD) in a Patient with D-Transposition of the Great Arteries (D-TGA) s/p Mustard Procedure with Progressive Cardiogenic Shock**; A.M. McDivitt, J.G. Copeland, E.D. Adler. Cardiology, University of California, San Diego, La Jolla, CA.

**(862) Twist and Shout: Acute Right Ventricular Failure**; E.R. Fenstad,<sup>1</sup> N.S. Anavekar,<sup>1</sup> C. Deschamps,<sup>2</sup> S.L. Kopecky.<sup>1</sup> <sup>1</sup>Cardiovascular Diseases, Mayo Clinic, Rochester, MN; <sup>2</sup>Thoracic Surgery, Mayo Clinic, Rochester, MN.

**(863) In the Thick of It**; S. Law, R. Kapur, T. Chun, L. Merritt, Y. Law. Seattle Children's Hospital, Seattle.

**(864) Bortezomib Desensitization Therapy in a Highly Sensitized Heart/Kidney Candidate with Severe Cardiac Allograft Vasculopathy**; A.J. Sauer,<sup>1</sup> R.C. Walsh,<sup>3</sup> E. McGee,<sup>2</sup> A.R. Tambur,<sup>3</sup> K. Grady,<sup>2</sup> Y. Tsao,<sup>1</sup> R. Gordon.<sup>1</sup> <sup>1</sup>Department of Internal Medicine, Division of Cardiology, Northwestern University Feinberg School of Medicine, Chicago, IL; <sup>2</sup>Department of Surgery, Division of Cardiothoracic Surgery, Northwestern University Feinberg School of Medicine, Chicago, IL; <sup>3</sup>Department of Internal Medicine, Division of Immunology, Northwestern University Feinberg School of Medicine, Chicago, IL.

**(865) Antibody-Mediated Allograft Rejection Presenting with QT Prolongation and Malignant Torsade-de-Pointes**; P.S. Nijjar,<sup>1</sup> C. Brown,<sup>2</sup> H. Roukoz,<sup>1</sup> E. Missov.<sup>1</sup> <sup>1</sup>Cardiology, University of Minnesota Medical School, Minneapolis; <sup>2</sup>Medicine, University of Minnesota Medical School, Minneapolis.

**(866) Use of Retrograde LVAD Perfusion in Hertmate II during AVR To Prevent Stasis**; Z. Khalpey, R. Venky, E.W. Betterton, P.S. Pomeroy, P. Nolan, R.G. Smith, M.C. Smith. Cardiothoracic Surgery, University of Arizona, Tucson, AZ.

**(867) Delayed Development of a Contained Ascending Aortic Rupture after Implantation of a Long-Term Continuous Flow Pump**; D. Malhotra, F.S. Schenkel, M.L. Barr, M.E. Bowdish. Department of Surgery, Keck School of Medicine of USC, University of Southern California, Los Angeles, CA.

**(868) Selective Main Bronchus Clamping and Utilization of Incremental PEEP To Recruit a Total Right Lung Collapse during Ex Vivo Lung Perfusion**; D.M. Wheeler,<sup>1,4</sup> T. Okomoto,<sup>2,4</sup> K.R. McCurry.<sup>3,4</sup> <sup>1</sup>Cardiothoracic Anesthesia Respiratory Therapy, The Cleveland Clinic, Cleveland, OH; <sup>2</sup>Cardiovascular Institute, The Cleveland Clinic, Cleveland, OH; <sup>3</sup>Cardiovascular Institute, The Cleveland Clinic, Cleveland, OH; <sup>4</sup>The Learner Research Institute.

**(869) Bortezomib for the Treatment of Persistent Antibody-Mediated Rejection Complicated by Obliterative Bronchiolitis after Lung Transplantation**; S.G. Kapnadak,<sup>1</sup> J.M. Pilewski,<sup>1</sup> A. Zeevi,<sup>2</sup> M.R. Morrell,<sup>1</sup> C.A. Bermudez,<sup>3</sup> C.J. Gries.<sup>1</sup> <sup>1</sup>Pulmonary, Allergy, and Critical Care Medicine, University of Pittsburgh, Pittsburgh, PA; <sup>2</sup>Pathology, University of Pittsburgh, Pittsburgh, PA; <sup>3</sup>Cardiothoracic Surgery, University of Pittsburgh, Pittsburgh, PA.



- (870) Bortezomib in a Patient with Four Episodes of Acute Antibody-Mediated Rejection (AMR) Early after Single Lung Transplantation;** S. Ohdah,<sup>1</sup> C. Baum,<sup>1</sup> B. Sill,<sup>2</sup> M. Oldigs,<sup>3</sup> C. Oelschner,<sup>2</sup> H. Reichenspurner,<sup>2</sup> T. Deuse.<sup>2</sup> <sup>1</sup>Department of General and Interventional Cardiology, University Heart Center Hamburg, Hamburg, Germany; <sup>2</sup>Department of Cardiovascular Surgery, University Heart Center Hamburg, Hamburg, Germany; <sup>3</sup>Department of Pneumology, Center of Pneumology and Thoracic Surgery, Großhansdorf, Germany.
- (871) Successful Cardiac Transplantation in a Girl with Alström Syndrome;** B. Kosmac,<sup>1</sup> S. Vesel,<sup>1</sup> T. Podnar,<sup>1</sup> P. Kotnik,<sup>2</sup> I. Knezevic,<sup>3</sup> G. Poglajen,<sup>4</sup> B. Vrtovec.<sup>4</sup> <sup>1</sup>Pediatric Cardiology Unit, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; <sup>2</sup>Department of Pediatric Endocrinology, Diabetes and Metabolism, University Children's Hospital, University Medical Centre Ljubljana, Ljubljana, Slovenia; <sup>3</sup>Department of Cardiovascular Surgery, University Medical Centre Ljubljana, Ljubljana, Slovenia; <sup>4</sup>Advanced Heart Failure and Transplantation Programme, Department of Cardiology, University Medical Centre Ljubljana, Ljubljana, Slovenia.
- (872) Pharmacokinetic Ramifications of Bariatric Surgery for Transplant Recipients;** L. Nikolaidis, Y. Pigeon, C. Ruggia-Check. Temple University School of Medicine, Philadelphia, PA.
- (873) Bariatric Surgery in a Patient with a Left Ventricular Assist Device: Unanticipated Consequence;** K.M. Hidalgo, G. Ruiz, M. Hofmeyer, L.E. Cooper, A.O. Griffin, S.W. Boyce, S.S. Najjar. Medstar Heart Institute, Washington, DC.
- (874) Orthotopic Heart Transplantation in Two Infants with Histiocytoid Cardiomyopathy and Left Ventricular Noncompaction;** S.L. Siehr, D. Bernstein, J. Yeh, D.N. Rosenthal, S.A. Hollander. Pediatric Cardiology, Stanford University, Stanford, CA.
- (875) Beware Cold Agglutinins in Organ Donors: Ex-Vivo Lung Perfusion (EVLP) of Lungs from a Category 1 Non-Heart-Beating Donor (NHBD) with a Cold Agglutinin;** A. Venkataraman,<sup>1</sup> J. Blackwell,<sup>1</sup> W. Simmons,<sup>1</sup> S. Beamer,<sup>1</sup> L. Forrest,<sup>1</sup> S. Randell,<sup>2</sup> T. Egan.<sup>1</sup> <sup>1</sup>Surgery, University of North Carolina, Chapel Hill, NC; <sup>2</sup>Cystic Fibrosis Center, UNC, Chapel Hill, NC.
- (876) Acute Tamponade of the Left Paracorporeal Pump House Due to Membrane Defect in a Patient with Berlin Heart EXCOR® Biventricular Assist Device;** S. Völz,<sup>1</sup> J. Gäbel,<sup>2</sup> M. Holmberg,<sup>3</sup> B. Redfors,<sup>3</sup> G. Dellgren.<sup>2</sup> <sup>1</sup>Cardiology, Sahlgrenska University Hospital, Gothenburg, Sweden; <sup>2</sup>Cardiothoracic Surgery, Sahlgrenska University Hospital, Gothenburg, Sweden; <sup>3</sup>Anesthesiology and Intensive Care, Sahlgrenska University Hospital, Gothenburg, Sweden.
- (877) First Report of Lung Transplant for Hyperimmunoglobulin E Syndrome;** I. Timofte, J. McDyer, C. Bermudez, J. Pilewski, M. Morrell, P. Szabolcs, A. Zeevi, M. Morrell. UPMC, Pittsburgh, PA.
- (878) CMV Duodenitis Mimicking Duodenal Cancer in Cardiac Transplant;** J.-C. Youn,<sup>1</sup> J.H. Nahm,<sup>2</sup> H. Lee,<sup>3</sup> S.-M. Kang.<sup>1</sup> <sup>1</sup>Division of Cardiology, Severance Cardiovascular Hospital, Yonsei University College of Medicine, Seoul, Republic of Korea; <sup>2</sup>Department of Pathology, Yonsei University College of Medicine, Seoul, Republic of Korea; <sup>3</sup>Division of Gastroenterology, Yonsei University College of Medicine, Seoul, Republic of Korea.
- (879) Successful Cardiac Re-Transplantation in Acute Antibody Mediated Rejection (AMR) Following Aggressive Immune Modulation;** L. Nikolaidis, H. Parekh, M. Birkenbach, J. Fitzpatrick. Temple University School of Medicine, Philadelphia, PA.
- (880) Multiple and Fatal Epstein-Barr Virus-Associated Smooth Muscle Tumors in a Heart Transplant Recipient;** C.D. Tan,<sup>1</sup> G.J. Boyle,<sup>2</sup> E.R. Rodriguez.<sup>1</sup> <sup>1</sup>Anatomic Pathology, Cleveland Clinic, Cleveland, OH; <sup>2</sup>Pediatric Cardiology, Cleveland Clinic, Cleveland, OH.
- (881) Diagnosis of Left Ventricular Assist Device Infection Using [F-18]-FDG PET/CT: An Underutilize Imaging;** S.C. Masri, E.D. Missov, R. John, M.M. Colvin-Adams. Cardiovascular Division, University of Minnesota, Minneapolis, MN.
- (882) Familial Paraganglioma Induced Cardiomyopathy Requiring Heart Transplantation;** E. Kransdorf, D.H. Chang, C. Ro, R. Reznik, R. Yu, O. Gordon, F. Esmailian, J. Patel, M. Kittleson, J. Kobashigawa. Cedars-Sinai Heart Institute, Los Angeles, CA.
- (883) Acute Pancreatitis as a Presentation of Severe LVAD-Induced Hemolysis;** J.O. Robertson,<sup>1</sup> S. Okada,<sup>1</sup> S.M. Joseph,<sup>2</sup> A. Itoh,<sup>1</sup> G.A. Ewald,<sup>2</sup> R.J. Damiano,<sup>1</sup> S. Prasad,<sup>1</sup> S.C. Silvestry.<sup>1</sup> <sup>1</sup>Surgery (Division of Cardiothoracic Surgery), Washington University, St. Louis, MO; <sup>2</sup>Medicine (Division of Cardiology), Washington University, St. Louis, MO.
- (884) Successful Treatment with Leflunomide as Part of Treatment for Multidrug Resistant Cytomegalovirus Disease after Lung Transplantation;** R.A.S. Hoek,<sup>1</sup> N.J. Verkaik,<sup>2,3</sup> H. Van Bergeijk,<sup>1</sup> M.E.I. Schipper,<sup>4</sup> P.Th.W. Van Hal,<sup>1</sup> S.D. Pas,<sup>2</sup> T.F.C. Beersma,<sup>2</sup> C.A.B. Boucher,<sup>2</sup> B. Van den Blink,<sup>1</sup> J.-L. Murk.<sup>2</sup> <sup>1</sup>Pulmonary Medicine, Erasmus MC, Rotterdam, Netherlands; <sup>2</sup>Virology, Erasmus MC, Rotterdam, Netherlands; <sup>3</sup>Medical Microbiology and Infectious Diseases, Erasmus MC, Rotterdam, Netherlands; <sup>4</sup>Pathology, Erasmus MC, Rotterdam, Netherlands.
- (885) Restrictive Cardiomyopathy and Sickle Cell Disease – Management after Pediatric Heart Transplantation;** T. Thomas, C. Castleberry, T. Ryan, A. Lorts, J.L. Jefferies, J. Towbin, D. Morales, A. Phillips, C. Chin. The Heart Institute, Cincinnati Children's Hospital Medical Center, Cincinnati, OH.
- (886) Paecilomyces lilacinus Skin Infection in a Heart Transplant Patient;** J.B. Cutrell,<sup>1</sup> D. Cavuoti,<sup>2</sup> S. Wada.<sup>1</sup> <sup>1</sup>Internal Medicine-Infectious Diseases, University of Texas-Southwestern, Dallas, TX; <sup>2</sup>Pathology, University of Texas-Southwestern, Dallas, TX.
- (887) Heart Transplantation in Pediatric Patients with Secondary Antiphospholipid Syndrome;** M.L. Gordeev, G.V. Nikolaev, I.V. Suchova, Y.V. Sazonova, V.E. Ribinchik. Thoracic Surgery, Almazov Federal Heart, Blood and Endocrinology Center, Saint-Petersburg, Russian Federation.
- (888) Chyloperitoneum Following Heart Transplantation;** N. Panagiotopoulos, A. Page, C. Lewis, J. Parameashwar, S. Tsui, C. Sudarshan. Cardiothoracic Transplant, Papworth Hospital, Cambridge, United Kingdom.
- (889) Pulmonary Nocardiosis Presenting as an Endobronchial Lesion;** A.M. Emtiazioo,<sup>1</sup> D.W. Roe.<sup>2</sup> <sup>1</sup>Department of Medicine, Division of Pulmonary and Critical Care, Indiana University, Indianapolis, IN; <sup>2</sup>Thoracic Transplant Program, IU Health, Methodist Hospital, Indianapolis, IN.
- (890) Can a Patient with a Left Ventricular Assist Device (LVAD) Be a Suitable Donor for a Lung Transplantation?;** J. Schmidt,<sup>1</sup> J. von Spiczak,<sup>1</sup> B. Redwan,<sup>1</sup> W. Rainer,<sup>2</sup> M. Mohr,<sup>2</sup> K. Wiebe.<sup>1</sup> <sup>1</sup>Dept. of Cardiothoracic Surgery, University Hospital of Muenster, Muenster, Germany; <sup>2</sup>Dept. of Medicine/Pneumology, University Hospital of Muenster, Muenster, Germany.
- (891) Concomitant Transcatheter Aortic Valve and Left Ventricular Assist Device Implantation;** U. Radunski,<sup>1</sup> C. Baum,<sup>1</sup> M. Seiffert,<sup>1</sup> H. Treede,<sup>2</sup> H. Reichenspurner,<sup>2</sup> T. Deuse.<sup>2</sup> <sup>1</sup>Department of General and Interventional Cardiology, University Heart Center Hamburg, Hamburg, Germany; <sup>2</sup>Department of Cardiovascular Surgery, University Heart Center Hamburg, Hamburg, Germany.
- (892) Belatacept in Lung Transplant;** C. Hui,<sup>1</sup> R.M. Kern,<sup>2</sup> D. Wojciechowski,<sup>2</sup> J. Kukreja,<sup>3</sup> S.R. Hays,<sup>2</sup> J.A. Golden,<sup>2</sup> J. Singer.<sup>2</sup> <sup>1</sup>Pharmaceutical Services, University of California, San Francisco, San Francisco, CA; <sup>2</sup>Medicine, University of California, San Francisco, San Francisco, CA; <sup>3</sup>Surgery, University of California, San Francisco, San Francisco, CA.
- (893) Chagas Disease Reactivation after Heart Transplantation: A Successful Alternative Therapy;** F. de S. Brito,<sup>1,2</sup> A.T.V. Araujo,<sup>3</sup> E.R. Alves,<sup>2</sup> D.R. de Almeida,<sup>2</sup> J.N.R. Branco,<sup>3</sup> A.C.C. Carvalho,<sup>2</sup> E. Buffolo,<sup>3</sup> R.D. Lopes.<sup>1,2</sup> <sup>1</sup>Duke Clinical Research Institute – DCRI, Duke University, Durham, NC; <sup>2</sup>Department of Cardiology, Federal University of Sao Paulo – UNIFESP, Sao Paulo, Sao Paulo, Brazil; <sup>3</sup>Department of Cardiovascular Surgery, Federal University of Sao Paulo – UNIFESP, Sao Paulo, Sao Paulo, Brazil.

**(894) Successful Heart Transplant of a Sensitized Adult with Single Ventricle Anatomy, Bilateral SVC's, TAPVR, and Heterotaxy;** T. Shah, M. Mitchell, R. Woods, J. Tweddell, S. Zangwill. Medical College of Wisconsin/ Children's Hospital of Wisconsin, Wauwatosa, WI.

**(895) Sildenafil for Exercise Induced Pulmonary Arterial Hypertension;** L. Nikolaidis, N. Memon, B. O'Murchu. Temple University School of Medicine, Philadelphia, PA.

**(896) Dunnigan Syndrome Complicated by Cardiomyopathy Requiring Heart Transplant;** A. Sultan, Y. Hellman, I. Gradus-Pizlo, M.A. Hadi, J.A. O'Donnell, A.S. Malik. Cardiology, Indiana University Health, Indianapolis, IN.

**(897) WITHDRAWN**

**(898) Avoidance of Heart-Lung Transplant with LVAD in an Adolescent with Dilated Cardiomyopathy and Markedly Elevated Pulmonary Vascular Resistance;** W.A. Zuckerman,<sup>1</sup> B. Yilmaz,<sup>1</sup> R.K. Singh,<sup>1</sup> M.E. Richmond,<sup>1</sup> T.M. Lee,<sup>1</sup> K.D. Beddows,<sup>1</sup> L.A. Gilmore,<sup>1</sup> J.M. Chen,<sup>2</sup> L.J. Addonizio.<sup>1</sup> <sup>1</sup>Division of Pediatric Cardiology, Columbia University Medical Center, New York, NY; <sup>2</sup>Department of Cardiothoracic Surgery, Weill Medical College of Cornell University, New York, NY.

**(899) Aortic Insufficiency Secondary to Impella® and Apparent LVAD Malfunction in a Bridge-to-Transplant Patient;** S.S. Cowan,<sup>1</sup> W. Chiu,<sup>2</sup> S. Virani,<sup>1</sup> S. Bell,<sup>3</sup> M. Toma,<sup>1</sup> J. Bashir,<sup>4</sup> <sup>1</sup>Department of Medicine, Division of Cardiology, St. Paul's Hospital, University of British Columbia, Vancouver, BC, Canada; <sup>2</sup>Department of Nursing, St. Paul's Hospital, University of British Columbia, Vancouver, BC, Canada; <sup>3</sup>Department of Anesthesiology, St. Paul's Hospital, University of British Columbia, Vancouver, BC, Canada; <sup>4</sup>Department of Surgery, Division of Cardiovascular Surgery, St. Paul's Hospital, University of British Columbia, Vancouver, BC, Canada.

**(900) Normoxic Left Ventricle Retraining after Arterial Switch Operation with Mechanical Assist Device;** F. Gandolfo, L. Di Chiara, Z. Ricci, G. Brancaccio, A. Carotti, A. Amodeo. Pediatric Cardiac Surgery, Bambino Gesù' Children Hospital, Rome, Italy.

**(901) Extrinsic Compression of a Malacic Bronchial Suture by a Giant Native Pulmonary Artery after Lung Transplantation for Pulmonary Hypertension: Successful Treatment by Interventional Endoscopy;** I. Wellemans,<sup>1</sup> D. Leduc,<sup>1</sup> B. Rondelet,<sup>2</sup> A. Belhaj,<sup>2</sup> C. Knoop,<sup>1</sup> G. Vandermoten.<sup>1</sup> <sup>1</sup>Chest Medicine, Erasme, Brussels, Belgium; <sup>2</sup>Heart and Lung Transplantation Surgical Clinic, Erasme, Brussels, Belgium.

**(902) Endobronchial Valve Implantation for Endoscopic Lung Volume Reduction Resulting in Severe Aspergillus Infection at Subsequent Lung Transplantation;** B. Redwan,<sup>1</sup> V. Koesek,<sup>1</sup> J. Schmidt,<sup>1</sup> B. Bedetti,<sup>1</sup> M. Mohr,<sup>2</sup> R. Wiewrodt,<sup>2</sup> K.M. Mueller,<sup>3</sup> K. Wiebe.<sup>1</sup> <sup>1</sup>Division of Thoracic Surgery, University Hospital of Muenster, Muenster, Germany; <sup>2</sup>Division of Pulmonary Medicine, University Hospital of Muenster, Muenster, Germany; <sup>3</sup>Institute of Pathology, University Hospital of Muenster, Muenster, Germany.

**(903) HeartMate® Left Ventricular Assist Device Placement in an Adolescent Duchenne Muscular Dystrophy Patient with Severe Dilated Cardiomyopathy;** R.K. Singh,<sup>1</sup> M.E. Richmond,<sup>1</sup> W.A. Zuckerman,<sup>1</sup> T.M. Lee,<sup>1</sup> K.D. Beddows,<sup>1</sup> L.A. Gilmore,<sup>1</sup> J.M. Chen,<sup>2</sup> L.J. Addonizio.<sup>1</sup> <sup>1</sup>Division of Pediatric Cardiology, Columbia University Medical Center, New York, NY; <sup>2</sup>Department of Cardiothoracic Surgery, Weill Medical College of Cornell University, New York, NY.

**(904) Rapidly Progressive Coronary Allograft Vasculopathy Following Post-Viral Eosinophilic Rejection;** P.T. Thrush,<sup>1</sup> J.G. Gossett,<sup>1</sup> C.L. Backer,<sup>2</sup> E. Pahl.<sup>1</sup> <sup>1</sup>Division of Cardiology, Ann & Robert H. Lurie Children's Hospital of Chicago, Northwestern University Feinberg School of Medicine, Chicago, IL; <sup>2</sup>Division of Cardiovascular and Thoracic Surgery, Ann & Robert H. Lurie Children's Hospital of Chicago, Northwestern University Feinberg School of Medicine, Chicago, IL.

**(905) Transition from ECMO to Left Ventricular Support Using a Single CentriMag Device;** W.F. DeNino,<sup>2</sup> C.J. Yeager,<sup>3</sup> J.M. Toole,<sup>2</sup> A.G. Shackelford,<sup>3</sup> J.L. Peura.<sup>1</sup> <sup>1</sup>Internal Medicine/ Cardiology, Medical University of South

Carolina, Charleston, SC; <sup>2</sup>Surgery, Medical University of South Carolina, Charleston, SC; <sup>3</sup>Cardiovascular Perfusion, Medical University of South Carolina, Charleston, SC.

**(906) Levosimendan Reverted Severe Pulmonary Hypertension in a Patient on Waiting List for Heart Transplantation;** E. Ammirati, F.G. Oliva, A. Garascia, L. D'Angelo, V. Pacher, A. Verde, F. Macera, M. Cipriani, M. Frigerio. Cardiothoracic and Vascular Department, Niguarda Ca' Granda Hospital, Milano, Italy.

**(907) Combined Heart and Liver Transplantation Against Positive Crossmatch in Hypoplastic Left Heart Syndrome;** S. Saxena,<sup>1</sup> E. Raichlin,<sup>1</sup> J. Um,<sup>2</sup> K. Duncan,<sup>2</sup> I. Dumitru,<sup>1</sup> B. Lowes,<sup>1</sup> J. Hammel.<sup>2</sup> <sup>1</sup>Cardiology, University of Nebraska Medical Center, Omaha, NE; <sup>2</sup>Surgery-Cardiovascular & Thoracic Surgery, University of Nebraska Medical Center, Omaha, NE.

**(908) Recurrence of Pulmonary Hypertension Post Lung Transplant;** N. Panagiotopoulos, S.K. Balasubramanian, L. Sucony, P. Catarino, J. Dunning, J. Parmar. Cardiothoracic Transplant, Papworth Hospital, Papworth Everard, Cambridge, United Kingdom.

**(909) Biventricular Assist Device Placement in Dextrocardia;** D.J. Kaczorowski,<sup>1</sup> J. Woo,<sup>1</sup> J.W. Wald,<sup>2</sup> M.A. Acker,<sup>1</sup> P. Atluri.<sup>1</sup> <sup>1</sup>Division of Cardiovascular Surgery, University of Pennsylvania, Philadelphia, PA; <sup>2</sup>Division of Cardiovascular Medicine, University of Pennsylvania, Philadelphia, PA.

**(910) Use of Pentoxifylline for Hemolytic Anemia in a Patient with a Continuous-Flow Left Ventricular Assist Device;** D.L. Jennings,<sup>1</sup> C. Vanderstelt,<sup>2</sup> C.T. Williams.<sup>2</sup> <sup>1</sup>Pharmacy Services, Henry Ford Hospital, Detroit, MI; <sup>2</sup>Cardiovascular Medicine, Henry Ford Hospital, Detroit, MI.

**(911) Obstructive Sleep Apnoea in Chronic Heart Failure with near Resolution after Implantation of a Left Ventricular Assist Device;** M. Voortman,<sup>1</sup> F.Z. Ramjankhan,<sup>2</sup> J.R. Lahpor,<sup>2</sup> N. de Jonge,<sup>3</sup> J.M. Kwakkel-van Erp.<sup>1</sup> <sup>1</sup>Pulmonology, University Hospital Utrecht, Utrecht, Netherlands; <sup>2</sup>Cardiothoracic Surgery, University Hospital Utrecht, Utrecht, Netherlands; <sup>3</sup>Cardiology, University Hospital Utrecht, Utrecht, Netherlands.

**(912) Immediate Post Cardiac Transplantation Thrombotic Thrombocytopenic Purpura;** M.A. Hadi,<sup>1,2</sup> Y. Hellman,<sup>1</sup> A. Malik,<sup>1,2</sup> I. Gradus-Pizlo,<sup>1,2</sup> O'Donnell,<sup>1,2</sup> S. Beganovic,<sup>2</sup> I.W. Wang,<sup>1,2</sup> Z. Hashmi,<sup>2</sup> T. Woziak,<sup>2</sup> D. Roe.<sup>1,3</sup> <sup>1</sup>Indiana University, Indianapolis, IN; <sup>2</sup>Cardiology and Cardiovascular Surgery, Indiana University Health, Indianapolis, IN; <sup>3</sup>Pulmonary and Critical Care, Indiana University Health, Indianapolis, IN.

**(913) An Unusual Case of Gastrointestinal Bleeding Post Heart-Lung Transplantation;** M.I. Birader, M.D. Holmes, C.-L. Holmes-Liew. South Australian Lung Transplant Unit, Royal Adelaide Hospital, Adelaide, South Australia, Australia.

**(914) Paradoxical Drop in the Pump Flow and Power Consumption in the Presence of Severe Ventricular Assist Device Thrombosis;** D. Saeed,<sup>1</sup> A. Albert,<sup>1</sup> B. Maxhera,<sup>1</sup> H. Kamiya,<sup>1</sup> U. Boeken,<sup>1</sup> R. Westenberg,<sup>2</sup> A. Lichtenberg.<sup>1</sup> <sup>1</sup>Cardiovascular Surgery, Düsseldorf University Hospital, Duesseldorf, Germany; <sup>2</sup>Cardiology, Pneumology and Angiology, Düsseldorf University Hospital, Duesseldorf, Germany.

**(915) Percutaneous Closure of the Aortic Valve To Treat Severe Aortic Insufficiency in a Patient with a HeartWare Left Ventricular Assist Device;** A.J. Sauer,<sup>1</sup> E. McGee,<sup>2</sup> C. Davidson,<sup>1</sup> C.W. Yancy,<sup>1</sup> K. Meehan,<sup>2</sup> A. Morse,<sup>1</sup> T. Provias,<sup>1</sup> H. Vidula,<sup>1</sup> R. Gordon.<sup>1</sup> <sup>1</sup>Department of Internal Medicine, Cardiology Division, Northwestern University Feinberg School of Medicine, Chicago, IL; <sup>2</sup>Department of Surgery, Cardiothoracic Surgery Division, Northwestern University Feinberg School of Medicine, Chicago, IL.

**(916) Successful Recovery with Biventricular Assist Device and Bromocriptine Administration in a Patient with Life-Threatening Peripartum Cardiomyopathy;** M. Funasako,<sup>1</sup> O. Seguchi,<sup>2</sup> D. Chinen,<sup>1</sup> C. Kamiya,<sup>3</sup> M. Hieda,<sup>2</sup> T. Watanabe,<sup>2</sup> T. Sato,<sup>2</sup> H. Sunami,<sup>2</sup> Y. Murata,<sup>2</sup> M. Yanase,<sup>2</sup> H. Hata,<sup>4</sup> T. Fujita,<sup>4</sup> J. Kobayashi,<sup>4</sup> T. Nakatani.<sup>2</sup> <sup>1</sup>Cardiovascular Medicine, National Cerebral and Cardiovascular Center, Osaka, Japan;

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**(917) Left Ventricular Assist Device Implantation to a Biventricular Failure Patient of Corrected Transposition of the Great Arteries after Anatomical Repair;** M. Komagamine,<sup>1</sup> T. Nishinaka,<sup>1</sup> Y. Ichihara,<sup>1</sup> T. Miyamoto,<sup>1</sup> K. Suzuki,<sup>1</sup> H. Tsukui,<sup>1</sup> S. Saito,<sup>1</sup> M. Nagashima,<sup>1</sup> K. Yamazaki,<sup>1</sup> T. Shinohara,<sup>2</sup> M. Shimizu,<sup>2</sup> T. Nakanishi.<sup>2</sup> <sup>1</sup>Cardiovascular Surgery, Tokyo Women's Medical University, Tokyo, Japan; <sup>2</sup>Pediatric Cardiology, Tokyo Women's Medical University, Tokyo, Japan.

**(918) A Case for Right Ventricular Assist Device Outflow Graft Restriction in a Patient with HeartWare HVADs as Biventricular Assist Devices;** R.D. Kociol,<sup>1</sup> C. Jouhourian,<sup>2</sup> M.S. Kiernan,<sup>2</sup> N.K. Kapur,<sup>2</sup> D. McSparren,<sup>1</sup> K.G. Warner,<sup>1</sup> D. DeNofrio,<sup>2</sup> D.T. Pham.<sup>1</sup> <sup>1</sup>Cardiology, Beth Israel Deaconess Medical Center, Boston, MA; <sup>2</sup>Cardiology, Tufts Medical Center, Boston, MA; <sup>3</sup>Cardiac Surgery, Tufts Medical Center, Boston, MA.

**(919) Case Report: Heartmate II Implantation in D-Transposition of the Great Vessels;** K.P. Mody,<sup>1</sup> S.H. Lee,<sup>1</sup> S.W. Restaino,<sup>1</sup> H. Takayama,<sup>2</sup> Y. Naka,<sup>2</sup> U.P. Jorde,<sup>1</sup> N. Uriel.<sup>1</sup> <sup>1</sup>Heart Failure and Transplant, Columbia University Medical Center, New York, NY; <sup>2</sup>Department of Cardiothoracic Surgery, Columbia University Medical Center, New York, NY.

**(920) Isolated Epstein-Barr Virus Central Nervous System Infection in a Heart Transplant Recipient;** H. Vidula, V. Stosor, A.J. Sauer, R.A. Gordon. Northwestern University, Chicago, IL.

**(921) Scopulariopsis chartarum/trigonoporus Pulmonary Infection in a Lung Transplant Recipient;** K.E. Schoeppler,<sup>1</sup> N.M. Northcutt,<sup>2</sup> D.M. Lyu,<sup>3</sup> G.R. Barber,<sup>4</sup> G. O'Malley Schroeder,<sup>4</sup> M.R. Zamora.<sup>3</sup> <sup>1</sup>Pharmacy, University of Colorado Hospital, Aurora, CO; <sup>2</sup>Medicine, University of Colorado Health Sciences Campus, Aurora, CO; <sup>3</sup>Pulmonary Sciences and Critical Care Medicine, University of Colorado Health Sciences Campus, Aurora, CO; <sup>4</sup>Clinical Laboratory, University of Colorado Health Science Campus, Aurora, CO.

**(922) Complication Profile of the Berlin Heart EXCOR Biventricular Support in Children;** M. Schweiger,<sup>1</sup> J. Schrempf,<sup>2</sup> A. Wasler,<sup>2</sup> G. Prenner,<sup>2</sup> M. Sereinig,<sup>2</sup> K. Tscheliessnigg,<sup>2</sup> I. Knez.<sup>2</sup> <sup>1</sup>Division of Congenital Cardiovascular Pediatric Surgery, University Children's Hospital, Zurich, Switzerland; <sup>2</sup>Division of Heart Surgery, Medical University Graz, Graz, Austria.

**(923) A Perilous Course Following a Myocardial Infarction: Ischaemic Ventricular Septal Defect in a Transplanted Heart;** E.L. Senanayake,<sup>1</sup> H. Singh,<sup>2</sup> C. McGrath,<sup>2</sup> N.J. Howell,<sup>1</sup> A.M. Ranasinghe,<sup>1</sup> S.J. Rooney,<sup>1</sup> J. Mascaro,<sup>1</sup> I.C. Wilson.<sup>1</sup> <sup>1</sup>Cardiothoracic Surgery, Queen Elizabeth Hospital, Birmingham, United Kingdom; <sup>2</sup>Cardiac Anaesthesia, Queen Elizabeth Hospital, Birmingham, United Kingdom.

**(924) Dyspnea Following MAZE Procedure;** J.Y. Park,<sup>1</sup> E.R. Fenstad,<sup>1,2</sup> S.S. Kushwaha.<sup>1,2</sup> <sup>1</sup>Department of Internal Medicine, Mayo Clinic, Rochester, MN; <sup>2</sup>Department of Medicine, Division of Cardiovascular Diseases, Mayo Clinic, Rochester, MN.

**(925) Obliterative Bronchiolitis after Heart Transplantation. Bug or Drug;** S.D. Patel, S.K. Shah, N. Boroumand, S. Lick, V.G. Valentine. Texas Transplant Center, University of Texas Medical Branch, Galveston, TX.

**(926) High-Output Heart Failure Due to an Aorto-Pulmonary Fistula in a Heart Transplant Patient;** P.S. Nijjar, J. Roberts. Cardiology, University of Minnesota Medical School, Minneapolis, MN.

**(927) Coronary Allograft Vasculopathy Associated with Hepatitis B Infection;** G. Poglajen, M. Sebestjen, R. Okrajsek, G. Zemljic, S. Frljak, V. Androcec, B. Vrtovec. Advanced Heart Failure and Transplantation Programme, University Medical Center Ljubljana, Ljubljana, Slovenia.

**(928) Cardiac Allograft Vasculopathy and Acute Cellular Rejection Resolved with OKT3;** N.K. Gandhi, B. Chokkalingam Mani, P. Mather. Department of Medicine, Thomas Jefferson University Hospital, Philadelphia, PA.

**(929) Completion Pneumonectomy and Thoracoplasty in a Single-Lung Transplant Recipient with Refractory Fungal Infection of the Native Lung;** J. Lin,<sup>1</sup> T.C. Ojo.<sup>2</sup> <sup>1</sup>Section of Thoracic Surgery, Dept of Surgery, University of Michigan, Ann Arbor, MI; <sup>2</sup>Division of Pulmonary Critical Care Medicine, University of Michigan, Ann Arbor, MI.

**(930) Airway Complication Contributing to Disseminated Fusariosis after Lung Transplantation;** J.M. Terasaki, S.K. Shah, G.A. Lombard, M.A. James, D.L. Beckles, S. Lick, V.G. Valentine. Texas Transplant Center, University of Texas Medical Branch, Galveston, TX.

**(931) Mycobacterium Abscessus Infections in Lung Transplant Recipients;** R.R. Zapata Gonzalez,<sup>1</sup> I.I. Lopez Sanz,<sup>1</sup> J.J. Sole Montserrat,<sup>1</sup> M.M. Deu Martin,<sup>1</sup> L.L. Romero Vielva,<sup>1</sup> A.A. Jauregui Aburalach,<sup>1</sup> J.J. Perez Velez,<sup>1</sup> M.M. Wong Jaen,<sup>1</sup> C.C. Berastegui Garcia,<sup>2</sup> M.M. Canela Cardona.<sup>1</sup> <sup>1</sup>Thoracic Surgery and Lung Transplantation, Vall d'Hebron University Hospital, Barcelona, Spain; <sup>2</sup>Pneumology and Lung Transplantation, Vall d'Hebron University Hospital, Barcelona, Spain.

**(932) Liver Transplantation and Cirrhotic Cardiomyopathy;** S. Murthy, M. Farr. Cardiology, Columbia University Medical Center, New York, NY.

**(933) Constrictive Physiology Complicating Cardiac Transplantation;** N. Panagiotopoulos, A. Page, C. Lewis, J. Parameshwar, S. Tsui, C. Sudarshan. Cardiothoracic Transplant, Papworth Hospital, Cambridge, United Kingdom.

**(934) Successful Treatment of Pulmonary Zygomycosis after Orthotopic Heart Transplant;** D.B. Graham,<sup>1</sup> J.D. Mishkin,<sup>2</sup> D.W. Markham,<sup>2</sup> M.H. Drazner,<sup>2</sup> M.A. Wait,<sup>1</sup> S.Y. Wada.<sup>3</sup> <sup>1</sup>Department of Cardiovascular and Thoracic Surgery, University of Texas - Southwestern Medical Center, Dallas, TX; <sup>2</sup>Department of Internal Medicine, Division of Cardiology, University of Texas - Southwestern Medical Center, Dallas, TX; <sup>3</sup>Department of Internal Medicine, Division of Infectious Disease, University of Texas - Southwestern Medical Center, Dallas, TX.

**(935) Tracheomalacia Requiring Several Interventions Following Successful Left Ventricular Assist and Cardiac Transplantation;** O. Yurdakok,<sup>1</sup> U. Kervan,<sup>1</sup> S.A. Kucuker,<sup>1</sup> E. Yekele,<sup>2</sup> M. Pac.<sup>1</sup> <sup>1</sup>Cardiovascular Surgery Clinic, Turkiye High Specialization Hospital, Ankara, Turkey; <sup>2</sup>Thoracic Surgery Clinic, Turkiye High Specialization Hospital, Ankara, Turkey.

**(936) C4d Challenge: CMV Viremia and Antibody Mediated Rejection in the Orthotopic Heart Recipient;** N. Krishna, J. Gluck, J. Radojevich, A. Ricci, R. Danialan, D. Wencker. Center for Advanced Heart Failure and Transplant, Hartford Hospital, Hartford, CT.

**(937) Berlin Heart Right Ventricular Assist Device as a Bridge to Recovery Post Heart Transplantation for Failed Fontan-Circulation;** S. Seitz, H. Buchholz, I. Rebeyka, L. West, D. Ross, S. Urschel. Department of Pediatrics, University of Alberta, Edmonton, AB, Canada; Division of Cardiothoracic Surgery, University of Alberta, Edmonton, AB, Canada.

**(938) Eight Years of Lung and Heart-Lung Transplantations in Malaysia: Institute of Respiratory Medicine and National Heart Institute Initial Experience;** D. Amran,<sup>1</sup> Z. Bakar,<sup>1</sup> S. Tahir,<sup>2</sup> R. Sanusi,<sup>2</sup> E. Taib,<sup>2</sup> A. Yunus.<sup>1</sup> <sup>1</sup>Lung Transplant Unit, Institute of Respiratory Medicine, Kuala Lumpur, Wilayah Persekutuan, Malaysia; <sup>2</sup>Cardiothoracic Department, National Heart Institute, Kuala Lumpur, Wilayah Persekutuan, Malaysia.

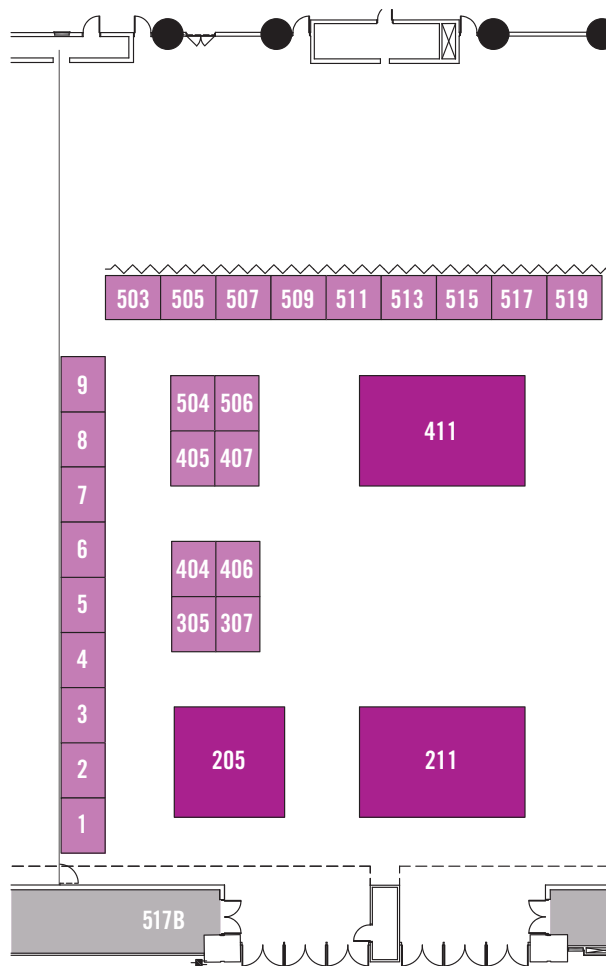
**(939) Pulmonary Vein Allograft Can Serve as a Nidus for Septic Emboli: Report of 2 Cases;** K.F. Catlyn,<sup>1</sup> J.C. Salgado,<sup>1</sup> P. Sarkar,<sup>1</sup> H. Dababneh,<sup>2</sup> M.A. Baz.<sup>1</sup> <sup>1</sup>Medicine - Division of Pulmonary, Critical Care and Sleep Medicine, University of Florida, Gainesville, FL; <sup>2</sup>Neurology, University of Florida, Gainesville, FL.



# ALPHABETICAL LISTING of EXHIBITING COMPANIES

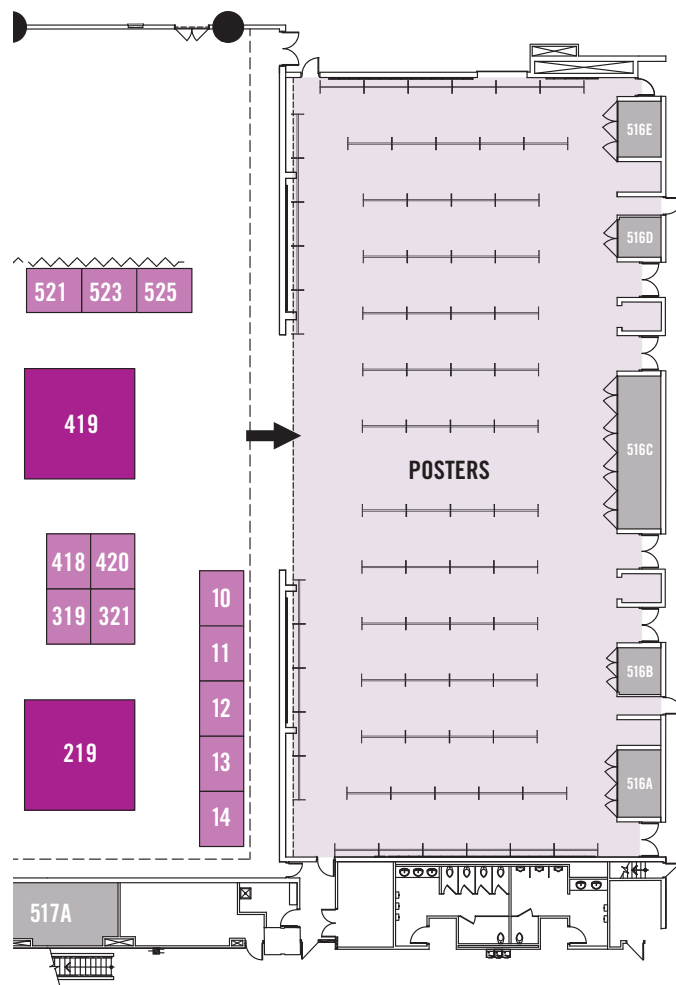
<b>NAME</b>	<b>BOOTH #</b>	<b>NAME</b>	<b>BOOTH #</b>
ALERE HOME MONITORING	521	JARVIK HEART, INC.	519
BAYER HEALTHCARE PHARMACEUTICALS	307	MAQUET	10-11
BERLIN HEART, INC.	319-418	METHODIST J.C. WALTER JR. TRANSPLANT CENTER	12
BIOLOGIC TX	1	NOVARTIS	205
CARDIAC ASSIST, INC	523	ONE LAMBDA, INC. Part Of Thermo Fisher Scientific	321-420
CENTURION MEDICAL PRODUCTS	504	ORTHODYNAMCIS COMPANY, INC.	515
CIRCULITE, INC.	5-6-7	REINHEART TOTAL ARTIFICIAL HEART	513
CORMATRIX CV, INC.	406	SCANLAN INTERNATIONAL, INC.	525
CSL BEHRING	511	SCHOLTEN SURGICAL INSTRUMENTS, INC.	509
ELSEVIER	8	SUNSHINE HEART	2
ESSENTIAL PHARMACEUTICALS & METHAPHARM	517	SYNCARDIA SYSTEMS, INC.	407-506
EUROMACS	503	THORATEC CORP	211
GLAXOSMITHKLINE	505	TRANSMEDICS, INC.	419
HEARTWARE	411	UNITED THERAPEUTICS	219
IMACS	405	VIVOLINE MEDICAL AB	9
ISHLT REGISTRY	305-404	XDX	13-14
IMACOR INC.	507	XVIVO PERFUSION AB	3-4

# Exhibit Hall Floorplan **Level 5** Palais des congrès de Montréal



## LIST OF EXHIBITORS by BOOTH NUMBER

BOOTH #	NAME	BOOTH #	NAME
1	BIOLOGIC TX	205	NOVARTIS
2	SUNSHINE HEART	211	THORATEC CORP
3-4	XVIVO PERFUSION AB	219	UNITED THERAPEUTICS
5-6-7	CIRCULITE, INC.	305-404	ISHLT REGISTRY
8	ELSEVIER	307	BAYER HEALTHCARE PHARMACEUTICALS
9	VIVOLINE MEDICAL AB	319-418	BERLIN HEART, INC.
10-11	MAQUET	321-420	ONE LAMBDA, INC. <small>Part Of Thermo Fisher Scientific</small>
12	METHODIST J.C. WALTER JR. TRANSPLANT CENTER	405	IMACS
13-14	XDX	406	CORMATRIX CV, INC.



## LIST OF EXHIBITORS by BOOTH NUMBER

BOOTH #	NAME	BOOTH #	NAME
407-506	SYNCARDIA SYSTEMS, INC.	513	REINHEART TOTAL ARTIFICIAL HEART
411	HEARTWARE	515	ORTHODYNAMCIS COMPANY, INC.
419	TRANSMEDICS, INC.	517	ESSENTIAL PHARMACEUTICALS & METHAPHARM
503	EUROMACS	519	JARVIK HEART, INC.
504	CENTURION MEDICAL PRODUCTS	521	ALERE HOME MONITORING
505	GLAXOSMITHKLINE	523	CARDIAC ASSIST, INC
507	IMACOR INC.	525	SCANLAN INTERNATIONAL, INC.
509	SCHOLTEN SURGICAL INSTRUMENTS, INC.		
511	CSL BEHRING		

**Alere Home Monitoring****521**

**30 S. Keller Road  
Suite 100 B  
Orlando, FL 32810**

**Web Address: [www.alere.com](http://www.alere.com)**

Alere Home Monitoring, through its Alere VADCare® Program, provides equipment and services for VAD patients and hospital VAD departments. Our newest offering, the Alere VADWatch® Telemonitoring service allows VAD Coordinators to monitor patients after discharge by providing them with alerts when critical patient values are outside of a pre-established acceptable range. The VAD-Watch® Tele-monitoring service is principally designed to reduce hospital readmission. VAD equipment lines supported include the HeartWare HVAD®, Thoratec Heart-Mate II® and Thoratec TLC II®. In addition, we enable VAD patients to monitor their INR at home using our industry leading home anticoagulation monitoring services.

**Bayer Pharma AG****307**

**Müllerstr. 178,  
13353 Berlin, Germany**

**Web Address: [www.healthcare.bayer.com](http://www.healthcare.bayer.com).**

**About Bayer HealthCare**

The Bayer Group is a global enterprise with core competencies in the fields of health care, agriculture and high-tech materials. Bayer HealthCare, a subgroup of Bayer AG with annual sales of EUR 17.2 billion (2011), is one of the world's leading, innovative companies in the healthcare and medical products industry and is based in Leverkusen, Germany. The company combines the global activities of the Animal Health, Consumer Care, Medical Care and Pharmaceuticals divisions. Bayer HealthCare's aim is to discover, develop, manufacture and market products that will improve human and animal health worldwide. Bayer HealthCare has a global workforce of 55,700 employees (Dec 31, 2011) and is represented in more than 100 countries.

More information at [www.healthcare.bayer.com](http://www.healthcare.bayer.com).

**Berlin Heart, Inc.****319**

**200 Valleywood Rd, Ste A500  
The Woodlands, TX 77380**

**Web Address: [www.berlinheart.com](http://www.berlinheart.com)**

Berlin Heart, the only company worldwide that develops, manufactures and distributes VADs for patients of every age and body size. EXCOR® Pediatric provides medium to long-term circulatory support specifically for infants and children awaiting heart transplants. EXCOR Pediatric is approved for use in the USA under HDE regulations by FDA.

**BiologicTx****1**

**40-D Commerce Way  
Totowa, New Jersey 07512**

**Web Address: [www.biologictx.com](http://www.biologictx.com)**

BiologicTx is the first, solely focused, infusion and pharmacy provider of biologic and oral transplant therapy management, specializing in the administration of intravenous biologic therapies. After the patient has been successfully transplanted, BiologicTx will provide comprehensive management of their oral immunosuppressive regime, ensure compliance and provide necessary biologic interventions. At BiologicTx, our fundamental philosophy is to lead, manage and care for transplant patients with the highest level of respect, integrity and dignity.

**CardiacAssist, Inc.****523**

**240 Alpha Drive  
Pittsburgh, PA 15238**

**Web Address: [www.Cardiacassist.com](http://www.Cardiacassist.com)**

CardiacAssist's TandemHeart, extracorporeal circulatory support system, provides a steady, high flow supply of oxygenated blood to the organs while also decompressing the left ventricle to unload and rest the heart.



**Centurion Medical Products****504**

**100 Centurion Way  
Williamston, MI 48895**

**Web Address: [www.centurionmp.com](http://www.centurionmp.com)**

Centurion Medical Products specializes in creating customized sterile procedural trays (e.g., dressing change trays, line maintenance bundles) designed to meet your special requirements. We also develop and manufacture catheter dressings featuring SorbaView SHIELD, an all-in-one catheter dressing with a built-in stabilization device that prevents catheter movement and dislodgement. In addition to the SHIELD, we offer a full line of unique securement devices, including our Foley Anchor designed to stabilize urinary catheter tubing and LVAD drivelines.

Centurion products help lower the risk of infection, reduce hospital readmissions, increase efficiency, lower costs per procedure and improve outcomes for medical professionals and patients.

**CircuLite, Inc.****5**

**250 Pehle Avenue, Park 80 West  
Suite 403, Plaza 1  
Saddle Brook, NJ 07663**

**Web Address: [www.circuLite.net](http://www.circuLite.net)**

CircuLite® is developing disruptive solutions to improve the treatment of chronic heart failure. The Company's minimally-invasive *circulatory support systems* are intended to work in conjunction with the native heart to enhance clinical outcomes and improve quality of life for patients and their families. The **SYNERGY®** Surgical System, which has received CE Mark approval in Europe, features the world's smallest surgically implanted blood pump designed for long-term use in ambulatory patients diagnosed with chronic heart failure. Next-generation circulatory support systems in development that incorporate CircuLite's micro-pump technology include an endovascular system, a right-heart system, a pediatric system and an all-support system.

**CorMatrix Cardiovascular, Inc.****406**

**1100 Old Ellis Road  
Roswell, GA 30076**

**Web Address: [www.cormatrix.com](http://www.cormatrix.com)**

CorMatrix® Cardiovascular markets its **ECM® Technology biomaterial devices** for pericardial closure, cardiac tissue repair, and carotid repair and is currently conducting pre-clinical studies to evaluate future applications in heart failure as well as other cardiovascular applications.

**CSL Behring****511**

**1020 First Ave  
King of Prussia, PA 19406**

**Web address: [www.cslbehring.com](http://www.cslbehring.com)**

CSL Behring is a global leader in the plasma protein therapeutics industry. Committed to saving lives and improving the quality of life for people with rare and serious diseases, the company manufactures and markets a range of safe and effective plasma-derived and recombinant therapies worldwide. These therapies are used to treat coagulation disorders including hemophilia and von Willebrand disease, primary immune deficiencies, hereditary angioedema and inherited respiratory disease. Additional therapies are used in cardiac surgery, organ transplantation, burn treatment and to prevent hemolytic diseases in the newborn.

**Elsevier****8**

**1600 JFK Blvd-Suite 1800  
Philadelphia, PA 19103**

**Web Address: [www.elsevierhealth.com](http://www.elsevierhealth.com)**

Elsevier is a leading publisher of health science publications, advancing medicine by delivering superior reference information and decision support tools to doctors, nurses, health practitioners and students. With an extensive media spectrum-print, online and handheld we are able to supply the information you need in the most convenient format.

**Essential Pharmaceuticals  
& Methapharm****517****770 Newtown Yardley Rd, Suite 212  
Newtown, PA 18940****Web Address: [www.essentialpharma.com](http://www.essentialpharma.com)**

**Custodiol® HTK organ preservation solution**, originally developed for cardiac surgery, offers superior convenience due to its easy handling characteristics, water like viscosity and no need for additives or filters which makes it a preferred solution for many transplant centers. Please visit us at our booth and at [www.custodiol.com](http://www.custodiol.com)

**EUROMACS****503****c/o German Heart Institute Berlin  
Augustenburgerplatz 1  
13353 Berlin, Germany****Web address: [www.euromacs.org](http://www.euromacs.org)**

Euromacs runs a registry for data from patients with mechanical circulatory support systems. The data collected will be made available for research purposes. Euromacs has 124 individual and 37 institutional members in 26 countries.

**GlaxoSmithKline****505****7333 Mississauga Rd  
Mississauga, On, Canada L5N 6L4****HeartWare, Inc.****411****205 Newbury Street  
Framingham, MA 01701****Web address: [www.heartware.com](http://www.heartware.com)**

HeartWare is dedicated to delivering safe, high-performing and transformative therapies that enable patients with heart failure to get back to life. The company's innovative technologies are creating advances in the miniaturization of Ventricular Assist Devices (VADs) leading to less invasive surgical procedures and increasing the patient population who may be suitable for VAD therapy. HeartWare's breakthrough innovations begin with the HVAD® Pump, designed to be implanted next to the heart in the pericardial space avoiding the more invasive surgical procedures required with older LVAD technologies. The HVAD Pump is commercially available around the world.

**ImaCor, Inc.****507****839 Stewart Ave, Suite 3  
Garden City, NY 11530****Web Address: [imacorinc.com](http://imacorinc.com)**

ImaCor, an innovator in critical care solutions, has developed the first hemodynamic transesophageal echocardiography (hTEE™) device designed for management of hemodynamically unstable patients. hTEE is the only technology which provides continuously available direct visualization of cardiac performance, enabling the intensivist to effectively manage the hemodynamics of critically ill patients.

**ISHLT Registry for Mechanically  
Assisted Circulatory Support (IMACS)****405****790 Lyons-Harrison Research Building  
701 19th Street South  
Birmingham, AL 35294-0007****Web Address: [www.isHLT.org/registries/mcsdDatabase.asp](http://www.isHLT.org/registries/mcsdDatabase.asp)**

The International Society for Heart and Lung Transplantation Registry for Mechanically Assisted Circulatory Support (IMACS) is an international registry intended to enroll and follow patients who receive durable mechanically assisted circulatory support devices (MCS) in all countries and hospitals that wish to participate. Durable devices are defined as those devices that are capable of allowing patient discharge with the device in place. Devices are defined on a country by country basis. The registry records pre-implant patient information, device information and tracks the major post implant clinical events.

**ISHLT Registry****305**

**700 North 4th Street  
Richmond, VA 23219  
Phone: 804-782-4859 • Fax: 800-809-7688  
Email: [ishlthelp@unos.org](mailto:ishlthelp@unos.org)**

The ISHLT Transplant Registry was created to collect on-going, current information on the worldwide thoracic organ transplantation experience. Our registry is the only one of its kind. The data we maintain is utilized for scientific study and contributes to the body of knowledge regarding thoracic transplantation. Our goal is to identify overall and best practices for improving cardiothoracic patient care. This year the exhibit will make center-specific information available for review by ISHLT Transplant Registry participants. In addition, data screens can be reviewed and we will provide guidance on enrollment, submission of data and data request services.

**Jarvik Heart****519**

**333 West 52nd S  
New York, NY 10019  
Web Address: [www.jarvikheart.com](http://www.jarvikheart.com)**

Jarvik Heart, Inc. is a privately held, New York based company that develops and manufactures miniaturized heart assist devices for the treatment of severe heart failure. The **Jarvik 2000** is a battery-powered axial-flow left ventricular assist device (LVAD). It is the smallest implantable blood pump available for the long-term treatment of Heart Failure.

**MAQUET****10**

**Kehler Str. 31  
76437 Rastatt, Germany  
Web Address: [www.maquet.com](http://www.maquet.com)**

As a trusted partner for hospitals and clinicians since 1838, MAQUET is a global leader in medical systems that advance surgical interventions, cardiovascular procedures and critical care. MAQUET develops and designs innovative products and therapeutic applications for the operating room, hybrid OR/cath lab, intensive care unit and patient transport within acute care hospitals, improving outcomes and quality of life for patients. Cardiovascular specialties include intra-aortic balloon counterpulsation (IABC) therapy for cardiac assist; coronary artery bypass surgery; aortic and peripheral vascular surgery; and extracorporeal circulation.

**Methodist J.C. Walter Jr.  
Transplant Center****12**

**6550 Fannin St, Suite 1201  
Houston, TX 77030**

**Web Address: [www.MethodistTransplantCenter.com](http://www.MethodistTransplantCenter.com)**

The Methodist J.C. Walter Jr. Transplant Center in Houston, Texas provides a comprehensive approach for patients suffering with end-stage organ failure. Our innovation, technology and techniques produce some of the highest quality patient care and outcomes in the nation.

The center performed 418 transplants in 2011 and 462 transplants in 2012.

**Novartis Pharma AG****205**

**Forum 1, Novartis Campus  
4056 Basel, Switzerland**

**Web Address: [www.novartis.com](http://www.novartis.com)**

Novartis provides innovative healthcare solutions that address the evolving needs of patients and societies. Headquartered in Basel, Switzerland, Novartis offers a diversified portfolio to best meet these needs: innovative medicines, eye care, cost-saving generic pharmaceuticals, preventive vaccines and diagnostic tools, over-the-counter and animal health products. Novartis is the only global company with leading positions in these areas.

In 2011, the Group achieved net sales of USD 58.6 billion, while approximately USD 9.6 billion (USD 9.2 billion excluding impairment and amortization charges) was invested in R&D throughout the Group. Novartis Group companies employ approximately 127,000 full-time-equivalent associates and operate in more than 140 countries around the world.

**One Lambda Inc. – a Part of Thermo Fisher Scientific, Inc.****321****21001 Kittridge Street  
Canoga Park, CA 91303****Web Address: [www.onelambda.com](http://www.onelambda.com)**

Post-Transplant monitoring is about identifying factors that may suggest the development of donor specific antibodies (DSA). Routine monitoring with One Lambda's LABScreen® Single Antigen may help determine early development of DSA. Visit the One Lambda booth to discover how we can help you improve the standard of care in post-transplant monitoring with our collection of Antibody Detection products. Also learn about the roles of anti-AT1R, complement (C1q) binding and IgM antibodies. Our experts will be available to discuss the role of DSA and post-transplant monitoring.

**Orthodynamics Company, Inc.****515****155 Carey Drive  
Noblesville IN 46060****Web Address: [www.od-inc.com](http://www.od-inc.com)**

Orthodynamics is an industry leader in the outsourcing of Ventricular Assist Devices, associated equipment and supplies. Focused on patient care and a team approach, our **VADTrac<sup>SM</sup> Solution** equipment management and individual account managers allow VAD Coordinators and hospitals to focus on what they do best! Patients benefit by access to Orthodynamics 24/7, providing services through manufacturers we represent nationwide. Our strategic alliances with hospitals, clinicians and major insurance carriers, give us the ability to provide a high level of service to patients and healthcare professionals.

**ReinHeart Total Artificial Heart****513****Dept. of Cardiovascular Engineering  
Institute of Applied Medical Engineering  
RWTH Aachen University  
University Hospital Aachen  
Pauwelsstr. 20  
52074 Aachen, Germany****Web Address: [www.reinheart.de](http://www.reinheart.de)**

**The Total Artificial Heart ReinHeart** is designed to treat terminal heart failure as an alternative to heart transplantation. The fully implantable system functions completely maintenance-free within the human body and is intended to be small enough to be implanted in the majority of patients. Among its unique features are its durable linear motor and the anatomically optimized configuration of the vascular prostheses. The configuration of the motor and membrane allow for a pressure controlled filling, thus avoiding suction related problems.

The system is being validated extensively in laboratory tests and chronic animal studies to prove hydraulic performance, durability and hemocompatibility.

**Scanlan International, Inc.****525****One Scanlan Plaza  
Saint Paul, Minnesota 55107****Web Address: [www.scanlaninternational.com](http://www.scanlaninternational.com)**

Highest quality surgical products designed and manufactured by the Scanlan family since 1921. Over 3,000 titanium and stainless steel instrument designs including needle holders, forceps, scissors, clamps and specialty instruments. Featured instruments include the SCANLAN® *LEGACY* titanium needle holders and forceps, full line of VATS / MIS Thoracoscopic instruments including the Chitwood Clamp, Knot Pusher and SUPER CUT™ Suture Cutter; Axial Handle needle holders and forceps, SUPER CUT™ Scissors and Rendina needle holder. Single-use products include: VASCU-STAT™ bulldog clamps, Aorta/Vein Punch and A/C Locator® graft markers. Also offering custom instrument designs and modifications for your individual needs.



**Scholten Surgical Instruments, Inc.****509****170 Commerce St., Suite 101  
Lodi, CA 95240****Web Address: [www.bioptome.com](http://www.bioptome.com)**

For more than thirty years SSI has manufactured high quality endomyocardial biopsy forceps. The Scholten disposable Bioptome model is called the Novatome™ and, like its predecessors, is specially designed to acquire maximum specimen size for more accurate pathology results. Our device has earned a reputation for its ease of use, heart rhythm feedback and considered the “gold standard” by many. With our innovative design paired with over three decades of clinical experience makes our device the best choice for safety and performance. With the Novatome,™ SSI continues to provide reliability, value, and forceps of the highest quality to your industry.

**Sunshine Heart****2****12988 Valley View Road  
Eden Prairie, MN 55344****Web Address: [www.sunshineheart.com](http://www.sunshineheart.com)**

The **C-Pulse® Heart Assist System** is an extra-aortic balloon pump using counterpulsation technology to treat moderate to severe heart failure (Class III/IVa). It is placed outside the bloodstream, can be implanted minimally invasively and the patient has the ability to disconnect from the system. It is designed to improve heart function by increasing coronary blood flow and decreasing afterload. C-Pulse's goal is to halt the progression of heart failure. The FDA feasibility clinical study results showed promising results with the reduction of NYHA classification in 80% of the patients. CE Mark has been received.

**SynCardia Systems, Inc.****407****1992 E. Silverlake Road  
Tucson, AZ 85713****Web Address: [www.syncardia.com](http://www.syncardia.com)**

The **SynCardia temporary Total Artificial Heart (TAH-t)** is the world's only FDA, Health Canada and CE approved Total Artificial Heart. The TAH-t is currently approved as a bridge to transplant for patients dying from end-stage biventricular failure. The 13.5 lb Freedom™ portable driver has received CE approval in Europe and is undergoing an IDE clinical study in the U.S. The Freedom driver is designed to provide mobility for stable TAH-t patients both inside and outside the hospital. Visit our booth for updates on the clinical study, the 50cc TAH-t and destination therapy.

**Thoratec Corporation****211****6035 Stoneridge Drive  
Pleasanton, CA 94588****Web Address: [www.thoratec.com](http://www.thoratec.com)**

Thoratec is the world leader in mechanical circulatory support with the broadest product portfolio to treat the full range of clinical needs for patients suffering from advanced heart failure. The company's products include the **HeartMate LVAS** and **Thoratec VAD**, with more than 20,000 devices implanted in patients suffering from heart failure. Thoratec also manufactures and markets the CentriMag and PediMag/PediVAS product lines. Thoratec is headquartered in Pleasanton, California. For more information, visit [www.thoratec.com](http://www.thoratec.com).

**TransMedics, Inc.****419****200 Minuteman Road, Suite 302  
Andover, MA 01810****Web Address: [www.transmedics.com](http://www.transmedics.com)**

TransMedics is dedicated to extending the life-saving benefits of transplantation to patients suffering from organ failure. **The Organ Care System (OCS™)** is a portable, advanced ex-vivo perfusion, monitoring and organ recruitment platform for heart and lung transplantation. The OCS maintains donor organs in a functioning state from donor to recipient and aims to enable more efficient use of potential donor organs and enhance patient outcomes.

The OCS HEART and OCS LUNG systems are CE-marked and in clinical use in leading worldwide transplant centers and in pivotal FDA trials in leading US transplant centers comparing the OCS to cold storage.

**United Therapeutics****219****55 TW Alexander Drive  
Research Triangle Park, NC 27709****Web Address: [www.unither.com](http://www.unither.com)**

United Therapeutics Corporation is a biotechnology company focused on the development and commercialization of unique products to address the unmet medical needs of patients with chronic and life-threatening cardiovascular and infectious diseases and cancer.

**Vivoline Medical AB****9****Scheelevägen 17  
SE-223 70 Lund  
Sweden****Web Address: [www.vivoline.se](http://www.vivoline.se)**

Vivoline Medical develops and manufactures systems for ex-vivo lung perfusion. The system **Vivoline® LS1** is CE-marked and in clinical use. It's intended for reconditioning, evaluation and cold preservation of lungs after donation and prior to transplantation. It provides a simplified method to perform evaluation in a safe and controlled way. The possibility to test marginal lungs provides the opportunity to increase the number of organs available for transplantation. Vivoline LS1 is a compact system which can be set up quickly, is flexible and very user friendly. System for research is also available and used in Europe, Australia and US.

**XDx****13****3260 Bayshore Blvd  
Brisbane, CA 94005****Web Address: [www.XDx.com](http://www.XDx.com)**

AlloMap has been used in 100 Heart Transplant Centers, on over 10,000 patients, and reimbursed by over 200 payers. AlloMap is the Standard of Care for the management of **stable** Heart Transplant Patients. During the 2013 ISHLT; investigators will be presenting AlloMap studies on the clinical utility for testing starting at 55 days post-transplant, use in steroid tapering and additional findings from the European CARGO II study. This non-invasive blood test is now offered in the EU. Please stop by our booth and attend the symposiums/posters to learn more about the use of AlloMap in stable heart transplant patients.

**XVIVO Perfusion AB****3****Box 53015  
SE – 400 14 Göteborg  
Sweden****Visiting address/deliveries:****Mässans gata 10  
SE-412 51 Göteborg  
Sweden****Web address: [www.xvivoperfusion.com](http://www.xvivoperfusion.com)**

XVIVO Perfusion AB manufactures and markets solutions and equipment for transplantation and thoracic surgery, designed to preserve, evaluate and recondition organs and tissues prior to transplantation. Two of our principle solutions are Perfadex® for hypothermic flushing and preservation of donor lungs during transport and STEEN Solution™ for normothermic ex vivo organ evaluation and reconditioning.  
(Approved in US for research purposes only).

**XVIVO aims to:**

- minimize ischemia-reperfusion injury by improving the solutions used for ex-vivo preservation of organs and tissues.
- extend the safe ex-vivo preservation time for organs and tissues prior to transplantation.
- increase organ availability and transplantation success rates by introduction of new transplantation concepts and techniques.













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## SAN DIEGO

**2014**  
34th ISHLT  
Annual Meeting and  
Scientific Sessions  
April 9-12, 2014



## NICE, FRANCE

**2015**  
35th ISHLT  
Annual Meeting and  
Scientific Sessions  
April 14-18, 2015

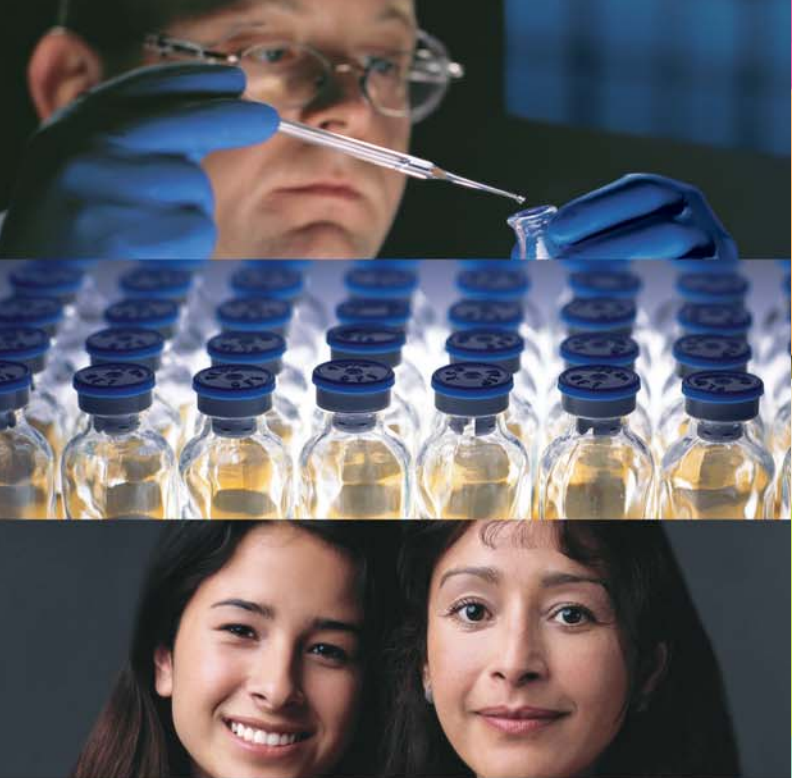
## FUTURE ANNUAL MEETINGS



## WASHINGTON DC

**2016**  
36th ISHLT  
Annual Meeting and  
Scientific Sessions  
April 27-30, 2016





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At Gilead, we are working to discover, develop and commercialize innovative therapeutics in areas of unmet medical need. Through our portfolio of marketed products and our pipeline of investigational compounds, we strive to set new standards that can ultimately change the way diseases are treated with the goal of improving patient care around the world.

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**Gilead is proud to support the  
International Society for Heart  
& Lung Transplantation.**

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For more information, please visit [www.gilead.com](http://www.gilead.com).

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