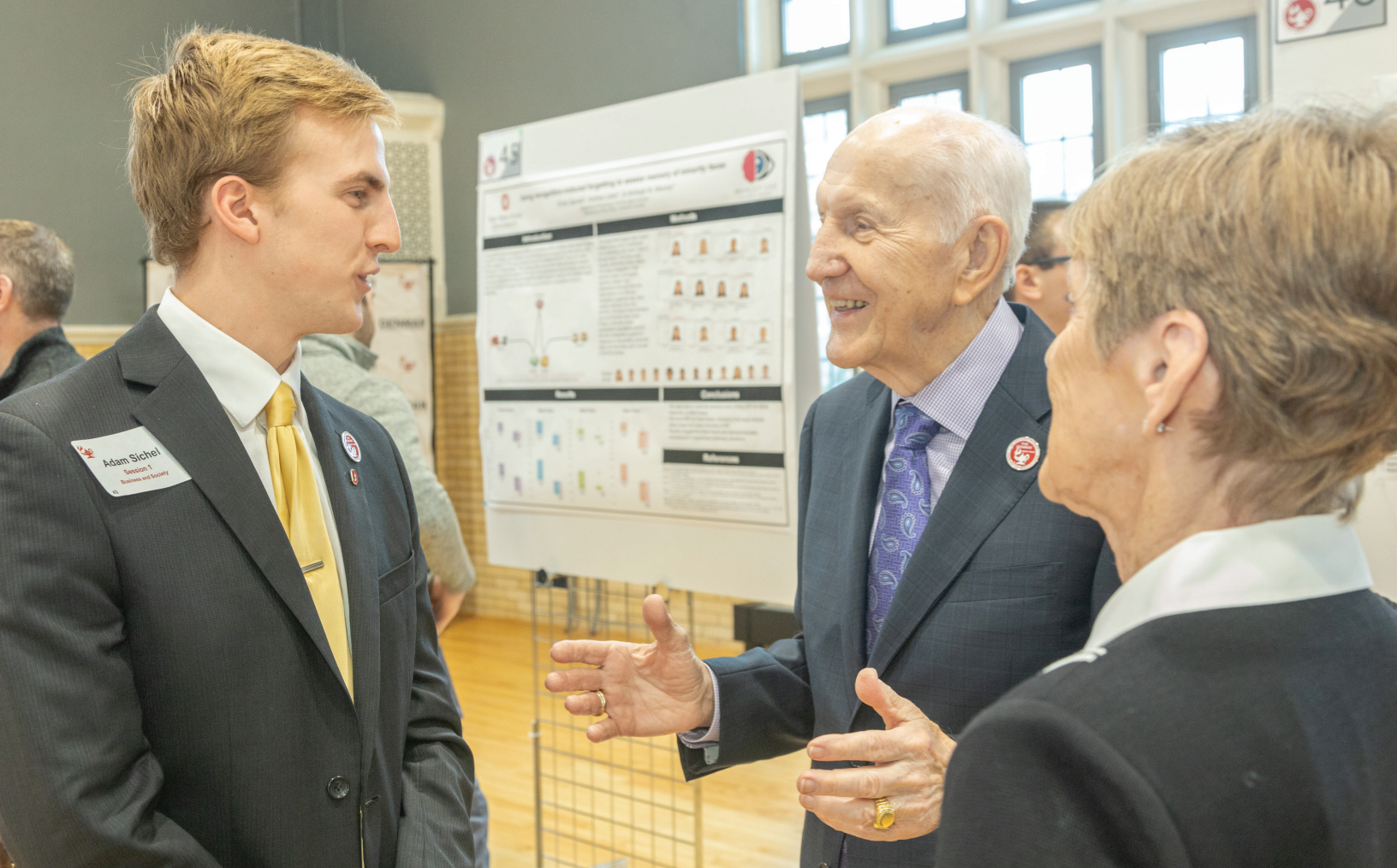


THE RICHARD J. AND MARTHA D.
DENNMAN
UNDERGRADUATE RESEARCH FORUM



MONDAY, APRIL 5
-
FRIDAY, APRIL 9
2021



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THE RICHARD J. AND MARTHA D. DENMAN UNDERGRADUATE RESEARCH FORUM SHOWCASES OUTSTANDING RESEARCH, SCHOLARSHIP, AND CREATIVE ACTIVITY BY STUDENTS AT THE OHIO STATE UNIVERSITY. THE DENMAN FORUM CELEBRATES THEIR DISCOVERY INNOVATION AND ENCOURAGES UNDERGRADUATES TO APPLY TO THIS EVENT TO HELP ENRICH THEIR EDUCATION. THE OFFICE UNDERGRADUATE RESEARCH AND CREATIVE INQUIRY OFFICE WOULD LIKE TO SEND A SPECIAL THANKS TO OUR COMMITTEE OF FACULTY, STAFF, AND ADMINISTRATORS WHO MADE THIS 26TH ANNIVERSARY SPECIAL.



Dear Fellow Buckeyes,

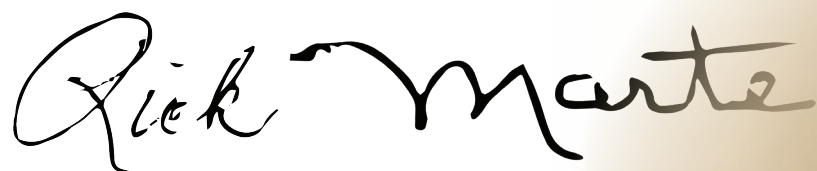
Welcome to the VIRTUAL 26th DENMAN UNDERGRADUATE RESEARCH FORUM! This remarkable event brings together an academically talented group of seniors that puts a spotlight on their talents and abilities. It is the most significant means through which our University encourages and recognizes high-quality undergraduate research.

The DENMAN FORUM highlights the need and importance of undergraduate research, a cornerstone for students to pursue more significant and meaningful research to better prepare them in dealing with the complex processes and sophisticated problems that exist in today's world.

It starts with their passion, perseverance and energy put forth by these high-ability students, as displayed in their oral and poster presentations. Fresh thinking and innovating ideas have been their trademark. Their combined efforts have resulted in the DENMAN FORUM being woven into the academic fabric of our University—a remarkable achievement!

Marte and I want to congratulate all of our students, staff, faculty and faculty mentors for their herculean efforts on successfully showcasing a first...a VIRTUAL DENMAN UNDERGRADUATE RESEARCH FORUM, in spite of the COVID-19 PANDEMIC—a truly remarkable accomplishment!

Thank you Buckeyes,



Rick and Marte Denman



Dear Students and Colleagues:

On behalf of the Office of Student Academic Success, I am delighted to welcome you to the 26th Annual Richard J. and Martha D. Denman Undergraduate Research Forum. The Denman fosters the engagement of our undergraduate students in the important process of discovering new knowledge. It also provides graduating seniors a capstone experience in which they can showcase their research and accomplishments as scholars and individuals.

Last year, the Denman took place just before the pandemic forced us to shift online. This year then marks the first virtual event in the history of the Denman Forum.

I would like to thank the many people who have contributed to the success of this very special Denman Forum. This includes the sponsors whose contributions play such a key role in supporting this important event. I would also like to recognize the faculty members who worked with the student presenters. As research mentors, they offered expertise, guidance and encouragement — all while adapting to new online tools — and are thus integral to the success of the event.

I also extend my appreciation to the Denman Undergraduate Research Forum organizers from the Offices of Academic Enrichment and Advancement for their dedication to making this year's virtual Denman a rewarding experience for presenters and attendees. And I thank the faculty and staff who volunteered their time to review presentations and judge student work.

Finally, I would like to congratulate all the undergraduate students who are participating in this event. May this experience inspire you to continue to ask difficult questions and seek new and creative answers.

Sincerely,



Beth Hume, PhD
Vice Provost of Student Academic Success
Dean of Undergraduate Education



Dear Students and Colleagues,

It is our great pleasure to welcome you to the 26th Annual Richard J. and Martha D. Denman Undergraduate Research Forum. Over 180 undergraduates are presenting their research and creative endeavors in twenty-one categories throughout the week in our new virtual format. Under the direction of their research mentors, students carried out collaborative research projects to solve pressing local, statewide, national, and global issues.

We would like to extend our sincere gratitude to Mr. and Mrs. Denman for their longstanding commitment to undergraduate research and scholarship. We also thank President Johnson for her support of undergraduate research endeavors and welcome her to the first Denman Forum of her tenure at Ohio State.

We would also like to extend a special thank you to our many research mentors, faculty advisory committee members, volunteers, and visitors. Congratulations to our students on their research accomplishments. Have a wonderful week.

Sincerely,
The Undergraduate Research and Creative Inquiry Team



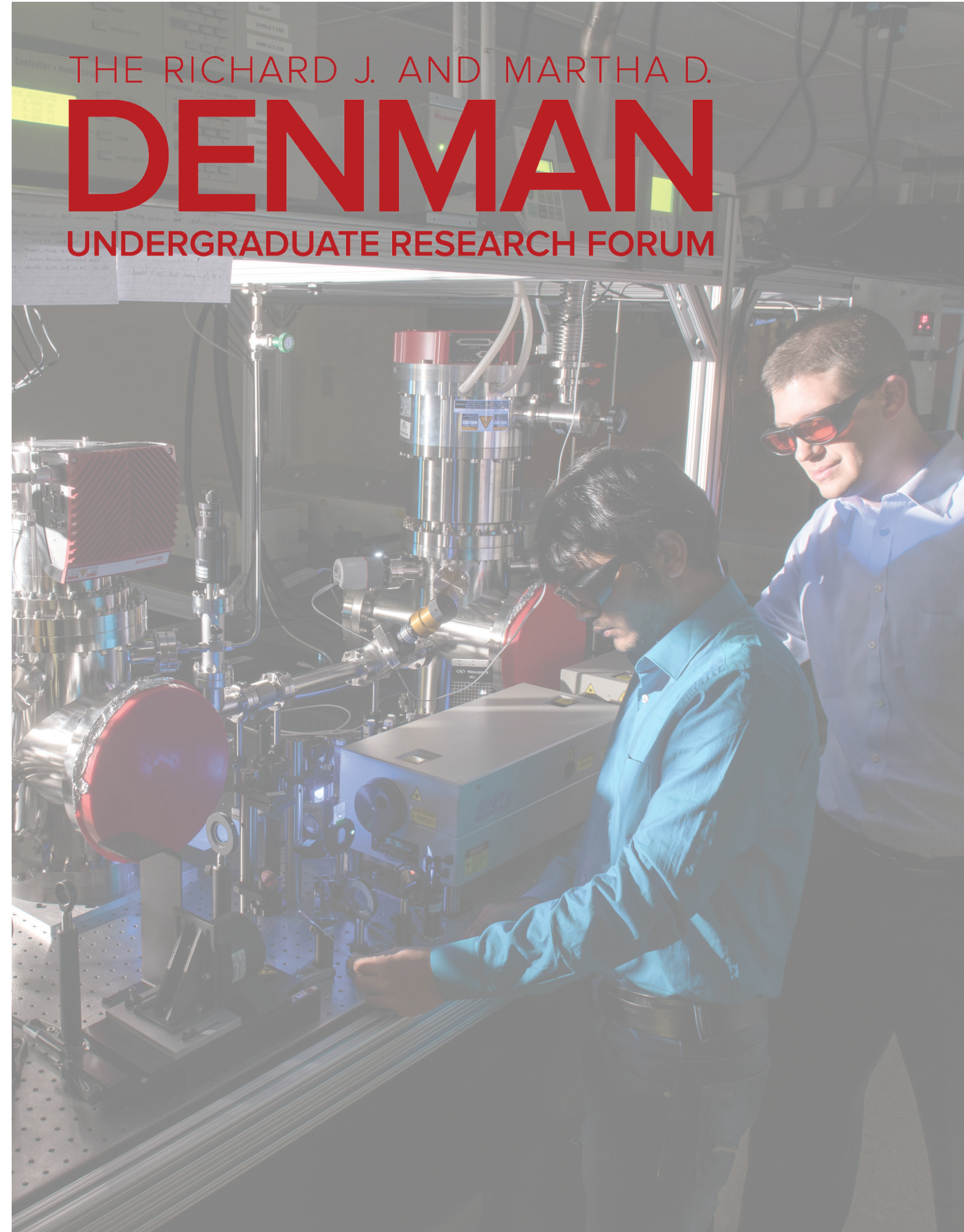
Ola Ahlqvist
Associate Vice Provost, Office of Academic Enrichment



Claire Sweigart
Program Director



Kayla Daniel
Program Coordinator



DENMAN AREAS OF RESEARCH



- ANIMAL AND INSECT SCIENCES**
- BUSINESS AND ECONOMY**
- CANCER TREATMENT AND INNOVATIONS**
- EDUCATION, TEACHING, AND LEARNING**
- ENGINEERING: LIFE AND NATURAL SCIENCES**
- ENGINEERING: PHYSICAL SCIENCES**
- ENVIRONMENT AND CLIMATE SCIENCE**
- FOOD SCIENCE AND NUTRITION**
- GENERAL AND SOCIAL PSYCHOLOGY**
- HEALTH PROMOTION**
- HUMAN EXPERIENCES**
- INNOVATIONS IN MEDICAL TREATMENT**
- INNOVATIONS IN TECHNOLOGY, MATHEMATICS, AND PHYSICS**
- LANGUAGE DEVELOPMENT AND UNDERSTANDING**
- MEDICAL TECHNOLOGY AND INFORMATICS**
- NATURAL AND LIFE SCIENCES**
- NEUROSCIENCE AND BEHAVIORAL HEALTH**
- SOCIAL DETERMINANTS OF HEALTH**
- SOCIAL JUSTICE AND ACTIVISM**
- STUDYING WELLBEING**
- UNDERSTANDING HEALTH OUTCOMES**

DENMAN SCHEDULE

VISIT [GO.OSU.EDU/DENMANPRESENTATIONS2021](https://go.osu.edu/denmanpresentations2021) TO REGISTER FOR EACH DENMAN UNDERGRADUATE RESEARCH FORUM WEBINAR SESSION

MONDAY, APRIL 5

9:00 – 10:30 A.M. – UNDERSTANDING HEALTH OUTCOMES

11:00 A.M. – 12:30 P.M. – EDUCATION, TEACHING, AND LEARNING

2:00 – 3:30 P.M. – FOOD SCIENCE AND NUTRITION

4:00 – 5:30 P.M. – ENGINEERING AND PHYSICAL SCIENCES

6:00 – 7:00 P.M. – BUSINESS AND ECONOMY

TUESDAY, APRIL 6

9:00 – 10:30 A.M. – STUDYING WELLBEING

11:00 A.M. – 12:30 P.M. – HUMAN EXPERIENCES

2:00 – 3:30 P.M. – ANIMAL AND INSECT SCIENCES

4:00 – 5:30 P.M. – INNOVATIONS IN MEDICAL TREATMENT

6:00 – 7:30 P.M. – NEUROSCIENCE AND BEHAVIORAL HEALTH

WEDNESDAY, APRIL 7

9:00 – 10:30 A.M. – HEALTH PROMOTION

11:00 A.M. – 12:30 P.M. – CANCER TREATMENT AND INNOVATIONS

2:00 – 3:30 P.M. – INNOVATIONS IN TECHNOLOGY, MATHEMATICS, AND PHYSICS

4:00 – 5:30 P.M. – LANGUAGE DEVELOPMENT AND UNDERSTANDING

6:00 – 7:30 P.M. – NATURAL AND LIFE SCIENCES

THURSDAY, APRIL 8

9:00 – 10:30 A.M. – SOCIAL JUSTICE AND ACTIVISM

11:00 A.M. – 12:30 P.M. – ENVIRONMENT AND CLIMATE SCIENCE

2:00 – 3:30 P.M. – ENGINEERING: LIFE AND NATURAL SCIENCES

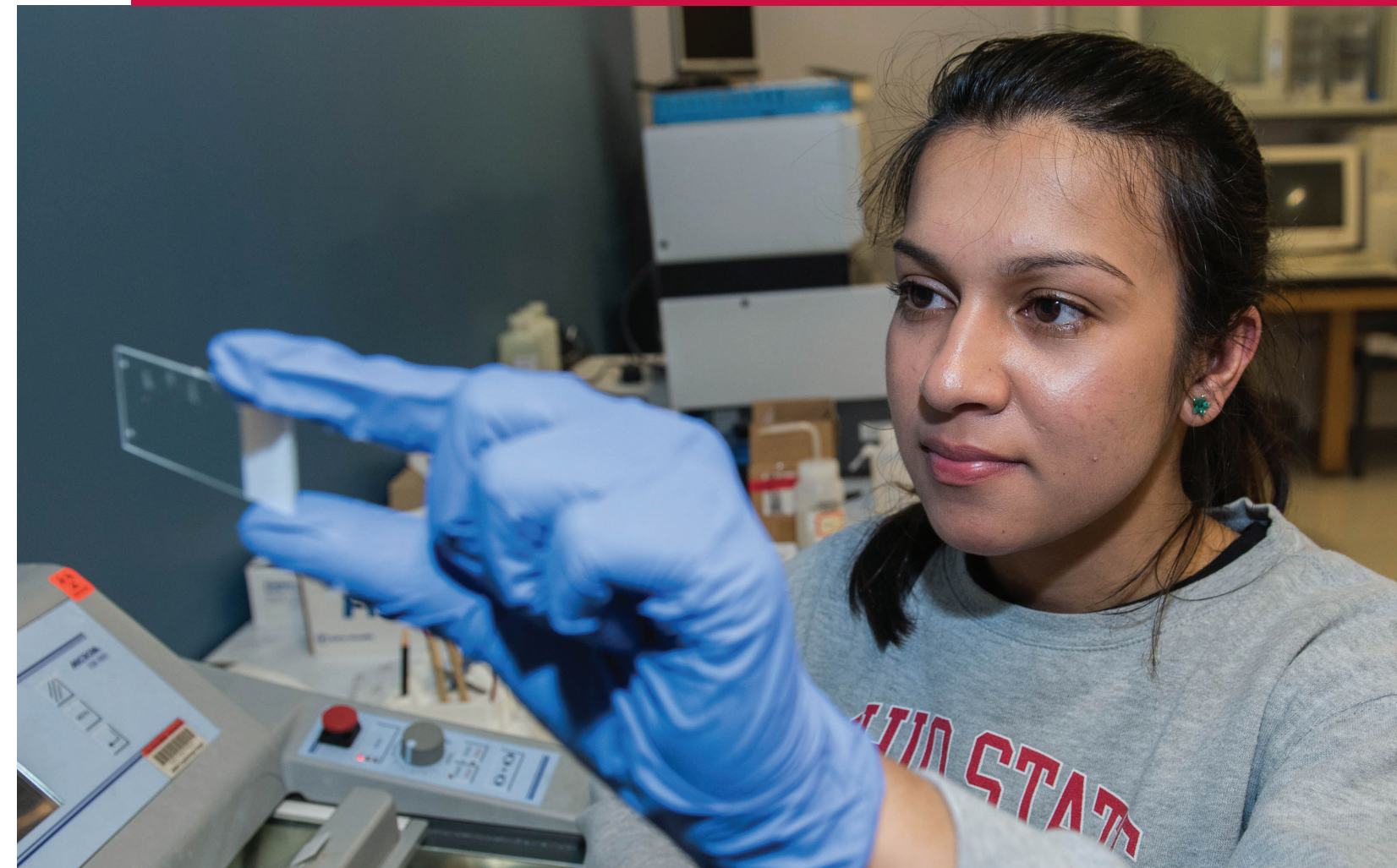
4:00 – 5:30 P.M. – SOCIAL DETERMINANTS OF HEALTH

6:00 – 7:00 P.M. – MEDICAL TECHNOLOGY AND INFORMATICS

FRIDAY, APRIL 9

9:00 – 10:30 A.M. – GENERAL AND SOCIAL PSYCHOLOGY

2:00 – 3:00 P.M. – AWARDS CEREMONY



M O N D A Y , A P R I L 5

9 : 0 0 A . M . – U N D E R S T A N D I N G
H E A L T H O U T C O M E S

ALLISON BISCHOFF

MENTOR: TAMAR GUR

PROJECT TITLE: IMMUNOMODULATORY EFFECTS OF PRENATAL STRESS AND GUT
MICROBIOME DISRUPTION ON THE MATERNAL GASTROINTESTINAL TRACT

DIANA HALLAK

MENTOR: NOAH WEISLEDER

PROJECT TITLE: INFLUENCE OF LIPID BILAYER COMPOSITION ON PLASMA MEMBRANE
REPAIR CAPACITY

MADISON HART

MENTOR: GINNY BUMGARDNER

PROJECT TITLE: IFN- γ AND CD4⁺ T CELLS ARE KEY FACTORS IN THE DEVELOPMENT
OF NOVEL, ANTIBODY-SUPPRESSOR CD8⁺ T CELLS

ANGELA HUMBEL

MENTOR: TODD MONROE

PROJECT TITLE: PAIN INTENSITY AND UNPLEASANTNESS IN PEOPLE WITH VASCULAR
DEMENTIA: A CROSS-SECTIONAL STUDY

DANIEL LESMAN

MENTOR: NICOLAS WEIN

PROJECT TITLE: DEVELOPMENT OF EXON SKIPPING VECTORS USING AAV.U7^{snRNA}
FOR THE SECOND CALPONIN HOMOLOGY DOMAIN OF DYSTROPHIN USING A NOVEL
MURINE MODEL OF DUCHENNE MUSCULAR DYSTROPHY.

XUYU LIU

MENTOR: JIANGJIANG ZHU

PROJECT TITLE: INVESTIGATING THE MODULATION EFFECTS OF POLYPHENOLS ON
CANCER GUT MICROBIOME AND METABOLOME

DANA MIDDENDORF

MENTOR: WILLA HSUEH

PROJECT TITLE: ADIPOCYTE-SPECIFIC KNOCKOUT OF MHCII LEADS TO IMPROVED
GLUCOSE SENSITIVITY AND LIVER FAT ACCUMULATION IN FEMALE PRO-ATHEROGENIC
MICE

ELIZABETH MINNCK

MENTOR: CINDY ANDERSON

PROJECT TITLE : EARLY PREGNANCY DNA METHYLATION IN STRESS-RELATED GENES
AND BIRTH OUTCOMES IN MOTHERS WITH MENTAL HEALTH DIAGNOSES

SERINA SMITH

MENTOR: MARCOS SOTOMAYOR

PROJECT TITLE: STRUCTURAL STABILITY OF A PROTEIN FRAGMENT ESSENTIAL FOR
HEARING

11:00 A.M. – EDUCATION,
TEACHING, AND LEARNING

SABRINA AMIN

MENTOR: TASHA POSID

PROJECT TITLE: UROLOGY PATIENT PERCEPTIONS OF RESIDENT CULTURAL
COMPETENCY IN A PILOT 'LOCAL' GLOBAL HEALTH CURRICULUM

DOMINIQUE DIGIACOMO

MENTOR: TASHA POSID

PROJECT TITLE: RESIDENT PRODUCTIVITY TRACKING DURING COVID-19 PANDEMIC:
UTILITY OF AN ONLINE TOOL TO RECORD NON-CLINICAL HOURS

RAYCHEL EDELSBERG

MENTOR: LINDA HELM

PROJECT TITLE: FOSTERING EDUCATION

JESSICA KAVINSKY

MENTOR: HOLLIE NYSETH

PROJECT TITLE: RWANDA'S POST-CONFLICT EDUCATIONAL SYSTEM: AN ANALYSIS OF
PEACEBUILDING MECHANISMS AND STATE INFLUENCE

ALIZA KHUHRO

MENTOR: TASHA POSID

PROJECT TITLE: SIMULATION SESSION IMPROVES RESIDENT COMFORT AND
CONFIDENCE ON MID-URETHRAL SLING PLACEMENT

KENDALL LOCASCIO

MENTOR: REBEKA CAMPOS-ASTORKIZA

PROJECT TITLE: HOW EARLY SHOULD WE TEACH PRONUNCIATION? SOUND CATEGORY
FORMATION IN BEGINNER AND INTERMEDIATE SPANISH LEARNERS

OWEN MORRISH

MENTOR: JANICE ASKI

PROJECT TITLE: CREATING IMMERSION: PEDAGOGICAL PRACTICES FOR LINGUISTIC
INTEGRATION AMONG ADULT REFUGEES IN THE US

ALYSSA TONISSEN

MENTOR: TZU-JUNG LIN

PROJECT TITLE: MATH ANXIETY IN MIDDLE GRADES CLASSROOMS SERVING GIFTED
AND NON-IDENTIFIED STUDENTS: THE MEDIATION OF EXPECTANCY AND VALUE

2:00 P.M. – FOOD SCIENCE
AND NUTRITION

KAYLIN ANDERSON

MENTOR: JENNIFER GARNER

PROJECT TITLE: PROGRAM ENGAGEMENT AMONG PARTICIPANTS OF A FARMERS
MARKET INCENTIVE PROGRAM

SCHELBY BEACH

MENTOR: ANNIE SPECHT

PROJECT TITLE: ETHICAL PERSPECTIVE OF CELL-CULTURAL PROTEINS

ANDREW BROWER

MENTOR: KICHOON LEE

PROJECT TITLE: IMPROVED FEED EFFICIENCY IN QUAIL WITH TARGETED GENOME
EDITING IN MYOSTATIN GENE

CHRISTIN GALES

MENTOR: KRISTEN ROBERTS

PROJECT TITLE: EXAMINATION OF THE PREVALENCE OF A POSITIVE HYDROGEN
BREATH TEST IN PATIENTS WITH IRRITABLE BOWEL SYNDROME AND THE
RELATIONSHIP WITH DIETARY INTAKE

JASON HOLLICK

MENTOR: CHERI KUBOTA

PROJECT TITLE: EFFECT OF SELF- AND INTER-CULTIVAR GRAFTING ON GROWTH AND
NUTRIENT CONTENT IN SWEET BASIL

JUSTYNA KORNELUK AND ANNA MCSURLEY

MENTOR: GONUL KALTUNC

PROJECT TITLE: EFFECT OF NOZZLE DIAMETER ON PARTICLE SIZE DISTRIBUTION AND SPHERICITY OF ALGINATE-PECTIN HYDROGEL PARTICLES PRODUCED BY EXTRUSION

KELLY MURPHY

MENTOR: TONYA ORCHARD

PROJECT TITLE: EFFECTS OF LOW-FAT AND HIGH-FAT DIETS SUPPLEMENTED WITH OMEGA-3 POLYUNSATURATED FATTY ACIDS ON LIVER POLYUNSATURATED FATTY ACIDS IN A MOUSE MODEL OF CHEMOTHERAPY

BRYNN SCHEINBERG

MENTOR: KRISTEN ROBERTS

PROJECT TITLE: ACCURACY OF A GLUTEN FREE DIETARY ASSESSMENT: AN EXAMINATION OF FOOD FREQUENCY QUESTIONNAIRE RESPONSES IN THOSE WITH CELIAC DISEASE

MICHAEL SWINGLER

MENTOR: STEVE OGHUMU

PROJECT TITLE: IMMUNOLOGICAL PROFILES OF HEAD AND NECK CANCER BEARING MICE FED BLACK RASPBERRY SUPPLEMENTED DIETS

4 : 0 0 P . M . – E N G I N E E R I N G :
P H Y S I C A L S C I E N C E S



TOM BALLAS

MENTOR: AYONGA HEREID

PROJECT TITLE: OFF-POLICY REINFORCEMENT LEARNING FOR BIPEDAL LOCOMOTION

ISAAC BENSIGNOR

MENTOR: JAMES GREGORY

PROJECT TITLE: DEVELOPMENT OF A PROPULSION ROTOR PERFORMANCE MODEL FOR ULTRA-LOW REYNOLDS NUMBER FLOW ($Re < 10^5$)

JACQUE BERKSON

MENTOR: ANTONIO RAMIREZ

PROJECT TITLE: EFFECTS OF A BINARY ARGON-HELIUM SHIELDING GAS MIXTURE ON ULTRA-THIN FEATURES PRODUCED BY LASER-POWDER BED FUSION ADDITIVE MANUFACTURING

SYDNEY COATES

MENTOR: CAROLIN FINK

PROJECT TITLE: EVALUATION OF WELD SOLIDIFICATION CRACKING RESISTANCE IN A NICKEL BASED FILLER METAL AT DIFFERENT CHROMIUM AND NITROGEN ADDITIONS

JAMES CROSS

MENTOR: DARREN DREWRY

PROJECT TITLE: INTEGRATION OF SPACEBORNE-LIDAR AND HYPERSPECTRAL IMAGING FOR SPECIES IDENTIFICATION

BRANDON CRUZ

MENTOR: RUIKE (RENEE) ZHAO

PROJECT TITLE: ADDITIVE MANUFACTURING FOR COMPLEX STRUCTURES WITH MAGNETIC SMART MATERIALS

ZHENGQI DONG

MENTOR: DARREN DREWRY

PROJECT TITLE: IMAGE-BASED PLANT LEAF DISEASE RECOGNITION WITH INCEPTIONV3 NETWORK

ANDREW SCHELLENBERG

MENTOR: HAIJUN SU

PROJECT TITLE: EVALUATION OF TRAINING METHODOLOGY FOR VISUOMOTOR ROBOTIC CONTROLS IN A SIMULATION ENVIRONMENT

ANTHONY WONG

MENTOR: LISA BURRIS

PROJECT TITLE: CALCIUM SULFOALUMINATE-PORTLAND CEMENT CONCRETE MIXTURES FOR RAPID HYDRATION AND STRENGTH GAIN



6 : 0 0 P . M . – B U S I N E S S A N D
E C O N O M Y



CHARLES DOWNING

MENTOR: TZACHI ZACH

PROJECT TITLE: CEO AND CFO EQUITY INCENTIVES RATIOS INFLUENCE OVER REAL EARNINGS MANAGEMENT

AMANDA KALL

MENTOR: CURTIS HAUGTVEDT

PROJECT TITLE: CORPORATE COVID-19 SAFETY RESPONSE, TWITTER SENTIMENT EXPOSURE INFLUENCE ON CUSTOMER-BASED BRAND EQUITY, CONSUMER ATTITUDES, AND INTENTIONS: AN EXPERIMENTAL APPROACH

NAYAN RAO

MENTOR: ALAM PAYIND

PROJECT TITLE: COMPARISON OF AFGHAN REMITTANCE SYSTEMS

MARGARET SEIKEL

MENTOR: RANDOLPH ROTH

PROJECT TITLE: DEATH AND TAXES: THE ECONOMY AND SUICIDE DURING THE GREAT DEPRESSION AND NEW DEAL

SARAH SIDDIQUI

MENTOR: BRUCE WEINBERG

PROJECT TITLE: RELIGIOUS REPRESENTATION AND ECONOMIC OUTCOMES IN INDIA

KATIE VISALLI

MENTOR: STEPHANIE MOULTON

PROJECT TITLE: MORTGAGE RELIEF AMONG LOW-INCOME HOMEOWNERS DURING THE COVID-19 PANDEMIC

DYLAN WARD

MENTOR: GRANT DONNELLY

PROJECT TITLE: DO GOOD THINGS COME TO THOSE WHO WAIT?: CONSUMER OPINIONS ON ADVANCE SELLING

LAUREN WHITEFORD

MENTOR: MICHAEL KNEMEYER

PROJECT TITLE: EXPLORING HOW LOGISTICS ACTIVITIES CAN BE USED TO MOTIVATE CONSUMER CROSS-BUYING BEHAVIORS ACROSS OMNICHANNEL FULFILLMENT METHODS

HENRY WONG

MENTOR: JASMINE HU

PROJECT TITLE: EXPLORING HOW LOGISTICS ACTIVITIES CAN BE USED TO MOTIVATE CONSUMER CROSS-BUYING BEHAVIORS ACROSS OMNICHANNEL FULFILLMENT METHODS

T U E S D A Y , A P R I L 6

9 : 0 0 A . M . – S T U D Y I N G

W E L L B E I N G

ISAIAH BLOOM

MENTOR: KEVIN EVANS

PROJECT TITLE: PREVENTATIVE HEALTH SCREENING FOR WOMEN AT RISK FOR
CARDIOVASCULAR DISEASE: TARGETING WOMEN 40-60 YEARS OF AGE.

MARGO BUSH

MENTOR: SHANNON GILLESPIE

PROJECT TITLE: MATERNAL CYTOKINE PRODUCTION CAPACITY AS A NOVEL INDICATOR
OF READINESS FOR LABOR: A PILOT OF INTRAPARTUM MEDICAL INTERVENTION
AMONG LOW-RISK BLACK WOMEN

LILY KAUFMAN

MENTOR: TASHA POSID

PROJECT TITLE: HEALTHCARE PRACTICES AND PERCEPTIONS OF THE UNITED STATES
POPULATION DURING COVID-19: AN IMMEDIATE AND CROSS-SECTIONAL IMPACT
STUDY

CRYSTAL MORTIMER

MENTOR: TONDI HARRISON

PROJECT TITLE: FEEDING OUTCOMES WITH SINGLE AND TWO VENTRICLE CONDITIONS

EVAN NECZYPOR

MENTOR: LOREN WOLD

PROJECT TITLE: VAPING REDUCES LEFT VENTRICULAR CARDIAC FUNCTION IN
ADOLESCENT MICE

JIMMY RICHARDS

MENTOR: SHARON TUCKER

PROJECT TITLE: CHECK YOUR STRESS AND COPING – UTILIZATION OF A MENTAL
HEALTH SCREENING TOOL FOR COLLEGE STUDENTS

TAYLOR SCHWEIN

MENTOR: BERNADETTE MELNYK

PROJECT TITLE: “EFFECTS OF MINDSTRONG® ON THE LEVELS OF STRESS,
ANXIETY AND DEPRESSION IN COLLEGE FRESHMEN WHEN DELIVERED PEER-TO-PEER”

ALEITHEA TEFFT AND MARINO MARKHO

MENTOR: IRENE HATSU

PROJECT TITLE: ASSOCIATION BETWEEN DIET AND SLEEP QUALITY IN A PEDIATRIC
ADHD POPULATION

11:00 A.M. – HUMAN EXPERIENCES

DANIELLE BARKER

MENTOR: HANNAH KOSSTRIN

PROJECT TITLE: A B-GIRL CONTINUUM

BRANDON D'SOUZA

MENTOR: MICHELLE WIBBELSMAN

PROJECT TITLE: INTERACTIVE TECHNOLOGIES AND INDIGENOUS ART: EXPLORING THE USE OF IMMERSIVE RESOURCES TO INCREASE AUDIENCE ENGAGEMENT WITH CERAMIC PIECES IN THE ANDEAN AND AMAZONIAN INDIGENOUS ART AND CULTURAL ARTIFACTS COLLECTION AT THE OHIO STATE UNIVERSITY

SANJANA KOTHARI

MENTOR: EMILY PATTERSON

PROJECT TITLE: MATERNAL MORTALITY LITIGATION REVIEW

MILLY MASON

MENTOR: SATHYA GOPALAKRISHNAN

PROJECT TITLE: MAPPING CONNECTIONS: ANALYZING THE ACTIVITY AND IMPACT OF AN INTERDISCIPLINARY COLLABORATIVE RESEARCH NETWORK

MIRANDA MCGOVERN

MENTOR: VALARIE WILLIAMS

PROJECT TITLE: DANCE AND DISABILITY

SANDHYA NORI

MENTOR: KAMMI SCHMEER

PROJECT TITLE: THE LINK BETWEEN ADVERSE CHILDHOOD EXPERIENCES AND HEALTH STATUS: AN ANALYSIS OF MOTHERS IN LEÓN, NICARAGUA

KERSTIN NORRIS

MENTOR: PIL HO KIM

PROJECT TITLE: FROM COLONIALISM TO NEOCOLONIALISM: THE YONGSAN EXCHANGE

SAVERIO ROSCIGNO

MENTOR: HOLLIE BREHM

PROJECT TITLE: EXAMINING THE ROLE OF MUSIC IN RELATION TO THE 1994 RWANDAN GENOCIDE

GENEVIEVE SOUCEK

MENTOR: JEFFREY COHEN

PROJECT TITLE: CHANGING RESEARCH TRENDS ON TURKISH MIGRANTS IN GERMANY

2:00 P.M. – ANIMAL AND
INSECT SCIENCES

ELAINE FINCH

MENTOR: RACHELLE ADAMS

PROJECT TITLE: HOST ANTS TOLERATE SOCIAL PARASITES BY BALANCING AGGRESSION
AND SUBMISSION RESPONSES

HAILEY JERMOLOWICZ

MENTOR: BENJAMIN WENNER

PROJECT TITLE: THE EFFECT OF WATERER COLOR AND FREQUENCY OF CLEANING ON
SHEEP WATER INTAKE

EMMA KLINE

MENTOR: GERRY CARTER

PROJECT TITLE: HABITUATION OF VAMPIRE BATS TO ANIMAL-BORNE PROXIMITY
SENSORS

LAUREN KRAUSE

MENTOR: SHEILA JACOBI

PROJECT TITLE: DETERMINATION OF THE EFFECTS OF DIETARY PROBIOTIC AND
ENVIRONMENTAL ENRICHMENT ON WEANING PIG GROWTH PERFORMANCE AND MEASURES
OF OXIDATIVE STRESS.

ABBY ORELLANA

MENTOR: MAURICE EASTRIDGE

PROJECT TITLE: EFFECTS OF FATTY ACID SUPPLEMENTATION TO PRE-PARTUM DAIRY
COWS ON IMMUNITY AND GROWTH OF THEIR OFFSPRING

SHANNON PYLE

MENTOR: ALEJANDRO RELLING

PROJECT TITLE: THE EFFECTS OF LONG CHAIN VS. SHORT CHAIN FATTY ACID
SUPPLEMENTATION IN EWE DIETS ON THE MEAT QUALITY OF THE LAMBS PRODUCED

SAMANTHA ROBINSON

MENTOR: KYLE SOZANSKI

PROJECT TITLE: THE EVOLUTION OF FARMER ANT EXPLOITATION: COMPARATIVE

METHODS REVEAL NOVEL INSIGHT

CALEB RYKACZEWSKI

MENTOR: ALVARO GARCIA GUERRA

PROJECT TITLE: EVALUATION OF ON-ANIMAL SENSORS FOR DETECTION OF BREEDING

IMPEDIMENTS AND BEEF BULL PERFORMANCE DURING THE BREEDING SEASON: A PILOT

STUDY

JOSEPH URSO II

MENTOR: RACHELLE ADAMS

PROJECT TITLE: EFFECTS OF MALE ACCESSORY GLAND PROTEINS ON FEMALE

REPRODUCTIVE PHYSIOLOGY IN THE NORTHERN HOUSE MOSQUITO, CULEX PIPPIENS

CAMERON WHITE

MENTOR: SHEILA JACOBI

PROJECT TITLE: THE REGULATORY EFFECT OF POLYUNSATURATED FATTY ACIDS ON THE

INFLAMMATORY RESPONSE IN IPEC J-2 CELLS CHALLENGED WITH ENTEROTOXIGENIC

E. COLI

4 : 0 0 P . M . – I N N O V A T I O N S I N M E D I C A L T R E A T M E N T



KELLEN BIESBROCK

MENTOR: PURNIMA KUMAR

PROJECT TITLE: SITE SPECIFIC DETERMINANTS OF THE SUB-GINGIVAL MICROBIOME

NEVIAN BROWN

MENTOR: BENJAMIN KOPP

PROJECT TITLE: EPITHELIAL SODIUM CHANNEL (ENAC) REGULATES MACROPHAGE

FUNCTION IN CYSTIC FIBROSIS

ANNA CHEN

MENTOR: DANIEL WOZNIAK

PROJECT TITLE: SCREENING OF NOVEL BACTERIAL TOPOISOMERASE INHIBITORS ON

STAPHYLOCOCCUS AUREUS BIOFILMS

JESSICA FINDSEN

MENTOR: KEVIN MASON

PROJECT TITLE: TRYPTOPHAN METABOLISM MODULATES FORMATION OF
INTRACELLULAR BACTERIAL COMMUNITIES BY NON-TYPEABLE HAEMOPHILUS
INFLUENZAE

ABRIANA KROBOTH

MENTOR: MIREIA GUERAU

PROJECT TITLE: THE EFFECT OF DEXAMETHASONE ACE-DEX MICROPARTICLES ON
PRO-INFLAMMATORY MACROPHAGES

EMILY MCDONEL

MENTOR: ANDRE PALMER

PROJECT TITLE: SONICATION EFFECTIVELY REDUCES NANOPARTICLE SIZE IN
HEMOGLOBIN-BASED OXYGEN CARRIERS (HBOCs) PRODUCED THROUGH
COPRECIPITATION: IMPLICATIONS FOR RED BLOOD CELL SUBSTITUTES

DIVYA SHANKAR

MENTOR: SUSHEELA TRIDANDAPANI

PROJECT TITLE: INHIBITION OF BET PROTEINS REGULATES FC-GAMMA RECEPTOR
FUNCTION AND REDUCES INFLAMMATION IN RHEUMATOID ARTHRITIS

MEGAN SUBR

MENTOR: VADIM FEDOROV

PROJECT TITLE: 3D IN-VIVO TO EX-VIVO HIGH-RESOLUTION OPTICAL MAPPING
AND DE-MRI TO REVEAL ARRHYTHMOGENIC FIBROTIC SUBSTRATES OF ATRIAL
FIBRILLATION FOR PATIENT-SPECIFIC TARGETED TREATMENT

ZACHARY WILSON

MENTOR: MIREIA GUERAU

PROJECT TITLE: EFFECT OF PROTEIN ARGININE METHYLTRANSFERASE 5 (PRMT5)
ON THE INFLAMMATORY PHENOTYPE OF HUMAN MACROPHAGES



6 : 0 0 P . M . – N E U R O S C I E N C E
A N D B E H A V I O R A L H E A L T H



PRACHITI PRADYOT GARGE

MENTOR: MICHAEL DEKAY

PROJECT TITLE: NONSTANDARD RISKY-CHOICE FRAMING EFFECTS WITH SOMEWHAT
RISKY OPTIONS: EXPLORATIONS AND THEORY COMPARISONS

AUGUST GONZALEZ

MENTOR: DANIEL STRUNK

PROJECT TITLE: IMPACT OF TREATMENT INFORMATION ON VIEWS OF MAJOR TREATMENT OPTIONS FOR PATIENTS WITH DEPRESSION

SONIA HAMILTON

MENTOR: PAUL MARTIN

PROJECT TITLE: LYSOSOMAL ACID LIPASE DEFICIENCY: MUSCLE AND NERVOUS SYSTEM PATHOLOGY

JOSHUA HASCHER

MENTOR: IAN KRAJBICH

PROJECT TITLE: INCENTIVIZED AND NON-INCENTIVIZED LIKING RATINGS OUTPERFORM WILLINGNESS-TO-PAY IN PREDICTING CHOICE

MADELINE PATRICK

MENTOR: SARAH SCHOPPE-SULLIVAN

PROJECT TITLE: COPARENTING, TEMPERAMENT, AND CALLOUS-UNEMOTIONAL BEHAVIORS IN EARLY CHILDHOOD

ALANA SAGGAR

MENTOR: SCOTT HAYES

PROJECT TITLE: EXAMINING ASSOCIATIONS BETWEEN INFLAMMATION, MODIFIABLE HEALTH VARIABLES, AND COGNITION IN BLACK OLDER ADULTS

MARIA SHEPARD

MENTOR: XIN FENG

PROJECT TITLE: SPECIFIC AND OVER-GENERAL AUTOBIOGRAPHICAL MEMORY IN PRESCHOOL-AGED CHILDREN OF DEPRESSED AND NONDEPRESSED MOTHERS

LINDSEY TRANK

MENTOR: MIN ZHOU

PROJECT TITLE: MORPHOLOGICAL AND BEHAVIORAL EFFECTS OF ASTROCYTIC GAP JUNCTION COUPLING MODIFICATION

YUNZI YU

MENTOR: MO-YEE LEE

PROJECT TITLE: COMPARISON OF DEMOGRAPHIC DATA BETWEEN FATHERS WITH AND WITHOUT PATERNAL POSTPARTUM DEPRESSION, ESPECIALLY DURING THE COVID-19 PANDEMIC

WEDNESDAY, APRIL 7

9:00 A.M. – HEALTH

PROMOTION

BROOKE BABBIN

MENTOR: TARA O'BRIEN

A SYSTEMATIC REVIEW OF THE EFFECTIVENESS OF DIETARY AND PHYSICAL ACTIVITY APPLICATIONS IN ADULTS WITH CHRONIC DISEASE

AUDREY LUND

MENTOR: MARY BETH HAPP

PROJECT TITLE: PATIENT-NURSE EFFECTIVENESS WITH ASSISTIVE COMMUNICATION STRATEGIES (SPEACS): ROLE IN FRUSTRATION, COMMUNICATION AND AVOIDANCE IN ICU

PEYTON MAST

MENTOR: HEATHER TUBBS COOLEY

PROJECT TITLE: VACCINE ATTITUDES AND PRACTICES IN A NATIONAL SAMPLE OF PEDIATRIC NURSES

TRAVIS NEDROW

MENTOR: SUSAN THRANE

PROJECT TITLE: COMPARING ADL ABILITY BEFORE AND AFTER ADMISSION TO THE INTENSIVE CARE UNIT IN CRITICALLY ILL OLDER ADULTS

DEVIN O'PIELA

MENTOR: CAROLYN GUNTHER

PROJECT TITLE: SOCIAL SUPPORT AMONG HEAD START CAREGIVERS DURING COVID-19: PRELIMINARY RESULTS FROM THE SIMPLE SUPPERS-GONE ONLINE (SS-GO) STUDY

ARIANA PITCHER

MENTOR: WENDY YI XU

PROJECT TITLE: THE SUPPLY OF DATA-WAIVED PROVIDERS AND OPIOID TREATMENT PROGRAMS FOR MEDICATION-ASSISTED TREATMENTS IN OHIO

BRIAN SALOMONS

MENTOR: ELIZABETH FITZGERALD

PROJECT TITLE: ENHANCED COLLECTION OF DE-IDENTIFIED COMMUNITY HEALTH DATA FOR THE ASK A BUCKEYE NURSE PROGRAM: A QUALITY IMPROVEMENT PROJECT

SHREYA SHAW

MENTOR: AMY FERKETICH

PROJECT TITLE: IMPACTS OF THE COVID-19 PANDEMIC ON MALE YOUTH IN OHIO

ANNE WILLS

MENTOR: TIMIYA NOLAN

PROJECT TITLE: ACCEPTABILITY AND USABILITY OF AN EVIDENCE-BASED PROGRAM
TO COACH NEWLY DIAGNOSED PATIENTS

11:00 A.M. – CANCER
TREATMENT AND INNOVATION

KRITI AGRAWAL

MENTOR: THOMAS MACE

PROJECT TITLE: LIPOCALIN-2 EXPRESSION BY MYELOID DERIVED SUPPRESSOR
CELLS IN THE PANCREATIC TUMOR MICROENVIRONMENT

CLAIRE HINTERSCHIED

MENTOR: ROBERT BAIOCCHI

PROJECT TITLE: PRMT5 INHIBITION DRIVES A PRO-APOPTOTIC PROGRAM IN MANTLE
CELL LYMPHOMA BY DIRECTLY AND INDIRECTLY MODULATING THE ABUNDANCE OF
BCL-2 FAMILY PROTEINS

JULIA HURLEY

MENTOR: TIMOTHY CRIPE

PROJECT TITLE: TARGETING TUMOR-RESIDENT MYELOID CELLS VIA BTK INHIBITION
TO ENHANCE ONCOLYTIC VIROIMMUNOTHERAPY

MALVENDERJIT JAGIJIT SINGH

MENTOR: DANIEL SPAKOWICZ

PROJECT TITLE: TUMOR MICROBIOME CORRELATION WITH GENE EXPRESSION AND
EPIGENETICS IN EARLY ONSET COLORECTAL CANCER

ANASTASIA KOTKOVSKAYA

MENTOR: ANNE STROHECKER

PROJECT TITLE: RAB20 MODULATES MITOCHONDRIAL FUNCTION IN HUMAN AND MOUSE
MODELS OF LUNG CANCER

GABRIELLA LAPURGA

MENTOR: WILLIAM CARSON

PROJECT TITLE: CHARACTERIZATION OF A NOVEL COMPOUND THAT INHIBITS
PEROXYNITRITE GENERATION BY IMMUNE SUPPRESSIVE MYELOID DERIVED
SUPPRESSOR CELLS

RESHAM MAWALKAR

MENTOR: BHUVANESWARI RAMASWAMY

PROJECT TITLE: TAMOXIFEN REVERSES THE HYPERPLASTIC CHANGES INDUCED BY
ABRUPT INVOLUTION IN MOUSE MAMMARY GLANDS

HANNAH ONG

MENTOR: CHUANXI CAI

PROJECT TITLE: OVEREXPRESSION OF MG53 SUPPRESSES THE PROLIFERATION OF
NEURONAL CANCER CELLS VIA INHIBITION OF KIF11 EXPRESSION

NIKHIL PRAMOD

MENTOR: BHUVANESWARI RAMASWAMY

PROJECT TITLE: TARGETING HER2 SIGNALING IN ENDOCRINE-RESISTANT INVASIVE
LOBULAR CANCERS

ARHAM SIDDIQUI

MENTOR: STEVE OGHUMU

PROJECT TITLE: CONDITIONAL REMOVAL OF MYELOID CELL-DERIVED MIF THROUGH A
CRE-LOXP SYSTEM IN MICE

2:00 P.M. – INNOVATIONS IN
TECHNOLOGY, MATHEMATICS,
AND PHYSICS

ANTHONY ANNERINO AND MICHAEL FALTAS

MENTOR: PELAGIA-IREN GOUMA

PROJECT TITLE: WEARABLE DEVICES FOR SKIN GAS BIOMARKER DETECTION

ERIC FAWCETT

MENTOR: SERGEI CHMUTOV

PROJECT TITLE: DISTINGUISHING TREES VIA THE SYMMETRIC CHROMATIC POLYNOMIAL

TESSA GILLMORE

MENTOR: PELAGIA-IREN GOUMA

PROJECT TITLE: "ELECTROSPINNING POLYMERS FOR WEARABLE ELECTRONICS

ZHENGYUAN HUANG

MENTOR: MARTIN GOLUBITSKY

PROJECT TITLE: A CLASSIFICATION OF HOMEOSTASIS TYPES IN FOUR-NODE INPUT-
OUTPUT NETWORKS

JOHN MCALLISTER

MENTOR: IAN HAMILTON

PROJECT TITLE: AN ADAPTIVE DYNAMIC MODEL OF A VIGILANCE GAME AMONG
GROUP FORAGERS

NASHAD RAHMAN

MENTOR: CHRISTOPHER ORBAN

PROJECT TITLE: ARE TWO LASER BEAMS BETTER THAN ONE (WITH EQUAL ENERGY)
FOR ION ACCELERATION?

JOHNATHAN RICHMOND

MENTOR: CLIFFORD WHITFIELD

PROJECT TITLE: A PARAMETRIC STUDY OF HYPERSONIC WAVERIDER FLIGHT
MECHANICS IN OPTIMIZED TRAJECTORIES DURING ATMOSPHERIC ENTRY

ISSAC ZACHMANN

MENTOR: JIM DAVIS

PROJECT TITLE: USING VISUAL FEATURES TO GENERATE LANGUAGE CONTEXT

ZHENGQI ZHU AND JIKE ZHONG

MENTOR: SETH YOUNG

PROJECT TITLE: INNOVATIVE ENHANCEMENTS TO AIR TRAFFIC DATA VISUALIZATION
MODELS



4 : 0 0 P . M . – L A N G U A G E
D E V E L O P M E N T A N D
U N D E R S T A N D I N G



ATENA BAGHBANIAN

MENTOR: JOHN GRINSTEAD

PROJECT TITLE: MULTIPLE MEASURES OF NUMERICAL COGNITION AND QUANTIFIER
INTERPRETATION

NICHOLAS BEDNAR

MENTOR: LAURA WAGNER

PROJECT TITLE: LINGUISTICS OUTREACH FOR BUILDING SCIENCE TRUST: DIY
CITIZEN SCIENCE

AUSTIN BRAMMER AND JARRETT RARDON

MENTORS: JULIE HUPP AND MELISSA JUNGERS

PROJECT TITLE: THAT'S SO NELCH: THE EFFECT OF PROSODY ON MEMORY FOR
NOVEL ADJECTIVES

GRACE LEFEVRE

MENTOR: ANDREA SIMS

PROJECT TITLE: QUANTIFYING THE INFLECTION CLASS STRUCTURE OF SPANISH
VERBS

KYLE MAYCOCK

MENTOR: ANDREA SIMS

PROJECT TITLE: A FORMAL ANALYSIS OF AGREEMENT MARKING IN THE ALBANIAN
NOUN PHRASE

ABIGAIL SEDZIOL

MENTOR: MELISSA JUNGERS

PROJECT TITLE: THE SILENT SPEAKER: THE IMPACT OF EMOJIS ON NONVERBAL
COMMUNICATION DURING A PANDEMIC

NINA SORINE

MENTOR: JOHN GRINSTEAD

PROJECT TITLE: INHIBITION PREDICTS MORPHOSYNTAX AS WELL AS LEXICON IN CHILD
SPANISH

ANNA TAYLOR

MENTOR: BRIAN JOSEPH

PROJECT TITLE: BILINGUAL ROAD SIGNS: A SOCIOLINGUISTIC JOURNEY OF
INDIGENOUS LANGUAGE REVITALIZATION

6:00 P.M. – NATURAL AND LIFE SCIENCES

KATHRYN BYERLY

MENTOR: JUSTIN NORTH

PROJECT TITLE: IDENTIFICATION OF RHODOSPIRILLUM RUBRUM GENES REQUIRED FOR THE REDUCTION OF VOLATILE ORGANIC SULFUR COMPOUNDS IN A NOVEL METHIONINE SALVAGE PATHWAY

AARON CHARNAY

MENTOR: BERN KOHLER

PROJECT TITLE: 2-AMINOPURINE FLUORESCENCE QUENCHING: A CLOSER LOOK AT THE MECHANISM OF 2-AMINOPURINE QUENCHING BY SILVER(I)

BEN CHARNAY

MENTOR: ANNE CO

PROJECT TITLE: INSIGHTS INTO THE CO₂ REDUCTION PATHWAY THROUGH THE ELECTROLYSIS OF ALDEHYDES ON COPPER

SHANNON COONEY

MENTOR: CHRISTINE THOMAS

PROJECT TITLE: SYNTHESIS OF TRIDENTATE NHC COBALT(II) COMPLEX TO EXPLORE EFFECT OF LIGAND NONINNOCENCE ON REDOX CAPABILITIES

ADITYA MISTRY

MENTOR: THOMAS MAGLIERY

PROJECT TITLE: UNDERSTANDING STRUCTURE-FUNCTION RELATIONSHIPS AND EXPLORING ALTERNATIVE CONFORMATIONS IN A FOUR-HELIX BUNDLE PROTEIN, ROP

LAUREN RAGER

MENTOR: MARK FOSTER

PROJECT TITLE: CHARACTERIZING INHIBITION OF THE CYCLIN A2-CDK2 COMPLEX BY SMALL MOLECULAR INHIBITORS USING TWO-DIMENSIONAL NMR AND ITC.

JILL TEITELBAUM

MENTOR: SUSAN COLE

PROJECT: A RARE HUMAN SNP IN THE HES7 3'UTR ALTERS ALTERNATIVE POLYADENYLATION

JOHN VU

MENTOR: KAREN MUSIER-FORSYTH

PROJECT TITLE: ROLE OF THE UNIQUE C-TERMINAL DOMAIN OF ARABIDOPSIS

THALIANA PROXP-ALA

LEAH WALSH

MENTOR: ABRAHAM BADU-TWAIH

PROJECT TITLE: ANALYSIS OF CROSS-LINKING PRODUCTS ON-LINE VIA CONTAINED-

ELECTROSPRAY IONIZATION MASS SPECTROMETRY

T H U R S D A Y , A P R I L 8

9 : 0 0 A . M . – S O C I A L J U S T I C E

A N D A C T I V I S M

ERIN BRODERICK

MENTOR: MARY THOMAS

PROJECT TITLE: PRISON ABOLITION IN THE TIME OF COVID-19

RACHEL BRUNOT

MENTOR: JOEL WAINWRIGHT

PROJECT TITLE: GARIFUNA WOMEN AND THE POLITICS OF CULTURAL HERITAGE: THE

LEGACY OF THE BELIZEAN WOMEN'S MOVEMENT

MIA CARIELLO

MENTOR: LEIGH BONDS

PROJECT TITLE: RECLAIMING OUR HISTORIES: ANTI-RAPE ORGANIZATIONS AND

PROTESTS AT THE OHIO STATE UNIVERSITY - 1970S TO PRESENT

CARIAH COX

MENTOR: ALAN DAVIS

PROJECT TITLE: THE SCHOOL-TO-PRISON PIPELINE AMONG BLACK AMERICAN BOYS

IN CENTRAL OHIO: THE INFLUENCE OF CHILDHOOD TRAUMA

MERA CRONBAUGH

MENTOR: JOYCE CHEN

PROJECT TITLE: AT THE CROSSROADS: IMPACT OF INTERETHNIC TOLERANCE LEVELS

ON LABOR FORCE PARTICIPATION IN THE SOUTH CAUCASUS

FATIMA DAHIR

MENTOR: MADHUMITA DUTTA

PROJECT TITLE: “DUMARKA ILAALI”: SOMALI-AMERICAN RELATIONSHIP WITH POLICE AND COMMUNITY RESPONSE TO SEXUAL VIOLENCE

BRADLEY EIDSON

MENTOR: NICOLO PINCHAK

PROJECT TITLE: SEXUAL MINORITY STATUS AND SUICIDE: THE MODERATING EFFECT OF SOCIOECONOMIC STATUS

JESSICA QUEEN

MENTOR: ZEYEP BENDERLIOGLU

PROJECT TITLE: THE IMPACT OF LOCKDOWN ORDERS AND UNEMPLOYMENT ON DOMESTIC VIOLENCE CASES DURING THE COVID-19 PANDEMIC

OLIVIA WARNER

MENTOR: JAMES O'DONNELL

PROJECT TITLE: QUALITATIVE META-ANALYSIS OF THE IMPACT OF PORNOGRAPHY ON SOCIAL STEROTYPES

11:00 A.M. – ENVIRONMENT AND CLIMATE SCIENCES



LAUREL BAYLESS

MENTOR: ELLEN MOSLEY-THOMPSON

PROJECT TITLE: EL NIÑO-SOUTHERN OSCILLATION (ENSO) SIGNAL IN AN ICE CORE FROM HUASCARÁN, PERU

SHIVANI BHATT

MENTOR: RYAN NORRIS

PROJECT TITLE: REASSESSMENT OF THE ALTICOLA ROYLEI SPECIES GROUP IN NORTHERN PAKISTAN THROUGH MORPHOLOGY, MOLECULAR SYSTEMATICS, AND BIOGEOGRAPHY

ZHENGQI HUANG

MENTOR: BRITTANY SHOOTS-REINHARD

PROJECT TITLE: A CALL FOR SUSTAINABLE LIVING: LEVERAGING COGNITIVE FACTORS TO DEVELOP EFFECTIVE SUSTAINABILITY CAMPAIGNS

ZANNA LECIEJEWSKI

MENTOR: NATALIE HULL

PROJECT TITLE: COMPARISON OF MICROCYSTIN-LR DEGRADATION BY UV222 AND UV254 VIA ELISA, UPLC-PDA, AND LC-HRMS

WILL PASSIFUME

MENTOR: REED JOHNSON

PROJECT TITLE: INCREASE IN SOYBEAN YIELD BY DISTANCE IN FIELDS WITH SUPPLEMENTAL HONEYBEE POLLINATION

MADELINE REUSCHLING

MENTOR: MATT DAVIES

PROJECT TITLE: FLAMMABILITY AND FUEL MOISTURE CONTENT OF GOLDEN ROD IN OHIO'S PRAIRIES.

AARON TAYAL

MENTOR: STEVE HOVICK

PROJECT TITLE: POPULATION AND REPRODUCTIVE BIOLOGY OF LESSER CELANDINE (RANUNCULUS FICARIA)

MATTHEW WALKER

MENTOR: SEAN DOWNEY

PROJECT TITLE: THE SUSTAINABILITY OF "SLASH-AND-BURN": A BAYESIAN ANALYSIS OF INTERMEDIATE DISTURBANCE PATTERNS IN Q'EQCHI' MAYA SWIDDEN AGRICULTURE

SHILING ZHAO

MENTOR: ANDREAS CHAVEZ

PROJECT TITLE: ENVIRONMENT SUPERSEDES HOST LINEAGE IN SHAPING THE GUT MICROBIOME OF SQUIRRELS IN THE PACIFIC NORTHWEST



2:00 P.M. – ENGINEERING:
LIFE AND NATURAL SCIENCES



ANDREW CHOI

MENTOR: KATELYN SWINDLE-REILLY

PROJECT TITLE: CONTROLLED RELEASE OF ANTI-VEGF BY REDOX-RESPONSIVE POLYDOPAMINE NANOPARTICLES

JUSTIN HOPKINS

MENTOR: NICHOLAS BRUNELLI

PROJECT TITLE: MANIPULATING ZEOLITE CATALYST MORPHOLOGY TO MODIFY CATALYTIC ACTIVITY AND ADDRESS DIFFUSION LIMITATIONS

CONNOR NEIFERT

MENTOR: THOMAS HUND

PROJECT TITLE: CARDIAC CELL-TO-CELL COMMUNICATION VIA EXOSOMES AND CYTOKINES REGULATED BY SPECTRIN-BASED PATHWAYS

ANTARA RATH

MENTOR: ANDRE PALMER

PROJECT TITLE: METHEMOGLOBIN SYNTHESIS AND PURIFICATION

THEODORE RENNER

MENTOR: GUNJAN AGARWAL

PROJECT TITLE: ROLE OF DISCOIDIN DOMAIN RECEPTOR 1 IN VASCULAR CALCIFICATION

BENJAMIN RUDZINSKI

MENTOR: UMIT OZKAN

PROJECT TITLE: KINETICS OF Pd SUPPORTED ON SWELLABLE ORGANICALLY MODIFIED SILICA (SOMS) CATALYSTS DURING HYDRODECHLORINATION OF TRICHLOROETHYLENE IN AQUEOUS PHASE

STAVAN SHAH

MENTOR: GUNJAN AGARWAL

PROJECT TITLE: MAPPING OF IRON IN BRAIN TISSUE FROM ALZHEIMER'S DISEASE USING MAGNETIC FORCE MICROSCOPY

JANE YU

MENTOR: THOMAS HUND

PROJECT TITLE: ROLE FOR TREK-1 IN MODULATING CARDIAC EXCITABILITY AND ARRHYTHMIA

4:00 P.M. – SOCIAL DETERMINANTS OF HEALTH

ALLIE BUSINGER

MENTOR: SCOTTY CASH

PROJECT TITLE: “UNDERSTANDING THE MENTAL-HEALTH NEEDS AND TECHNOLOGICAL TREATMENT IMPLICATIONS FOR VULNERABLE YOUTH: A FOCUS GROUP WITH PRACTITIONERS”

DAKOTA DANIEL AND ADELINE WICKERHAM

MENTOR: ELIZABETH FITZGERALD

PROJECT TITLE: INTERVENTIONS TO ELIMINATE CERVICAL CANCER IN NICARAGUA: AN INTEGRATIVE REVIEW OF THE LITERATURE

ABIGAIL FOSTER

MENTOR: ABIGAIL NORRIS TURNER

PROJECT TITLE: CHARACTERISTICS OF OHIO WOMEN EXPERIENCING A LACK OF ACCESS TO ANNUAL OBGYN VISITS

CRISTY GAO

MENTOR: CHRISTINA FORTNEY

PROJECT TITLE: PARENT DISTRESS RELATED TO INFANT APPEARANCE IN THE NEONATAL INTENSIVE CARE UNIT

HANNAH GU

MENTOR: JENNIFER BOGNER

PROJECT TITLE: INCOME AND HEALTH-RELATED QUALITY OF LIFE IN TRAUMATIC BRAIN INJURY PATIENTS

CASSANDRA KEMPER AND MARISSA KRIETEMEYER

MENTOR: JESSICA KROK-SCHOEN

PROJECT TITLE: THE ASSOCIATION OF SOCIAL SUPPORT AND INCOME ON THE NUTRITIONAL STATUS AND PHYSICAL ACTIVITY OF OLDER FEMALE CANCER SURVIVORS

GLORIVEE MENDEZ

MENTOR: CINDY ANDERSON

PROJECT TITLE: NEIGHBORHOOD WALKABILITY, PERCEIVED STRESS AND TELOMERE LENGTH: IS THERE A RELATIONSHIP?

VINCENT PANCINI

MENTOR: KATIE VINOPAL

PROJECT TITLE: THE EFFECTS OF ACA MEDICAID EXPANSIONS ON HEALTH INSURANCE COVERAGE AND TIME SPENT SEEKING HEALTH CARE: EVIDENCE FROM THE AMERICAN TIME USE SURVEY

ANAND SHAH

MENTOR: CHRIS TAYLOR

PROJECT TITLE: DIFFERENCES IN PERCEIVED HEALTH STATUS AND UTILIZATION OF ASSISTANCE PROGRAMS IN US WOMEN BY HISTORY OF PREGNANCY

6 : 0 0 P . M . – M E D I C A L
T E C H N O L O G Y A N D
I N F O R M A T I C S

NOAH ECKSTEIN

MENTOR: YUN SEOK KANG

PROJECT TITLE: KINEMATIC MODEL BASED SENSOR FUSION FOR INERTIAL MEASUREMENT UNITS IN INJURY BIOMECHANICS

NICOLE FYE

MENTOR: AMANDA AGNEW

PROJECT TITLE: UTILIZING GEOGRAPHIC INFORMATION SYSTEMS TO ANALYZE HISTOMORPHOMETRY IN THE HUMAN CLAVICLE

MUKUL GOVANDE

MENTOR: JAMES BLACHLY

PROJECT TITLE: PRIORITIZATION OF POTENTIAL TARGETS IN A MASSIVE MULTIPLEX CRISPR SCREEN

GARRETT HAUCK

MENTOR: JONATHAN DAVIS

PROJECT TITLE: MATHEMATICAL MODELING OF THE CALCIUM BINDING PROTEINS CALMODULIN AND TROPONIN C

TOSHIKI NAKAO

MENTOR: KOU-SAN JU

PROJECT TITLE: DISCOVERY OF PHOSPHONATE NATURAL PRODUCTS FROM BACILLUS VELEZENSIS BY GENOME MINING

MAKAYLA NEWMAN

MENTOR: LAURA BOUCHER

PROJECT TITLE: MUSCULOSKELETAL ULTRASOUND OF THE PATELLAR TENDON IN ADOLESCENT ATHLETES

ISHAN PATEL

MENTOR: RICHARD HUGHES

PROJECT TITLE: DETECTION OF PNEUMONIA USING MACHINE LEARNING

MATTHEW SCHUETZ

MENTOR: IGOR JOULINE

PROJECT TITLE: NIEMANN-PICK DISEASE AND THE SAVER ALGORITHM

ZHIXIN ZHU

MENTOR: SHANG-TIAN YANG

PROJECT TITLE: OPTIMIZATION OF EMBRYONIC STEM CELL DIFFERENTIATION FOR HIGH THROUGHPUT SCREENING OF EMBRYOTOXIC DRUGS AND CHEMICALS

F R I D A Y , A P R I L 9

**9 : 0 0 A . M . – G E N E R A L A N D
S O C I A L P S Y C H O L O G Y**

ADEN BHAGWAT

MENTOR: RUSSELL FAZIO

PROJECT TITLE: SHAPING MOCK JUROR'S JUDGEMENTS: THE ROLE OF INDIVIDUAL DIFFERENCES IN DISGUST SENSITIVITY AND VALENCE WEIGHTING BIAS

JOSELLE CARRILLO

MENTOR: KENTARO FUJITA

PROJECT TITLE: THE BENEFITS OF SELF-AFFIRMATION BELIEFS FOLLOWING SOCIAL EXCLUSION

SHAN GAO

MENTOR: JENNIFER CROCKER

PROJECT TITLE: NAME CHOICE AND STEREOTYPE

MIA GARCIA

MENTOR: SARAH SCHOPPE-SULLIVAN

PROJECT TITLE: CONSTRUCTIVE AND DESTRUCTIVE MARITAL CONFLICT AND CHILDREN'S SOCIAL COMPETENCE: THE ROLE OF GENDER

EMILY NOTHNAGLE

MENTOR: CHRISTOPHER KNOESTER

PROJECT TITLE: SPORT PARTICIPATION AND THE DEVELOPMENT OF GRIT

JOSEPH REITER

MENTOR: BRITANNY SHOOTS-REINHARD

PROJECT TITLE: POLITICAL IDEOLOGY, CONFIDENCE, & COGNITIVE ABILITY

ARIAN SORANI

MENTOR: SARAH SCHOPPE-SULLIVAN

PROJECT TITLE: THE MODERATING EFFECT OF MATERNAL GATEKEEPING ON THE ASSOCIATION BETWEEN FATHERS' ROUGH-AND-TUMBLE PLAY AND CHILDREN'S SELF-REGULATION

ROSE TYLER

PROJECT MENTOR: JENNIFER CROCKER

PROJECT TITLE: NONZERO SUM BELIEF INTERVENTION AND RESPONSE TO CONFLICT IN ROMANTIC RELATIONSHIPS

CAMRYN WEIHRAUCH

MENTOR: VIRGINIA TOMPKINS

PROJECT TITLE: QUALITY OF PARENT-CHILD BOOK READING AS A PREDICTOR OF CHILDREN'S SOCIAL-EMOTIONAL COMPETENCIES

2:00 P.M. – DENMAN 2021
AWARDS CEREMONY

A CELEBRATION OF THE IMPRESSIVE ACHIEVEMENTS OF UNDERGRADUATE RESEARCHERS AT OHIO STATE. WINNERS IN EACH CATEGORY WILL BE ANNOUNCED.



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