RESEARCH PAPER International Journal of Medical Sciences (October, 2009 to March, 2010) Vol. 2 Issue 2 : 177-180

Immunomodultory activities of aqueous extract of *Alseodaphne andersonii* in mice

PUJA GUPTA AND MADHULIKA BHAGAT

See end of the article for authors' affiliation

Correspondence to :
MADHULIKA BHAGAT
School of Biotechnology, University of Jammu, JAMMU (J&K) INDIA

ABSTRACT

Immunomodulating substance especially immunostimulant are in high demand because of the increasing occurrence of disease that impair the immunestimulation. In search for new immunomodulating agents over the past few year, many traditional herbal medicines and relatively new plant products have been evaluated. These are used as a tonic and thought to flourish and strengthen the host defense mechanism. In the present study, attempts have been made to evaluate and investigate the immunomodulating potential of aqueous extract of Alseodaphne andersoniii and preliminary examination of this aqueous extract has shown significant increase in antibody concentration and DTH response which is the indicative of the fact that this extract can be a source of new immunostimulant drug.

Key words : Immunomodulating, Immunostimulants, immunesuppression, *Alseodaphne antersonii*.

Accepted :* *September, 2009

Many traditional herbal medicines and relatively new plant products have been evaluated in the search for new immunomodulating agents (Thatte and Dahanukar, 1977; Rege *et al.,* 1999). These immunomodulatory agents are of plant origin which are claimed to induce paraimmunity, the non-specific immunomodulation of essentially granulocytes, macrophages, natural killer cells and complement systems (Labadie *et al*., 1989; Sainis *et al*., 1997). In the present study, attempts have been made to evaluate and investigate the immunomodulating potential of *Alseodaphne andersonii.* The rationale for development of immunomodulant is that such agents should be beneficial for individuals with immune deficiency.

Alseodaphne andersonii (King ex Hook. f.) Kosterm. (Lauraceae), a large tree indigenous tree.The leaf part of this plant had showed to possess antimicrobial potential against various pathogenic bacterial strains (Parcha *et al.,* 2007). Five new compounds, including four C_{17} γ-lactones, dihydroisoobtusilactone, dihydroobtusi-lactone, 3-epilitsenolide D_2, and 3-epilitsenolide D_1 and one furanone alseodafuranone, were isolated from the root and stem of *Alseodaphne andersonii* (Lee *et al.,* 2001).

The new heterocyclic compound developed in the medicinal chemistry laboratories, University college of pharmaceutical sciences, Kakatiya University, Warangal has been selected for this study. This compound is prepared adopting the appropriate methods available in literature and is characterized by spectral data. The new compound possessing pyrimidine moiety because of structural similarities with nucleic acid bases exhibit various biological activities. Literature reveals that indole derivative exhibit aldose reductase inhibition activity along with other biological activities keeping in view of biological significance of indole moiety and pyrimidine moiety present in the new compound, it is planed to study the effect of this new compound on protein and lipid metabolisms adopting standard protocols available in literature.

MATERIALS AND METHODS

Collection of plant material:

Leaves of Alseodaphne andersonii of family Lauraceae has been collected from botanical garden of Forest Research Institute, Dehradun India. The plant species has been authenticated from Botany division of FRI, Dehradun.

Preparation of the crude extract:

The fresh leaves of the plant material were dried and macerated, 300g in 1L of distilled water for 48 hrs to obtain aqueous extract and