



***In vitro* and *in vivo* screening of *Clitoriaternatea* (Linn.) for Immunomodulatory activity**

Sneha J Anarthe*, P. Spoorthisudha, M. Swetha and M. Ganga Raju

Department of Pharmacology GokarajuRangaraju College of Pharmacy, Bachupally, Hyderabad- 500090, India

Abstract: To evaluate immunomodulatory activity for methanolic extract of *Clitoriaternatea* Linn. **Method:** Methanolic extract of *Clitoriaternatea* (MECT) was evaluated for *in vitro* antioxidant assay by reducing power assay and hydrogen peroxide assay and immunomodulatory activity [specific and humoral immunity] at the dose of 100, 200 and 400 mg/kg bd. wt. by various models as plaque forming cell assay, quantitative haemolysis assay and antibody titre (Cell mediated) T cell population, delayed type hypersensitivity and drug induced myelosuppression with antigen challenge by sheep RBCs. **Results:** Methanolic extract of *Clitoriaternatea* at the dose of 100, 200 and 400 mg/kg bd. wt. along with the antigen (sheep red blood cells) showed significant increase in the production of circulating antibody titre and the number of plaque forming cells (PFC) in response to (SRBC's) in the spleen. MECT showed significant ($p < 0.01$) increase in the delayed type hypersensitivity response facilitated by footpad thickness response, significantly ameliorated haematological parameters (WBC, RBC and Hb) and also restored the myelosuppressive effects induced by Azathioprine. MECT also showed increase in the levels of lymphocytes and rosettes formation when results were compared with standard as levamisole. MECT showed significant immunomodulatory activity at the dose of 100, 200 and 400 mg/kg bd. wt. but amongst 100 mg/kg bd. wt. was found to be potent. **Conclusion:** MECT showed significant immunostimulating activity with specific and non-specific mechanism which may be due to the presence of prominent amount of flavonoids and phenols. So MECT can be used as immunostimulating agent in various disease conditions. **Key words:** Immunomodulatory activity, *Clitoriaternatea*, Delayed type hypersensitivity, Antibody, Drug induced myelosuppression.

Sneha J Anarthe *et al* // International Journal of ChemTech Research, 2017,10(1): 116-125.
