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Immunomodulatory activity of Formonoetin-7-*O*-β-D-glucopyranoside isolated from Methanolic Extract of *Operculina turpethum*

***M.TamizhMozhi[1], D.Nagavalli[2]**

[1]Vels University, Chennai, Tamilnadu, India.
[2]Adhiparasakthi College of Pharmacy, Melmaruvathur, Kanchipuram - 603 319, India

Abstract : To investigate the immunomodulatory activity of isolated compound Formonoetin-7-*O*-β-D-glucopyranoside from Methanolic Extract of *Operculina turpethum*. The isolated compound was characterized by spectral techniques namely FTIR, ^{1}H NMR, ^{13}C NMR and mass. Due to the paucity of the compounds **1** and **2**, the compound (**3)** Formonoetin-7-*O*-β-D-glucopyranoside was subjected to evaluate the immunomodulatory activity by the Neutrophil adhesion test, phagocytic activity, delayed type hypersensitivity response and antibody tire. Administration of (**3**) at the doses of 10, 20, 40, 50 mg/kg b. w. p. o. exhibited significant ($p<0.05$) increase in percent neutrophil adhesion to nylon fibers as well as a dose-dependent increase in antibody titre values and phagocytic activity, potentiated the delayed-type hypersensitivity reaction induced by sheep red blood cells. It is concluded that Formonoetin-7-*O*-β-D-glucopyranoside from the methanol extract of *Operculina turpethum* have produced a significant immunomodulatory activity and possess a promising therapeutic potential for the prevention of autoimmune diseases.

Keywords : *Operculina turpethum*, Formonoetin-7-*O*-β-D-glucopyranoside, Neutrophil adhesion, Phagocytic activity, Antibody titre, Delayed-type hypersensitivity.

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