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### **Immunoprotective effects of ethanolic extract of the bark of *Bombax ceiba* against cyclophosphamide induced immuno-suppression in mice**

**Hussain Arshad**  
Integral University, India

The Immunoprotective effects of ethanolic extract of the bark of *Bombax ceiba* (Bombaceae) were investigated against Cyclophosphamide induced immune suppression in mice. The study was carried out by performing various hematological along with serological tests moreover the assessment of immunomodulatory activity on specific and non-specific immunity was made after the administration of test extract. Humoral antibody response to SRBC measurement of antibody titer by hemagglutination reaction was done. Whereas the Cellular immune response (Foot pad reaction test) the edema formation was also assessed by measuring the delayed type hypersensitivity response. Administration of ethanolic extract remarkably ameliorated both the cellular and humoral antibody responses. Cyclophosphamide injection caused a prominent reduction in the relative organ weight of the mice that includes the kidney, liver and spleen. The study result exhibit that animal treated with ethanolic extract demonstrate a significant up-regulation of cytokines including IL-6 and TNF- $\alpha$  in a dose-dependent manner. It is concluded that the above test extract possess promising immunoprotective properties.

#### **Biography**

Hussain Arshad has completed his PhD at age of 29 years from Jamia Hamdard University, New Delhi. He is serving as Head, Faculty of Pharmacy, Integral University, a state private University at Lucknow, India. He is engaged in teaching along with research at under-graduate and post-graduate level. His main areas of research include isolation, identification and evaluation of active/bioactive constituents from natural resources. He has published more than 35 papers in reputed journals and currently supervising eight PhD theses at the Department. He is also serving as the Principal Investigator in UP-CST funded project on "Development of Anti-cancer Herbal Nano-formulations".