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Study of Immunomodulatory activity of *Terminalia arjuna* (roxb) bark on in-vitro neutrophils

Kamal Singh Rathore
BN University, India

In recent year's biology and particularly in healthcare, immunology played an imperative and an increasing role in the considerate and diagnosis of disease. The immune response is implicated in the etiology as well as the pathophysiologic mechanism of many disease processes. Immunology is not only the most quickly developing area of biomedical research but has the great promise of major advances in the prevention and treatment of a wide range of disorders. To explore the possibility of using traditional medicines as an immunomodulatory agent with proper scientific account. Chemotherapeutic agents available today have mainly immunosuppressive activity. Chemotherapeutic agents accessible today have mainly immunosuppressive actions. Mostly they show cytotoxic and exert a range of adverse effects. *Terminalia arjuna* has been documented to produce immune promoting effect.²

However, detailed phytochemical investigations of leaves for in-vitro immunomodulatory activity have not been scientifically documented. Here in this study the extracts of petroleum ether, ethyl acetate, chloroform alcohol and chloroform water of *Terminalia arjuna* (Roxb) bark was investigated for immunomodulatory activity by assessing Nitroblue tetrazolium test, phagocytosis of killed *Candida albicans*, candidicidal assay, neutrophil locomotion and chemotactic assay. All the extracts were given at dose of 5 µg/ml, 10 µg/ml, 25 µg/ml, 50 µg/ml and 100 µg/ml. Results of in-vitro immunomodulatory activity lead to the conclusion that the chloroform extract and isolated compound of *Terminalia arjuna* bark showed predominantly significant activity on in-vitro human neutrophils in all parameters as compared to other extracts.

Biography

Kamal Singh Rathore has completed his PhD at the age of 37 years from MLS University, Udaipur. He is the Head of Department of Pharmaceutics, at BNIPS, Udaipur a premier pharmacy institute. He has published more than 20 books and 100 papers in reputed journals and has been serving as an editorial board member of reputed journals.

kamalsrathore1234@gmail.com

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