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Methanolic seed extracts of Peganum Harmala exhibit potent activity against Acanthamoeba Castellanii cysts and its encystment In-Vitro**Abdul Matin***University of Baltistan, Pakistan*

Acanthamoeba is a protozoan pathogen and known to be one of the most prevalent organisms on earth which plays an important role in our environment. It causes keratitis (infection of eye) and deadly encephalitis (CNS infection) with a very poor diagnosis. This is because of inadequate accessibility of active anti-Acanthamoeba drugs. The aim of the current investigation was to access the effectiveness of medicinal plants extracts on the capability and natural characteristics of Acanthamoeba (T1 and T4 genotypes) and its lethal properties on human corneal epithelial cells (HCEC). Three traditional plants *P. harmala*, *M. azedarach*, and *R. communis* were collected and methanolic extracted were prepared for the present study. Adhesion and cytotoxicity assay were performed in the presence of HCEC cells In Vitro. It was witnessed that Acanthamoeba demonstrated adhesion (>90 %) and toxicity (>80 %) to HCEC cells. But, medicinal plants extracts extraordinarily blocked >70 and 60 % of amoeba adhesion and toxicity to HCEC, separately. It was also additionally recognized that medicinal plants extracts (from 0.1 - 1.5 mg/ml) displayed amoebicidal effects, i.e., >50 % of trophozoites were destroyed at extreme dose (1.5 mg/ml) within 1 h cultivation. Moreover, the remaining amoeba stayed static over extended cultivations. Additionally, growth assay validated that medicinal plants extracts reserved >50 % Acanthamoeba up to one-week time. Our outcomes established that medicinal plants extracts have obstructed the effects on Acanthamoeba development and sustainability. Generally, these outcomes shown that all trail medicinal plants extracts blocked the Acanthamoeba possessions connected with pathogenesis. These verdicts validated that nominated methanol medicinal plants extracts possess the blocking special effects on natural possessions of Acanthamoeba without any side effects on trails human cells In Vitro.

Biography

Abdul Matin completed his PhD from Birkbeck, University of London followed by a Postdoctoral Research Fellowship from School of Medicine, Southampton University Hospital, United Kingdom. Currently, He is a Professor & Dean at University of Baltistan, Skardu, Pakistan. His interests include the epidemiology and pathogenic mechanism of emerging parasitic diseases with special interest on role of blood-brain barrier, which is the only gateway to central nervous system infections. His aim is to understand the basic molecular mechanism of pathogenesis and pathophysiology of serious infections (i.e., encephalitis). These studies will help him to identify potential targets, which may lead to the development of therapeutic interventions. Furthermore, using multi-disciplinary approach his group is looking for potential novel synthesized compounds or nanoparticles or/and obtained from plants or insects to discover potential drug candidates to alleviate the burden of life threatening infections. He is conducting research using state-of-the-art technologies in the field of infectious diseases.