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Bioactive compounds from *Gelidiella acerosa*, a red alga

Algal resources have a tremendous potential to be explored for the benefits of the mankind. *Gelidiella acerosa* is a genus of Red algae (Family: Gelidiellaceae) with high economic value found in many parts of India. As *Gelidiella acerosa* is used in the production of high quality agar, reported to possess a variety of phytoconstituents including Flavonoids, Alkaloids, Tannins, Proteins, Sulfated polysaccharides, Sulfono glycolipid, Sesquiterpenes, Monoterpenes, Phenols and various pharmacological activities, prompted us to investigate on this red alga with its hexane, ethyl acetate and methanolic extracts.

Among the extracts, methanolic extract of *Gelidiella acerosa* exhibited the highest percentage of free radical scavenging activity (68.42%) by Invitro DPPH assay which was comparable to that of the standard Ascorbic acid (76.55%). Methanolic extract also possessed the highest anti-inflammatory potential followed by ethyl acetate and hexane extracts in the Carrageenan induced paw edema and Cotton pellet induced granuloma models and it was found to be significant at $p < 0.001$. The percentage inhibition was found to be 64.60% when compared to the standard, Diclofenac sodium (70.45%) at 10mg/kg concentration.

The antioxidant and anti-inflammatory activity of methanolic extract could be attributed to the highest amount of Flavonoid and Phenolic content, which were estimated to be 48.5 mg/g Quercetin and 34.34 mg/g Gallic acid equivalent respectively. Further investigations should be carried out to discover other potential phytoconstituents and pharmacological activities of *G. acerosa*.

Biography

Sadish Kumar Shanmugam is the Director of I T S College of Pharmacy, Ghaziabad, India. He has been working as a Professor since 2010. He has over 2 decades of research and teaching experience. He is a Member of various professional bodies including Royal Society of Chemistry, UK. He has published 2 books, 30 research articles and presented research papers at conferences held in South Korea, USA, Germany and Egypt and guided over 30 MPharm research projects in Marine and other natural products, guiding PhD projects as well.

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