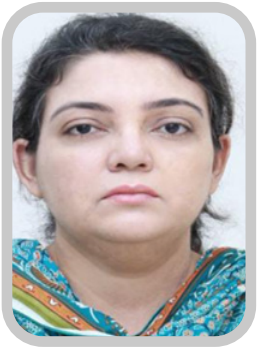

Sadia Suri Kashif

Ziauddin University
Pakistan

Neuroprotection from the sea: Shark fish oil as a therapeutic agent in memory impairment

Abstract:

Shark fish oil, rich in polyunsaturated fatty acids (PUFAs), is widely recognized for its antioxidant, anti-inflammatory, cardioprotective, and neuroprotective effects. This study evaluated the potential of Carcharhinus bleekeri (shark fish) oil in improving cognitive function in a rodent model of scopolamine-induced amnesia. Using open field and passive avoidance tests, researchers assessed memory and exploratory behavior in male albino mice (n = 40), randomly divided into four groups: control (saline), scopolamine (2 mg/kg), scopolamine + shark fish oil (5 mg/kg/day), and scopolamine + donepezil (3 mg/kg/day), each administered over 21 days. Treatment with shark fish oil significantly improved learning and memory outcomes ($p < 0.01$), restored hippocampal acetylcholine levels ($p < 0.05$), and reduced monoamine degradation compared to the scopolamine group. Histological examination further confirmed protective effects, showing reversal of neuronal damage in the hippocampus. These findings support the role of shark fish oil in mitigating cognitive deficits and neurochemical disruptions associated with chemically-induced memory impairment.

Biography

Sadia Kashif is an Assistant Professor at Ziauddin University, Pakistan, where she serves as both an academician and an active researcher. With a background in Pharmacology, her primary research interest lies in the pharmacological evaluation of natural compounds, with a special focus on their potential in managing psychological health conditions and reproductive disorders. Over the years, Dr. Sadia has developed a strong research portfolio, having authored around more than 20 research papers and 2 book chapters published in reputable journals and has also been serving as an editorial board member. Her work emphasizes the use of plant-based and naturally derived substances as safer, more sustainable therapeutic options, aiming to bridge the gap between traditional remedies and modern scientific validation. In addition to her research, Dr. Sadia is deeply committed to teaching and mentoring, inspiring the next generation of scientists and healthcare professionals. Her contributions reflect a growing effort to integrate natural product research into mainstream pharmacological innovation, with the ultimate goal of improving patient outcomes and expanding treatment options.