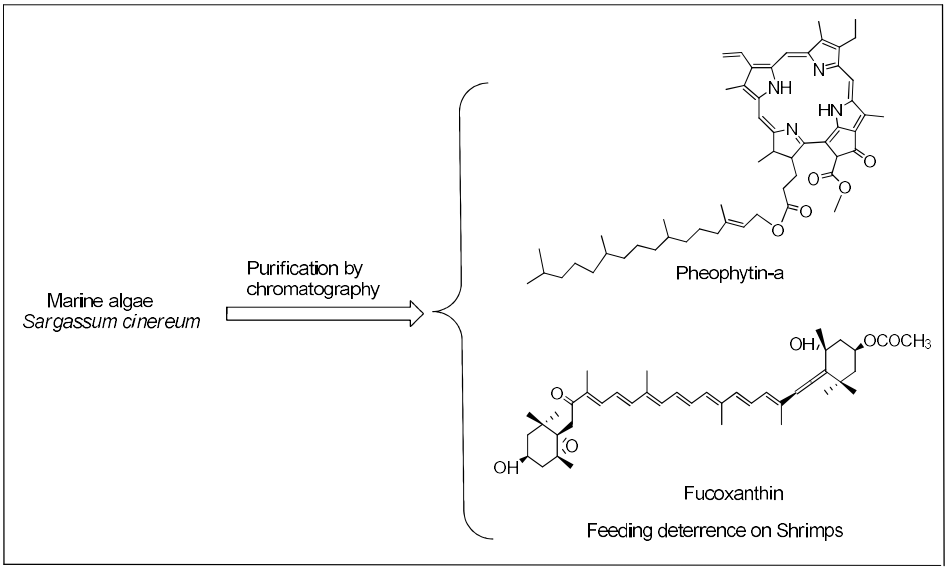
Fucoxanthin and pheophytin-*a* from the marine algae *Sargassum cinereum:* Isolation, characterization and their feeding deterrent activity on Shrimps

P. J. Praveen[1,2], Kushal Banerjee[1], Keisham S. Singh[1,*] , Prabha Devi[1] and P. S. Paramesawaran[2]

[1]*Bioorganic Chemistry Laboratory, CSIR-National Institute of Oceanography, Dona Paula 403004, Goa, India;* [2]*Academic of Scientific and Innovative Research, CSIR-National Institute of Oceanography, Dona Paula-403004,Goa, India*

**For correspondence; E-mail:keisham@nio.org; keisham.sarjit@gmail.com*



Abstract: Chemical investigation of the brown alga *Sargassum cinereum* collected from Goa coast, India led to the isolation of two bioactive pigments *viz*. pheophytin-*a* and fucoxanthin in a relatively good concentration. These pigments were known to possess several biological properties. Specifically, fucoxanthin is present in several micro- and macro-algae and known to exhibit a remarkable antioxidant, cytotoxic and, hypoglycemic activity. These pigments are being used in several health care products however; their feeding deterrent activity is not well understood. Here, we report the isolation of fucoxanthin and pheophytin-*a,* from this algal species by chromatographic techniques and their characterization on the basis of FTIR, UV-Vis, NMR and mass spectroscopic data. Additionally, feeding deterrent effects of the pigments on shrimps have been investigated by performing a feeding assay in an aquarium.

Keywords*:* Marine algae, Fucoxanthin, Pheophytin-*a*, Feeding deterrence, Spectroscopic data.