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Kisspeptin 1 is a neuropeptide hormone, which acts as an upstream regulator of brain- pituitary-gonad (BPG) axis in most vertebrates including teleosts. In the present study, a 16 amino acid long putative mature bioactive peptide (kiss 1) from pre-prokisspeptin 1 of golden mahseer, *Tor putitora* (Hamilton, 1822), was synthesized by solid phase peptide synthesis (SPPS) using Fmoc-Chemistry. The solution conformational characters of kiss 1 peptide were determined using circular dichroism (CD) spectroscopy. The far-UV CD spectrum of this peptide was evaluated both in aqueous and membrane mimicking solvents (TFE, HFIP and Dioxane). The results indicate that kiss 1 peptide adopted helical, turn and β conformations in apolar membrane like environments. The near-UV CD spectroscopy was also carried out to examine the tertiary packing around aromatic residues of kiss 1 peptide and the peptide- membrane complex. The kiss 1 peptide exhibited little signal in water, but a prominent negative band was observed at around 275 nm when membrane mimetic solution was added. The observed ordered conformations of kiss 1 peptide in the different solvents indicated its potential biological activity which could enhance the secretion of gonadotropin-releasing hormone (GnRH) at BPG axis. The conformational information generated from the present study will be helpful in designing of stable bioactive synthetic peptide analogs of kisspeptin 1 in improving the reproductive performances of important cultivable fish species. To the best of our knowledge, this is the first report on solution conformational study of a fish kiss 1 peptide.

Determination of ciguatoxin in fish by liquid chromatography tandem mass spectrometry and comparison with mouse bioassay

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Avisibly unidentifiable colourless, odourless, heat stable, lipid soluble polyether marine biotoxin known as Ciguatoxin (CTX) responsible for human illness has been identified from certain fish collected from Cochin, Trivandrum and Mangalore. Our study showed that among the 14 species collected, *Lutjanus bohar* (7.54 kg) has been identified for ciguatoxicity. Detection of the toxin was done using mouse bioassay which showed symptoms related to suspected CTX toxicity. Significantly, a higher level of 2.17 mouse unit Ciguatoxin was estimated which is equivalent to 10.84 ng of CTX toxicity and 13% of weight loss. Solid phase extraction (SPE) was employed for the separation and purification of the toxin from the fish extract, which was confirmed and quantified by gradient reverse phase liquid chromatography tandem mass spectrometry (LC- MS/MS). The Extracted Ion Chromatogram of CTX fish extract of *Lutjanus bohar* showed m/z 1117.303 Da precursor/product confirmatory ion transitions.

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In vitro anti oxidant and antimicrobial activity of different seaweeds from Ratnagiri coast

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