**Reproductive endocrinology of the Red deep-sea crab, *Chaceon quinquedens*: identification of reproductive regulators and vitellogenin**

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The reproductive strategy is closely associated to their life history, which depends on neuroendocrine inputs. In crustaceans, these hormones originate in the eyestalk and belong to the crustacean hyperglycemic hormone (CHH) superfamily including CHH, molt-inhibiting hormone (MIH), mandibular organ-inhibiting hormone, and gonad- or vitellogenesis-inhibiting hormone. Specifically, CHH and MIH are known to regulate vitellogenesis, the process of vitellogenin synthesis and vitellin (yolk protein) accumulation. To increase the limited information available in the reproductive physiology of Red deep-sea crabs, *Chaceon quinquedens,* this study aims to elucidate potential roles of reproductive regulators. We localized of the presence of CHH (1 and 2) and MIH in the sinus gland and neurosecretory cells of the eyestalk ganglia using western blot, immunohistochemistry, and RP-HPLC combined with dot blot assay. We also isolated the full-length CHH (957nt including the entire open reading frame, 423nt) and partial cDNA sequences of MIH and vitellogenin using degenerate PCR combined with 5’, 3’ RACE cloning strategy. The putative amino acid sequence of ChqCHH and -MIH is related most closely to those of *Carcinus maenas.* The role of these reproductive regulators in the ovarian development is currently being investigated by establishing a relationship between the levels of vitellogenin and these neuropeptides*.*