

Abstract

Uncovering and dissecting the roles of cellular and molecular players involved in learning and memory has been an intriguing issue in neuroscience. The nuclear protein CREB is well established to mediate the aforementioned function in diverse animals. Using the invertebrate model *Caenorhabditis elegans*, our group previously dissected a novel role of a particular CREB homolog isoform *crh-1e* (of *C.elegans*) in long-term associative memory. Preliminary qRT-PCR data revealed a strikingly significant lower expression of this particular isoform in comparison to the other *crh-1* isoforms in the nematode *C.elegans*. Herein, we investigated the regulatory mechanism underlying expression of *crh-1e* isoform. We uncover a suspected role played in part by the first exon of the *crh-1e* isoform to underlie this observation using confocal imaging and qRT-PCR analysis on transgenic worm strains.