Audrey F Seasholtz Ph.D.

Professor
Research Professor
Department of Biological Chemistry
Molecular and Behavioral Neuroscience Institute
1036 Molecular and Behavioral Neuroscience Institute
0720
Ann Arbor, MI 48109
(734) 936-2072
aseashol@umich.edu

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Research Interests

The studies in my laboratory are focused primarily on corticotropin-releasing hormone (CRH). This 41 amino acid neuroendocrine peptide is the key hypothalamic releasing factor in the mammalian stress response. One goal of our research is to understand the molecular mechanisms responsible for transcriptional regulation of this important peptide. We have focused on transcriptional regulation of the CRH gene by cAMP, calcium, and steroid hormones. A second goal of our research is to understand the in vivo role of the CRH-binding protein (CRH-BP). This protein is distinct from the CRH receptors, binds CRH with an affinity equal to or greater than that of the receptors, and is expressed in the pituitary and CNS of rodents and primates. We have hypothesized that the CRH-BP may modulate (inhibit or enhance) the biological activity of CRH. We have created mouse model systems of CRH-BP overexpression or deficiency states. The results from these studies will allow us to better understand the role of this protein in modulating the actions of CRH and other CRH-like peptides in the pituitary and within the central nervous system.

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