Postdoctoral positions in developmental neuroendocrinology, epigenetics and gene regulation are available in the Department of Molecular, Cellular and Developmental Biology (MCDB) at the University of Michigan, Ann Arbor. The University of Michigan is among the top research institutions in the world, with outstanding opportunities for career development. The research laboratories, biomedical research core facilities, infrastructure, and computer technology at Michigan are state-of the art. We are now building a state-of-the-art life science research building, the Biological Sciences Building (BSB) which will house the Departments of MCDB and Ecology and Evolutionary Biology, the Museum of Paleontology and the public Museum of Science and Nature.

There are two projects with open postdoctoral positions:

1) **Genome-wide analysis of DNA methylation and its regulation by hormones during post-embryonic brain development.** This NSF-funded project is focused on: 1) genome-wide patterns of DNA methylation (methylome) during brain development and how these influence gene expression, 2) how DNA methylation in the developing brain is regulated by thyroid hormone (TH), and 3) the roles and mechanisms of ten eleven transferase (TET) enzymes in DNA demethylation and gene regulation in the developing brain. For this project we are using tadpoles of *Xenopus* species, and techniques that include chromatin immunoprecipitation sequencing (ChIP-seq), RNA sequencing (RNA-seq), methylome analysis, bioinformatics, bisulfite sequencing, transgenesis and CRISPR/Cas9-mediated genome editing *in vivo*.

2) **Thyroid hormone regulation of DNA methylation in the developing brain through direct modulation of the DNA methyltransferase 3a gene.** This NIH-funded project will investigate thyroid hormone (TH) regulation of *Dnmt3a*, and its role in neurological development. The goals of the project are to investigate: 1) the regulation of *Dnmt3a* by TH in mouse brain during early postnatal development, and 2) the role of Dnmt3a in TH-dependent cell cycle arrest and differentiation. For this project we are using wild type and mutant (thyroglobulin knockout) mice and mouse neuronal cell lines, and techniques that include cell transfection, chromatin immunoprecipitation sequencing (ChIP-seq), RNA sequencing (RNA-seq), methylome analysis, bioinformatics, bisulfite sequencing and CRISPR/Cas9-mediated genome editing.

A Ph.D. in an appropriate life science discipline such as developmental biology, neuroscience, neuroendocrinology, endocrinology, molecular biology is required. Send expressions of interest along with a CV and the names of three references to: **Prof. Robert Denver, Department of MCDB, The University of Michigan, Ann Arbor, MI 48109-1048 (rdenver@umich.edu).**

For more information please visit the lab website at: **http://sites.lsa.umich.edu/denver-lab/**

Keywords: neuroendocrinology, epigenetics, gene regulation, DNA methylation, developmental biology, Xenopus, mouse