Ghrelin’s role in metabolic and mood disorders

Two postdoctoral positions are available in the laboratory of Jeffrey Zigman, M.D., Ph.D., in the Division of Hypothalamic Research of the UT Southwestern Medical Center. Our laboratory investigates the neuronal/hormonal basis for complex eating and blood glucose control with the goal of designing new methods to treat body weight extremes and associated disorders of mood and metabolism. We mainly have investigated how the hormone ghrelin and its receptor influence eating (when hungry, for pleasure and upon stress), blood glucose, body weight, the body’s responses to gastric bypass surgery, and mood. We also study ghrelin secretion and the relationship of ghrelin cells to other gastrointestinal endocrine cells.

For one postdoctoral project, we will use state-of-the art neuroanatomical and ex vivo cell culture techniques, a unique collection of mouse genetic models and mouse behavioral models to determine the molecular and neuronal mechanisms mediating the stimulation of ghrelin secretion by stress and the ensuing anti-depressant response.

For another project, we will take advantage of our mouse genetic models targeting the ghrelin system and targeting enteroendocrine cells, as well as cell culture techniques, RNAseq technology, and various histochemistry techniques to determine the molecular mechanisms mediating ghrelin release and the release of other gastric hormones in several physiologically-relevant and pathologic settings. These studies will help us to determine the role of these gastric hormones in obesity, cachexia, diabetes, mood disorders, and Prader-Willi Syndrome, to name just a few of the conditions in which the lab is invested.

Candidates must hold a Ph.D. and/or M.D. degree and are expected to be self-motivated and contribute substantively to the design, implementation, interpretation and reporting of these investigational studies. Prior experience with genetically-engineered mouse models and related breeding strategies, mouse behavioral studies, stereotaxic brain surgery and other neuroanatomical techniques, histology, cell culture, and/or bioinformatics leading to publication in peer-reviewed journals is recommended.

Interested individuals should send a CV, statement of interests, and a list of three references to: Jeffrey Zigman, MD, PhD at Jeffrey.zigman@utsouthwestern.edu

http://www.utsouthwestern.edu/labs/zigman/

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