Postdoctoral Associate Position

Snell Lab, Yale School of Medicine Department of Neuroscience

The Snell Lab at Yale School of Medicine is seeking a highly motivated **Postdoctoral Associate** to join our dynamic team investigating cerebellar function and its role in neurodevelopmental and cerebellar motor disorders.

About Our Research

Our lab is dedicated to understanding the fundamental mechanisms underlying cerebellar function, with a particular focus on Purkinje cells - the main output neurons of the cerebellar cortex. While the cerebellum has traditionally been known for coordinating motor movements, emerging evidence reveals its critical contribution to non-motor functions including reward processing and social interaction. Defects in cerebellar circuitry are increasingly linked to cognitive disorders such as autism spectrum disorder. Using cutting-edge techniques and mouse models, we aim to pioneer discoveries that advance basic cerebellar science and ultimately improve quality of life for patients worldwide.

Our approach is grounded in scientific discovery and basic science, but deeply influenced by interactions with patients, their families, and physicians. We boldly hypothesize and carefully prove, bridging the gap between fundamental research and clinical impact.

Research Focus

The cerebellum is traditionally known for coordinating motor movements, but recent evidence suggests it also contributes to non-motor tasks such as reward processing and social interaction. Defects in cerebellar function lead to cognitive disorders including autism spectrum disorder (ASD). Our lab focuses on understanding how cerebellar circuitry contributes to these diverse functions, with particular emphasis on:

- **Purkinje cell and cerebellar physiology and pathophysiology**: Investigating the regular pace-making firing of Purkinje cells, the main output neuron of the cerebellar cortex while also exploring changes in cerebellar network activity.

- **Cerebellar contributions to motor and non-motor functions**

- **Mechanisms underlying neurodevelopmental disorders with cerebellar involvement**

Position Overview

We are seeking a highly motivated postdoctoral associate to join our dynamic research team. The successful candidate will contribute to ongoing projects investigating cerebellar function in health and disease, with opportunities to develop independent research directions within the lab's scope.

Key Responsibilities

- Design and conduct experiments using state-of-the-art neuroscience techniques

- Analyze and interpret complex datasets

- Present research findings at scientific meetings and publish in peer-reviewed journals

- Mentor undergraduate and graduate students

- Collaborate with clinicians and other research groups

- Contribute to grant writing and laboratory management

- Participate in lab meetings, journal clubs, and departmental seminars

Required Qualifications

- Ph.D. in Neuroscience, Neurobiology, Cell Biology, Biomedical Engineering, or related field

- Strong background in cellular/molecular neuroscience or systems neuroscience

- Experience with at least one of the following techniques:

    - Electrophysiology (patch-clamp, extracellular recording, in-vivo)

    - Calcium imaging or other optical techniques

- Proficiency in data analysis software (e.g., MATLAB, Python, R)

- Excellent written and verbal communication skills

- Strong publication record appropriate to career stage

- Ability to work independently and collaboratively

Research Techniques and Resources

The successful candidate will have access to and may work with:

- State-of-the-art electrophysiology equipment

- Advanced imaging systems

- Behavioral analysis platforms

- Animal models of cerebellar dysfunction

- Core facilities for molecular biology, histology, and imaging

What We Offer

- Competitive salary commensurate with experience and NIH guidelines

- Comprehensive benefits package

- Professional development opportunities

- Conference travel support

- Mentoring in grant writing and career development

- Collaborative and supportive research environment

- Opportunities for independent project development

Application Materials

Please submit the following materials as a single PDF:

1. **Cover letter** (1-2 pages) describing your research interests, relevant experience, and career goals

2. **Curriculum vitae** including publication list

3. **Contact information for three references**

4. **Representative publication** or manuscript (optional but encouraged)

Application Instructions

Please email your application materials to: **heather.snell@yale.edu**

Subject line: "Postdoctoral Application - [Your Last Name]"

Applications will be reviewed on a rolling basis until the position is filled.

Contact Information

Dr. Heather Snell, PhD
Assistant Professor
Department of Neuroscience
Yale School of Medicine
Email: heather.snell@yale.edu
Lab Website: www.snelllab.org

Yale University is an equal opportunity employer and does not discriminate on the basis of race, color, religion, age, sex, sexual orientation, gender identity or expression, national origin, disability status, protected veteran status, or any other characteristic protected by law.

Join us in our mission to understand the cerebellum's role in health and disease, and contribute to research that may one day improve the lives of patients with neurodevelopmental disorders.