

Postdoctoral Fellow in Neocortex Cerebellum Circuitry

Neocortex-Cerebellum Circuitry Unit | NINDS | NIH | Bethesda, Maryland

How do interacting cortical and cerebellar circuits turn experience into prediction and flexible behavior? We are recruiting a postdoctoral fellow to develop new questions at this interface. Our recent studies show how cerebellar circuits distinguish related contexts, track time, predict rewards, and reinforce motivated actions.

The research opportunity

The fellow will shape a research direction with Principal Investigator [Mark Wagner](#) and colleagues, building on a collaborative program that examines activity across neocortex and cerebellum during learning. We are especially interested in how information is transformed across connected circuits and how those transformations influence behavior. The specific question and experimental strategy will be developed with the fellow, according to their interests and strengths.

Approaches and environment

Depending on the question, projects can draw on multisite two-photon microscopy, high-speed volumetric imaging, three-photon microscopy, holographic photostimulation, electrophysiology, quantitative analysis and simulations, and behavioral learning experiments. The range of approaches supports projects that connect population dynamics to causal tests; applicants need not already know every method.

Who should apply

We welcome scientists with a doctorate in neuroscience, physics, engineering, or a related field who enjoy working across experimental and quantitative approaches. We value careful thinking, intellectual initiative, and a collaborative approach. Applicants with complementary expertise are encouraged to apply.

Support and application

This is a funded NIH intramural postdoctoral position. Applicants are not required to bring their own fellowship. To apply, email a CV, a brief description of your research interests, and contact details for references to mark.wagner@nih.gov. Questions and informal inquiries are welcome.

Selected recent work

- [Context separation across neocortex and cerebellum](#) · Nature (2026)
- [Cerebellar prediction and teaching signals for dopamine reward](#) · Nature Neuroscience (2026)
- [Cerebellar learning over extended intervals](#) · Neuron (2024)

HHS and NIH are Equal Opportunity Employers. Individuals with diverse backgrounds are encouraged to apply.

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