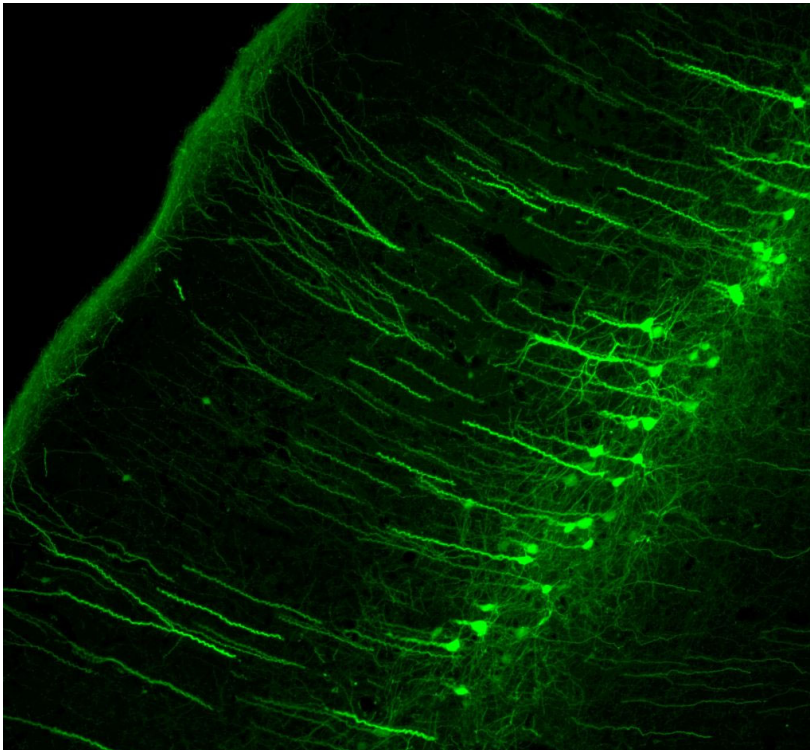


Tiered Mentoring Program

Can you hear me now? Detangling brain circuits for hearing and attention

Dr. Brett Schofield (NEOMED)

The Schofield Lab uses microscopy to study pathways in the brain, especially pathways important in hearing and attention that use acetylcholine as a neurotransmitter. We inject fluorescent tract tracers into auditory brain areas in mice and guinea pigs, then study pathways using a fluorescent microscope. We also fluorescently label brain cells with immuno-staining, a technique where antibodies are used to recognize proteins in the brain. These techniques allow us to map brain circuits that might explain why hearing your name in a crowded room grabs your attention, or why you can easily sleep through your partner's snoring but awaken immediately at an unfamiliar noise. The photo below shows cells in the auditory cortex that make descending projections to the brainstem.



GP799 1:7-1 left AC AAVrg in LIC; scale 250 um

Benefits to students:

- Observe or participate in tracer injection surgeries
- Participate in cutting of brains on a microtome and immuno-staining of brain sections
- Learn how to use a fluorescence microscope and fluorescence microscopy software
- Opportunity to participate in weekly Schofield Lab meetings
- Access to NEOMED Hearing Research Group seminars and journal clubs

Skills needed:

- None! We are happy to teach you everything you need to know to work in The Schofield Lab with us. All you need is an eagerness to learn and participate.
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To read more about research in the Schofield lab, visit our website at www.schofieldlab.org.

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