

Position Description:**Research 90%**
RESEARCH – 90%

The incumbent will focus on helping set up and using a new system to perform extracellular recordings in the prefrontal cortex. The incumbent will be involved in data collection (main contribution at first), data analysis, and publication of the results. Much of the planned research will build on prior work in the lab. The data collection system is the most advanced high-density recording array system capable of recording from several hundreds of neurons at a time.

The incumbent will also be responsible for keeping records related to the experiments and training and mentoring undergraduate volunteers. The incumbent may have the opportunity to creatively contribute to the research by proposing alternative analysis strategies, generating novel projects with existing data, and reviewing literature for manuscript preparation. The incumbent will be actively and significantly involved in publishable research activities, including reading journal articles and engaging in discussions on research and the interpretation of research results with PI and others in the lab. The incumbent will spend a marginal amount of time assisting the current lab manager with administrative tasks, including the maintenance of animal protocols, logging essential data related to the health and well-being of the non-human subjects.

Data Collection and Analysis

- Complete required training to work in the lab.
- Collect and analyze data related to non-human subjects performing a behavioral task
- Record from 4 to several hundred simultaneously recorded neurons while the subject are performing the behavioral task.
- Spike sort to separate individual neurons from the electrode recording based on their action potential waveform
 - Analyze the data related to behavior and how single neurons and populations of neurons respond to different components of cognitive control function, including decision-making and selective visual attention.
 - Log fluid-intake, food-intake, and other health-related metrics of non-human subjects
 - Assist in surgeries for non-human subjects
 - Coordinate research collaborations with faculty at UC Davis (Mainly center for Neuroscience); training will occur in the CC Lab in conjunction with other labs
 - Maintain databases of all study data.
 - Mentor undergraduate research assistants
 - Maintain organized records

PROFESSIONAL COMPETENCE – 5%

The ideal candidate will have strong interpersonal, communication, and decision-making skills, as well as the ability to work independently, and as part of a team. The incumbent may have the opportunity to submit data for presentation at relevant conferences, such as

Society for Neuroscience (if funding is available).

- Actively participate in weekly lab meetings, journal club presentations, presentations from outside speakers, and weekly workshops to help incumbents develop their career goals.

UNIVERSITY SERVICE – 5%

- The incumbent will mentor undergraduate student assistants in the lab.
- The incumbent will participate in public outreach activities