

Introduction

The In vivo Neurophysiology Core has been serving the University of Colorado researchers since 2009. It provides equipment, facilities, consultation, and technical expertise for carrying out experiments such as EEG monitoring and stereotaxic guided brain surgery. Video-EEG monitoring permits investigators to more thoroughly phenotype the rodents they use in their research and specifically address issues of whether they have abnormalities of neurophysiological function such as EEG background suppression, sleep disturbances, and seizures. This can be important for the characterization of translational models of nervous system disorders, including stroke, epilepsy, traumatic brain injury, neurodegenerative, psychiatric, genetic, and developmental disorders. The robotic stereotactic guided surgeries enable researchers to accurately place electrodes, deliver drugs, and inject viruses in brain area of interest, and induce lesions of specific brain regions.

Services and Facilities

The EEG Core is located in the RC1 Laboratory Animal Facility and provides following services Video and EEG Monitoring - Synchronized video and tethered EEG system for adult and neonatal rats and mice - Continuous 24/7 video and/or EEG monitoring for 32 rats and 20 mice - Two channel wireless EEG recording system, one neonatal rat/mouse at a time Stereotactic surgeries - Digital motorized system with integrated atlas for rat and mouse for precise implantation of electrodes and injection of drugs/viruses in region of interest - Adapter available for neonatal rat stereotaxy Stereotactic frame and Anesthesia System for rent - Robotic stereotactic frame and isoflurane inhalation anesthesia system with active scavenger for rat and mouse **Review Station** - Five computers with preinstalled EEG analysis software, free to use Training - The EEG core will provide on-site training in stereotactic surgery Consultation - Consultation regarding experimental design

Pricing

- Video-EEG Monitoring (Recording started and maintained by the core) Stereotaxy/Anesthesia System
- Electrode implantation surgery done by core
- Training: electrode implantation for EEG recording, EEG recording unit operation
- EEG review and analysis station
- Consultation after first free session

*Please note that charges do not include daily cage charge billed by OLAR

How to use the Core

To schedule an appointment for video-EEG recording, please send an email to Timothy Corrigan. You must have an approved animal protocol for surgical implantation of electrodes and for video-EEG monitoring. Please contact Yogendra Raol to obtain standard operating procedures (SOP) for electrode implantation and video-EEG monitoring.

In Vivo Neurophysiology Core NeuroTechnology Center, University of Colorado Anschutz Medical Campus, Aurora, CO

\$8/day*

\$40/half day \$100/animal \$60/hour No Charge \$49/hour



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Video-EEG Recording Stations

Support

The In Vivo Neurophysiology Core is part of the NeuroTechnology Center (NTC)



Robotic Stereotactic Frame