

Rodent Behavioral Core Facility (RBC)

Center for Psychiatric Neuroscience (CPN) at the University of Mississippi Medical Center

MISSION

The CPN-funded Rodent Behavior Core conducts state of the art rodent behavioral testing for investigators at UMC and other nearby institutions. The core facility is equipped to perform a comprehensive battery of behavioral tests to thoroughly phenotype overall motor and sensory function of rats and mice as well as specific behaviors of interest to specific investigators (learning and memory, motor function and gait, place/fear conditioning, pain/analgesia, depression- and anxiety-related behaviors). The Core can assist in all aspects of rodent behavioral testing including design and execution of behavioral tasks as well as data analysis and interpretation. The Core laboratories are located on the 1st and 3rd floor in the Guyton Building.

EXPECTED TO BE FULLY OPERATIONAL

The Rat Testing Laboratory is expected to be fully operational by the end of February, 2010, while the Mouse Testing Laboratory will be fully operational by the end of May, 2010.

CORE PERSONNEL

William L. Woolverton, Ph.D., Animal Core Director
Ian A. Paul, Ph.D., Rodent Behavioral Core Director

Xiu Liu, Ph.D., Rodent Behavioral Core Co-Investigator
Emily Nichols, Rodent Behavioral Core Technician

FUNDING SOURCE

Funds for the Rodent Behavioral Core of the Center for Psychiatric Neuroscience (CPN) were awarded by the National Center for Research Resources (NCRR Grant #P20 RR017701) to the University of Mississippi Medical Center (UMC) for its psychiatric neuroscience research program.

ACKNOWLEDGEMENT OF CPN / NCRR SUPPORT

Publications. Publications resulting from research supported by the CPN's Rodent Behavioral Core must acknowledge the Center for Psychiatric Neuroscience (P20 RR017701).

Grant applications. Grant applications including preliminary data supported by the CPN Rodent Behavioral Core must be reported to the CPN Principal Investigator, Dr. Craig Stockmeier. If the grant application receives funding, the awardee must provide written notification of the type and amount of funding to Dr. Stockmeier.

CPN AUTHORSHIP POLICY

Rodent Behavioral Core personnel assist in all aspects of rodent behavioral testing (including design and execution of behavioral tasks as well as data analysis and interpretation), conduct behavioral testing, and in some circumstances may provide rodent tissue samples. Core personnel further provide administrative oversight and ensure all equipment is maintained, serviced and functioning properly.

Core users should send their publication drafts to the Animal and Rodent Behavioral Core Directors for review prior to submitting abstracts or journal publications to societies or journals. Animal and Rodent Behavioral Core Directors and appropriate Core Investigators will automatically be included as co-authors on the first or initial abstract and journal publication resulting from Core expertise and support. Authorship on subsequent publications after the first should be considered and negotiated on an individual basis with the Animal and Rodent Behavioral Core Directors.

COMPLIANCE WITH NIH PUBLIC ACCESS POLICY

NIH Public Access Policy. [NIH Public Access Policy](#) ensures that the public has access to the published results of NIH funded research. It requires scientists to submit final peer-reviewed journal manuscripts that arise from NIH funds to the digital archive [PubMed Central](#) *upon acceptance for publication*. Any publication resulting from CPN support should be submitted to Anne Dautenhahn (amdautenhahn@psychiatry.umsmmed.edu) upon acceptance for publication to ensure compliance with NIH Public Access Policy.

INSTITUTIONAL ANIMAL CARE & USE COMPLIANCE & TRAINING REQUIREMENTS

All Core users will submit and receive protocol approval by the UMC Institutional Animal Care and Use Committee (IACUC) and Dr. Ian Paul (Director, Rodent Behavioral Core) prior to use of the Core. For off-site investigators, a memorandum of agreement must be arranged in advance prior to usage of the facility.

All investigators planning to use the Core (see below) already have IACUC approval for rodent use. Once the Core is ready for use, individual protocols will be modified and approved by the IACUC to include Core testing areas and any additional behavioral tests desired by the individual investigator. All personnel using the Core will receive training from the IACUC in basic animal care and handling.

TESTING AND ASSISTANCE FOR:

- Standard battery screening tests (neurological testing (Irwin Observation Battery), locomotor activity, rotorod), simple pain/sensory testing (tail-flick, hot plate), aggression
- Testing relevant to affective disorders and antidepressant activity (acute – forced swim and tail suspension tests and chronic social defeat, chronic mild/unpredictable stress, learned helplessness)
- Testing relevant to fear and anxiety and anxiolytic activity (Pluz maze, zero maze, marble burying)
- Learning and memory (active/passive avoidance, spontaneous alternation, water maze, Barnes maze)
- Specialized assistance as needed (e.g. Sexual behavior, maternal behavior, social interaction)

BEHAVIORAL TESTING FACILITIES ARE EQUIPPED WITH:

- Overhead video camera + slave computer + Noldus Ethovision (movement tracking)
- Noldus Observer (complex analysis of individual and social behaviors)
- Automex activity monitors + slave computer
- 1 Video camera on tripod
- Elevated Plus, Zero mazes
- Plexiglas observation chambers with mirrors
- 4 Swim test cylinders + dividers
- Tail suspension frame (G-318, mouse only)
- Rheostat-controlled lights
- Sound Meter
- T-maze
- Water maze
- Barnes maze
- 2 Shuttle boxes (G-118, rat only)
- Focused beam nociception apparatus
- Rotorod
- Red lights
- Light meter