### Rodent Behavioral Core - FACILITIES & OTHER RESOURCES

**FACILITIES & OTHER RESOURCES**

**Updated: 1 September 2020**

**Fields Relevant for the Rodent Behavioral Core (RBC)**

**RODENT BEHAVIORAL CORE (RBC)**

The **Rodent Behavioral Core (RBC)**, one of the **Emory Integrated Core Facilities (EICF)**, provides rodent behavioral analysis services. Dr. David Weinshenker is the Scientific Director and Dr. Jason Schroeder is the Core Director who runs the day to day operations and provides services for investigators. The core facility has approximately 1300 sq. ft. of space dedicated to this core within the larger Division of Animal Resources (DAR) facility in the Whitehead Biomedical Research Building. The core space includes three mouse and/or rat testing rooms, and isolated cubicles for particularly sensitive tests. At present, the following items and tests have been developed and validated by the Core and/or the Weinshenker lab:

**Locomotor activity**

1. Novelty-induced locomotor activity

2. Circadian rhythm

**Arousal and attention**

1. Behavioral sleep latency

2. Latent inhibition

**Coordinated movement**

1. Rotarod

2. Grid performance test

3. Automated gait analysis

4. Beam traversal

5. Pole test

6. Abnormal involuntary movements (AIMs) scoring

**Learning and memory**

1. Morris water maze

2. Radial arm maze

3. Y-maze

4. Social memory/discrimination test paradigm

5. Novel Object Recognition

6. Fear Conditioning

**Anxiety/Stress**

1. Elevated plus maze

2. Light/dark box

3. Open field

4. Social defeat

**Depression**

1. Forced swim test

2. Tail suspension test

3. Novelty-suppressed feeding

4. Chronic unpredictable stress

5. Sucrose consumption/preference

6. Social defeat

**Seizure susceptibility**

1. Flurothyl seizure chamber

2. Kanic acid seizures

3. Pentylenetetrazole seizures

4. Bicuculline seizures

5. Audiogenic seizures

6. Electrical kindling

7. Increasing current electroshock seizures

8. Pilocarpine seizures

**Reward/Reinforcement**

1. Drug-induced locomotor activity

2. Drug-induced stereotypy

3. Sensitization

4. Conditioned place preference

5. Oral self-administration

6. Operant drug self-administration and reinstatement

7. Operant drug discrimination

8. Operant cocaine vs. food choice

**Aggression**

1. Resident-intruder aggression

2. Social defeat

**Sensorimotor Gating**

1. Acoustic startle

2. Prepulse inhibition

**General hardware/software**

1. 24 rat operant self-administration chambers (Med Associates) (6 of these are equipped with laser systems for optogenetics – see next line below)

2. 6 OEM 150mW 473nm Laser systems for optogenetics

3. 4 shock generators

4. 24 SDI automated locomotor activity chambers

5. 2 SDI automated conditioned place preference chambers

6. Clever Systems automated MazeScan software

7. Video-EEG electrical seizure apparatus (two Grass S44 stimulators, two Grass SIU5 stimulus isolators, two Grass CCU1 constant current units, oscilloscope)

8. 6 rat cages equipped with running wheels

9. 8 rat cages equipped with removable wire mesh enclosure for social defeat paradigm
10. 6 video cameras

11. 1 IntelliCage system

12. 4 Coulbourn Fear Conditioning Chambers

13. 4 SDI SRI-LAB chambers