### Rodent Behavioral Core - MAJOR EQUIPMENT

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**Updated: 1 September 2020**

**Major Equipment for Rodent Behavioral Core (RBC) Users**

**RODENT BEHAVIORAL CORE (RBC)**

The **Rodent Behavioral Core (RBC)**, one of the **Emory Integrated Core Facilities (EICF)**, provides rodent behavioral analysis services. Major equipment includes:

1. Clever Systems automated MazeScan software (2). This tracking software is used in combination with our multiple mazes and apparatuses. It allows for digital recording and unbiased scoring of behavior. One system is used for tracking mouse behavior and the second is used for tracking rat behavior.

2. Stand-alone rodent enclosures used in combination with the Clever Systems tracking system for animal testing. We have 2 water mazes (1 for mice and 1 for rats), 2 Elevated Plus Mazes (1 for mice and 1 for rats), 2 forced swim test enclosures (1 for mice and 1 for rats), 2 mouse social investigation enclosures, 2 mouse open fields, 1 rat open field, 1 mouse light/dark box, 1 mouse zero maze, 2 rat CPP chambers, 2 mouse Novel Object Recognition enclosures, and 1 mouse Y-maze.

3. Eight Coulbourn Fear Conditioning Chambers (4 for mice and 4 for rats). These systems are equipped with cameras and software for analyzing fear behavior as evidenced by contextual or cued freezing.

4. Six OEM 150mW 473nm Laser systems for optogenetics. These systems can be used in combination with six of our operant chambers or on their own for optogenetic stimulation.

5. Twelve rat operant self-administration chambers (Med Associates) Six of the operant chambers are compatible with laser systems for optogenetics. These chambers allow for investigating a variety of operant behavior including and not limited to food and drug taking and relapse, drug discrimination, as well as responding for optogenetic manipulations.

6. Six mouse operant self-administration chambers (Med Associates). These chambers allow for investigating a variety of operant behavior including and not limited to food and drug taking and relapse, and drug discrimination.

7. 32 SDI automated locomotor activity chambers. These systems measure ambulation and general circadian activity in mice and rats.

8. 4 SDI automated conditioned place preference chambers. These chambers assess conditioned place preference/aversion.

9. 6 rat cages equipped with running wheels.

10. Six video cameras for use in combination with our tracking software or on their own.

11. One IntelliCage system. Up to ten mice can be implanted with transponders to monitor their fluid intake behavior with minimal handling. Multiple measures of operant behavior and fluid intake can be analyzed using this system.

12. Four SDI SRI-LAB chambers. Each unit measures startle behavior as well as pre-pulse inhibition, an animal model of schizophrenia-like behavior.