Some of what we provide:

**BASIC BEHAVIOR**

Stereotaxic injection, an assessment of neurological dysfunction in newly created Tg mice, e.g., we measure body weight, temperature, several neurological reflexes (including pain), tail flick, motor skills and quality, e.g., walking, hanging, etc.

Open Field: videos of behavior in an open field; mice and rats are available.

Elevated Plus maze and Zero maze, video tracking of activity in maze, consisting of 2 open (exposed) and 2 parts with high walls (e.g., walls, anxiety-related).

Porcellini Forced Swim test, rodents are observed while forced to swim in a water filled cylinder.

Hot/Cold Plate, Tail Flick, pain sensitivity.

Visual cliff, testing vision of mice, i.e., will they walk over a lab's edge or not.

Acoustic Startle, a test to measure acoustic startle, a measure of PTSD and other stress disorders (rat and mouse version).

**MOTOR TESTING**

Beam walking, tests motor coordination of mice (or rats) walking on a small beam; many beams available.

Rotarod: an assessment of basic motor skills, both increasing rotations and fixed rotation modes are possible; we have two Rotarods, with up to 16 rats per Rotarod.

Rotometer: an assessment of left/right turning movement in mice (rats) that have received unilateral brain damage.

Automatic Foot misplacement apparatus, the miss-stepping of the mouse on a horizontal ladder is measured (related to beam-walking).

The Montoya staircase test of skilled forelimb reaching in rodents, tests motor coordination (both rat and mouse version available).

Cylinder test, the "preferred" forelimb-reaching of the mouse is observed.

Dynamic weight bearing, the weight placed on each foot of the mouse is measured, motor problems, stroke, etc.

Caterwalk, the stepping pattern of a mouse or rat can be analyzed.

**ACTIVITIES (long term)**

Activity, simple measurement of photobeam breaking, 20 cages.

Improved Activity, video tracking of activity in "home cage". It cage, simple learning and memory can also be measured (prints are available).

Labsys, 8 Cages, mice live in their home cage, the computer tracks activity, eating, drinking, grooming, epilepsy etc.

Running Wheel Cages, mice live in their home cage with a running wheel in it, a computer tracks activity, very good for circadian rhythms.

**COGNITION**

T-maze and Y-maze, testing simple Pavlovian learning skills, such as spontaneous renewal, forced choices, etc.

Figure 8 maze, the maze is used for testing delayed alternation (similar to the T-maze).

Shuttle boxes, testing basic memory skills (Pavlovian learning); either food rewards or shock as stimulus, e.g., passive (active) avoidance, etc.

Object Recognition and Social Recognition, testing memory for objects or traps or combinations/interaction, either mice or rats.

Fear conditioning, pavlovian conditioning using shock and sound, i.e., simple Pavlovian learning and memory tests, both auditory and contextual fear conditioning are possible, and, of course fear extinction.

Acoustic startle, a test to measure acoustic startle, a measure of PTSD and other stress disorders (rat and mouse version).

Water maze, mice learn the location of a hidden escape platform, this task is used to study spatial learning and memory.

Dynamic Weight Bearing, the weight placed on each foot of the mouse is measured, motor problems, stroke, etc.

Caterwalk, the stepping pattern of a mouse or rat can be analyzed.

**EXERCISE**

Forced Running Wheel. 10 mice can be forced to exercise for a defined period of time.

Teerfield, forced exercise, multiple lanes and speeds, fixed speed and increasing speed, incline is possible, shock is available (both mice and rats).

**TELEMETRY**

Blood pressure (direct and indirect), blood pressure can be measured, either directly by implantation of pressure probes/probes, or indirectly by tail cuff.

EEG and/or EMG can be measured with implantable probes, 8 probes.

Heart rate and body temperature, implantable probes measure heart rate and body temperature or only body temperature of mice (and rats), 8 and 6 probes.

**LABORATORY SYSTEM ACTIVITY CHARACTERIZATION**

GaitLab, a software program to detect "themes" in activity or other recorded activity, NOTE: this system is not limited to animals!

ACANALYSIS

Cinchlab, a software program designed to analyze circadian activity.

Sonometrics, a system for measuring ultrasonic vocalizations of rodents, we can record, and, replay the recorded sounds.

Thema, a software program to detect "themes" in activity of other recorded behaviors.

Cinfield, a software program to capture the actograms. Simple video tracking of activity in "home cage", 8 cages, simple learning and memory can also be measured (stimuli are available).

**LABORATORY SYSTEM ACTIVITY CHARACTERIZATION**

Biologic's system, a software program to detect "themes" in activity or other recorded activity, NOTE: this system is not limited to animals!