

## Facilities and Other Resources

### Rodent Behavior Core

The Rodent Behavior Core (RBC) was established to optimize the conduct of rodent behavioral assessments at WVU. This core facility offers a wide array of commonly used rodent behavioral tests designed to assess a range of behavioral phenotypes. The RBC maintains a suite of dedicated behavior testing rooms within the vivarium space of the WVU Health Sciences Center, a short walking distance from animal housing rooms. Tests are permanently set-up within the RBC, allowing for the rapid and reproducible collection of behavioral data. Tests available tap the following domains: anxiety-related behaviors (elevated plus maze, hole board test, light-dark transition test, marble burying, open field, novelty-induced hypophagia, social investigation), depression-related behaviors (differential reinforcement of low rate, Porsolt forced swim test, sucrose preference, tail suspension), drug abuse potential (conditioned place preference, two-bottle choice), nociception (hot plate, tail flick), operant conditioning (food- or liquid-delivering lever-press chambers), sensori/locomotor behaviors (accelerating rotarod, adhesive dot removal, cylinder test, forepaw inhibition, foot fault ladder test, grip strength test, spontaneous locomotion), general neurological/physiological function (health/sickness scale, modified neurological severity score), and spatial and non-spatial cognition, learning and memory (active and passive avoidance, delayed match/non-match to sample, Morris water maze, novel object recognition, radial arm maze). As well, WVU maintains a machine shop and employs a construction expert for the fabrication of custom designed apparatus. All accompanying computer hardware, behavior tracking software (Med Associates, Noldus Ethovision, Stoelting AnyMaze, San Diego Instruments Photobeam Activity System and Avoidance System), and statistical analysis tools (StatView, SPSS, Prism) are contained in the facility and instruction on their use is readily available. The RBC is funded by internal monies awarded to the RBC Director, Dr. Elizabeth Engler-Chiurazzi and to Dr. James Simpkins. Thus, use of equipment and access to expert consultation regarding rodent behavior experiments are available free of charge to all WVU investigators.