

Spontaneous running wheel activity in home cage

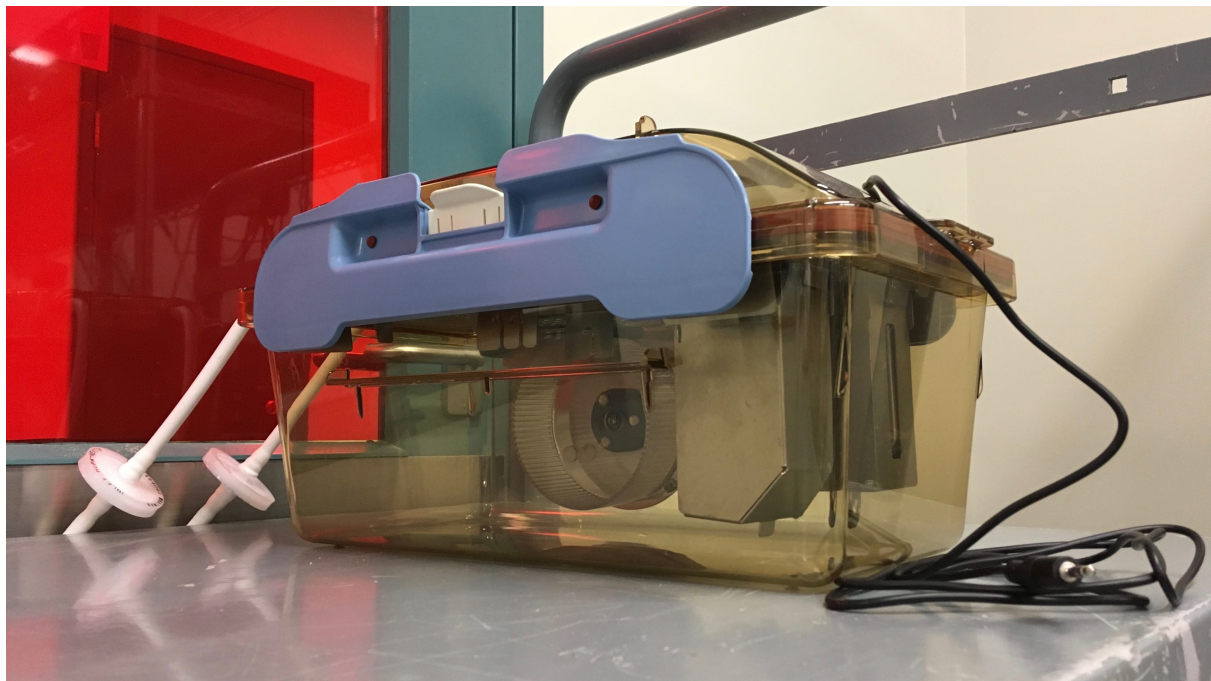
1. Experiment

Mice are housed in cages with trackable wheels to record spontaneous running activity

2. Aim

To measure wheel activity, perhaps to compare sedentary and exercising groups

3. Equipment



16 x HEPA-filtered home cages each contain a running wheel (0297-16, Columbus Instruments) connected to computer software that records wheel distance and speed over a number of days. Each home cage contains a food hopper and water bottle, corn-cob bedding and is connected to filtered air flow of 2000 mL/h.

4. Training requirements

Researchers who need to perform their own monitoring are required to complete adequate training prior to handling the spontaneous wheel cages. Training takes approximately 15 min.

5. Experiment design considerations

- Up to 16 mice can be run at a time
- For preference, mice are housed individually
- If male mice are housed individually for more than 3 nights, they cannot be returned to group housing as they may fight.

6. Monitoring

Mice are required to be monitored once daily whilst in the spontaneous wheel cages. Researchers that have runs over a weekend or public holiday will need to perform their own daily monitoring. For this

reason, only 'Internal' researchers with access to the animal facility can book the spontaneous wheel cages for weekend runs.

7. References

<https://www.colinst.com/products/running-wheels>