

## Mouse voluntary running.v1

### **IMPORTANT!!**

**Never turn off** the “Dataquest” program or the computer. You will disrupt other people’s experiments!!! Please talk to me if you have any questions.

1. House mice in the Voluntary Running Room (Independence Park Facility Room 293) in a dark-light cycle (**7:00 pm off, 7:00 am on**) for 3 days in individual running cages with the running wheels locked by a straightened **large paper clip**.
2. **Connect the cables** between the matrix and the cages.
3. **Log the information** on the running wheel recording book.
4. **Unlock the wheel around 5 pm** on the 3<sup>rd</sup> day and set up the computer monitoring for each of the cages.
5. Double click on the “dog” signs of the designated channels, make sure **the recording interval is 300 second (5’)** and then click “Ok”.
6. Right click on the “dog” signs of the designated channels and click on “**continuous sampling**” to start the recording for the cages.
7. Unlock the wheel by removing the paper clip. Turn the wheel and wait for 5 min to see if the **summary window shows a recorded number** that is reasonable. For example, if you turn 5 times, the recording number should be 1 since  $5 \text{ times} / 5 \text{ min} = 1 \text{ turns/min}$ .
8. **Lock the wheels for 48 hours** before sacrificing the mice if we want to determine the effect of long-term exercise training rather than acute effect of exercise.
9. Stop recording for each of the channels by **right click on the “dog” sign and select “discontinue sampling”**. The information on the summary window for that channel will disappear.
10. After finish your study, **move your data** (only the data specific for your channels) to a new “Running Data” folder in a folder of your own. This will insure that other members could start to use the channels for their studies.

### Calculations for Running Wheel Studies

1. Open Excel application
2. Open your file from Excel
3. Press “Fixed width” in dialog box
4. Press “Next” in dialog box (you should see columns)
5. Press “Finish” on dialog box to get to work sheet
6. Your data should be in columns (if not ask for help)
7. Multiply your raw data by 5 (this gives you rev/ 5 min)
8. Multiply rev/5 min by 0.357 (wheel circumference) (this gives you meters/5min)
9. Sum the meters/5min over 24 hour increments (this gives you meters/day)