Details on behaviour analysis for Tennant et al (2018)

# RAW DATA FOR BEHAVIOURAL EXPERIMENTSParsed raw data files for behavioural experiments (HDF5 format) can be found under Data\_Input>Behaviour\_DataFiles.HD5F format files:The following information applies to all parsed raw datafiles used for behavioural analysis for the Tennant et al (2018) paper in cell reports.Datafiles are organised as follows according to column number in raw datafile:0: Time from start of session (seconds)1: Location (virtual units (1-20)) \*2: Speed (cm/second)3: Speed (cm/second)4: Reward (Yes/No) (1/0)5: Licks (Yes/No) (1/0)6: Start of reward zone (9)7: End of reward zone (11)8: Trial type (beaconed/non-beaconed/probe: 0/10/20) \*\*9: Trial number# RAW DATA FOR BEHAVIOURAL EXPERIMENTS# FIGURE 1Experiment details:Task 13:Experimental mice: 1,2,3,5Control mice: 4,6,7,8,9Training days: 1-22Task 12:Experimental mice: 1,2,3,4,5Control mice: 6,7,8Training days: 1-22Note: Experimental mice had no expression in Task13Note: Experimental mice had expression in all Cre+ neurons in Task12 (i.e. in CA1, MEC L2, MEC L5, Sub)# FIGURE 2Experiment details:Task 12:Mice with 0.5x gain modulation: 1,4,6,7,8Training days with gain modulation: 31-35 (mice are not staggered)Task 18:Mice with 2x gain modulation: 6Training days with gain modulation: 15-46 Task 19:Mice with 2x gain modulation: 2,7,13Training days with gain modulation: 15-46 (mice are staggered)# FIGURE 3Experiment details:Task 18:Mice with increasing track lengths: 1,5Training days with increasing track lengths: 0 - 20Task 19:Mice with increasing track lengths: 3,6,7,8,9 Training days with increasing track lengths: 1 - 46# FIGURE 5Experiment details:Task 15GFP expressing mice : 1,3,4,10Mice with low TeLC expression: 5,8,10Mice with high TeLC expression: 2,6,7,9Training days: 1-22Task 15bGFP expressing mice : 4,5Mice with low TeLC expression: 1,2,3Training days: 1-19 \*\*\*\*# FIGURE 6See spreadsheet in RawData\_ExplorationTasks for details of experiment. 16 mice in total, all Sim1Cre, 8 males, 8 females. 8 with TeLC expression, 8 with GFP expression - virus was counterbalanced according to gender. """# NOTES:\* There is an observed discrepancy between location along the virtual track and location on the treadmill by approximately 2 cm. I.e mouse appears in virtual space (in data, on computer when VR is running) approx. 2cm more forward than on the treadmill (on the torus screen). Therefore 0.2 virtual units (i.e. 2 cm) is added to all location values.\*\* There is an error in trial incrimination in raw data for the following experiments: Task 12, Task 13. In these datafiles, trial number is incremented when the animal leaves the reward zone instead of when the animal begins a new track/trial. To amend this, a short function (maketrialarray) was written to rewrite the trial number for each row in the HDF5 datafile. This function was tested (Functions\_Core\_0100\_test) and corrects the previous error in trial incrimination.\*\*\* Mouse became 1 ill after two training days into final training week : was marked with a food deprivation score of 2, so showed mild signs of food deprivation. Was fed some food before training but was not able to perform in the task as usual. Therefore training days after - are not analysed. This is mentioned in the methods of Tennant et al, 2018. \*\*\*\* Only training days till 19 are analysed for both Task 15 and 15b as task 15b ran for less days."""