

Thoughts about pre-emptive pumping

The freely moving foraging experiments lead to a possible difficulty: How to discriminate 'preemptive' pumping from normal exploration and how to work with the gradual changes seen in the population averages?

To me, it appears that the most helpful way would be to look at cumulative pumps, which also tend to be much less noisy than other measures. We should fit the mean rate far away from the lawn (how far?) and define the start of preemptive pumping as the first time the animal upregulates its rate.

Additionally, we should plot the populations as a function of distance to establish the connection between smell ($1/r^{**2}$) and pumping, rather than the (bad) proxy of time.

Gain of function

Jun had a good idea to add a gain of function mutant into the line-up. If we see earlier pumping we could confirm that it is sensory if we have eg. a diacetyl-gain of function mutant.

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Last update: 2020/06/22 00:10

