

Seminar Announcement

Stress, Dark Chocolate, Obstructed Memory and Finding Lost Memory

Date: 13 September 2019
Time: 10.30 a.m.
Venue: Classroom 4, SBS
Hosted By: A/P Ajai Vyas

Ecologically relevant stressors can both enhance and at other times suppressing learning, memory formation or recall. We examine how this happens in our model system the pond snail, *Lymnaea stagnalis*. Helpful to us is that some *Lymnaea* strains innately form memory better than other strains and we can use this in an attempt to discover the cost of being smart. One cost appears to be an inability to deal with stress as regards long-term memory (LTM) formation; especially if those stressors lead to an emotional memory. Yes, snails can make an emotional memory. I will attempt to show that in the smart snails, LTM may have formed but memory recall is blocked. This is novel as most often this is thought not to happen to non-declarative memory. I will also try to address the problem of how instinct is encoded into the nervous system. Again, we are fortunate in that there are some *Lymnaea* strains that are Predator-Experienced while others are Predator-Naive. That is some strains innately respond to a crayfish predator whilst other strains do not. We are following this in a series of ponds that are undergoing an invasion of a crayfish predator. Finally, substances in foods such as dark chocolate will be shown to enhance LTM formation or to even reverse blockade of learning and memory by certain stressors.

