



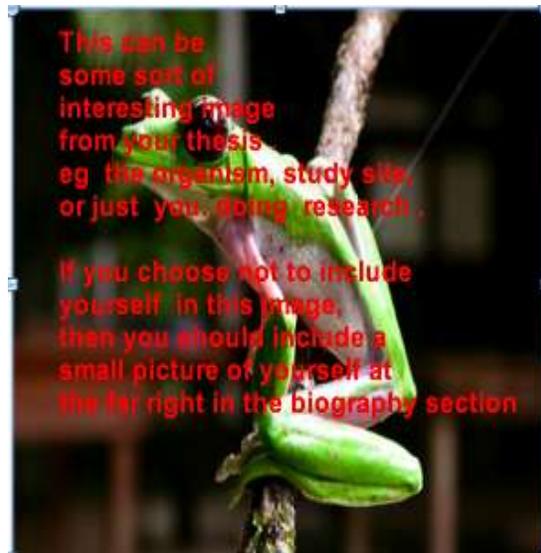
Biology @ Acadia

BUGS AND DRUGS: THE EFFECTS OF OCTOPAMINE ON THE SENSITIVITY OF FEMALE ORNS TO THEIR OWN SEX PHEROMONE IN *HELIOTHIS VIRISCENS* *(Arial or Helvetica 16 point bold caps) (space)*

Kavanaugh, Rhys, Dr Kirk Hillier *(16 point, student name only in bold)*
 Department of Biology, Acadia University, Wolfville, NS *(14 point)*
(Space)

(Body of abstract - 12 point Arial or Helvetica - For this year, everything is directly from your biofeedback abstract)

Octopamine is a very important neurohormone, neuromodulator and neurotransmitter in invertebrates. Octopamine increases male moth sensitivity to female sex pheromones, however, relatively little is known as to the role of octopamine (if any) in the female olfactory system. Hillier and Vickers (2006) demonstrated that female *H. virescens* moths detect their own sex pheromone, despite demonstrating sexual dimorphism in their antennal sensilla. In addition, female sex pheromone detecting olfactory receptor



neurons target a centrally located large glomerulus at the base of the antennal nerve named the central large female glomerulus (cLFG) which appears to be analogous to the macroglomerular complex in male moths. The purpose of this study was to determine whether octopamine increases sensitivity of female olfactory receptor neurons to their own pheromone. Studies in this area will reveal more information on the emergence and degree of sexual dimorphism in *H. virescens* and may be used in pest control development. Extracellular recordings were made from female moths both injected and not injected with octopamine. Moths were restrained in a plastic tube and positioned horizontally on a microscope slide. Antenna were fastened and observed under compound microscope. The distal 20% of sensilla were cut using a piezo crystal cutter and a glass electrode was used to record signals directly from the sensilla.

(VIP- line up edges of your photos with edge of text - format images as "square" in format) - be sure to compress your images to manageable size!!!! Leave one space after text)

Rhys Kavanaugh graduated from (high school name) in (city or town and province or state or country) in (year). Rhys is currently completing his Honours thesis in his fourth year Biology at Acadia. *Other activities you want to mention- that would aid in recruiting? Perhaps list any major awards you received while at Acadia. Briefly describe - future plans. This all should be written in the third person, as if someone else was writing it. Space is limited!!!!*



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