

Aaron T. Haselton
State University of New York at New Paltz
Department of Biology
Assistant Professor

Education:

Degree	Date	Institution	Major
Ph.D.	2005	University of Massachusetts Amherst	Entomology
M.S.	2001	University of Massachusetts Amherst	Entomology
B.S.	1997	University of Massachusetts Amherst	Biology

Dissertation Title and Description:

“Myotropic peptide hormones and serotonin in the regulation of feeding in the adult blow fly, *Phormia regina*, and the adult horse fly, *Tabanus nigrovittatus*”

For my dissertation work, I investigated the involvement of several classes of myoactive neuropeptides and the biogenic amine serotonin in the regulation of feeding in insects. I was able to immunolocalize and characterize the occurrence of these neuromessengers throughout the central and stomatogastric nervous systems and alimentary tracts in two model insects, the blow fly, *Phormia regina*, and the blood-feeding horse fly, *Tabanus nigrovittatus*. I also studied the effects of myotropic neuropeptides on gut motility in *P. regina* *in situ* and *in vitro* and the effects of the serotonin depleter, α -methyltryptophan, on blood-feeding in *T. nigrovittatus*. My results demonstrated that feeding behavior and nutrient processing are under the control of the activities of a constellation of neuromessengers that are produced by specialized cells in the nervous system and in the alimentary tract. The act of feeding triggers a neurohormonal cascade in these insects that, through the control of gut musculature, results in the proper delivery of nutrients to appropriate regions of the digestive tract at appropriate times. Simultaneously, many of these released neuromessengers serve as systemic hormones that regulate other unidentified aspects of physiology and behavior.

Professional Experience:

August 2006 – Present, Assistant Professor, State University of New York at New Paltz, New Paltz, NY, Assistant Professor of Biology, 1.0.

October 2005 – July 2006, Postdoctoral Researcher, Brown University, Providence, RI, Postdoctoral Research Associate in the laboratory of Stephen Helfand in the Department of Molecular Biology, Cell Biology, and Biochemistry, 1.0.

June 2004 – September 2005, Postdoctoral Researcher, University of Connecticut Health Center, Farmington, CT, Postdoctoral Research Associate in the laboratory of Stephen Helfand in the Department of Genetics and Developmental Biology, 1.0.

February 1999 – May 2004, Graduate student researcher, University of Massachusetts Amherst, Amherst, MA Graduate Research Assistant in the laboratory of John Stoffolano in the Department of Entomology, 1.0

August 1995 - January 1999, Research Assistant, University of Massachusetts Amherst, Amherst, MA, Research Assistant in the laboratory of Professor Lynn Margulis, 0.5 and 1.0.

Fellowships and Awards:

Summer Undergraduate Research Experience Award, 2008

Summer Undergraduate Research Experience Award, 2007

University of Massachusetts Graduate School Fellowship, 2002-2003 academic year

Hughes Undergraduate Research Award, 1996-1997 academic year

Publications:

Journal Articles:

Haselton, A.T., Downer, K.E., Zylstra, J., Stoffolano, J.G., Jr., Serotonin inhibits protein feeding in the Blow Fly, *Phormia regina* (Meigen). *Journal of Insect Behavior*, in review.

Haselton A.T., Yin, C.-M., Stoffolano, J.G., Jr., FMRFamide-like immunoreactivity in the central nervous system and alimentary tract of the non-hematophagous blow fly *Phormia regina* and the hematophagous horse fly *Tabanus nigrovittatus*. *Journal of Insect Science*, in review.

Downer, K., **Haselton, A.T.**, Nachman, R.J., Stoffolano, J.G., Jr., 2007. Insect satiety: sulfakinin localization and the effect of drosulfakinin on protein and carbohydrate ingestion in the blow fly, *Phormia regina* (Diptera: Calliphoridae). *Journal of Insect Physiology*, 53, 106-112.

Haselton, A.T., Yin, C.-M., Stoffolano, J.G., Jr., 2006. The effects of *Calliphora vomitoria* Tachykinin-I and the FMRFamide-related peptide Perisulfakinin on female *Phormia regina* crop contractions, in vitro. *Journal of Insect Physiology*, 52, 436-441.

Haselton, A.T., Yin, C.-M., Stoffolano, J.G., Jr., 2006. Occurrence of serotonin immunoreactive cells and processes in the central nervous system and midgut of the horse fly, *Tabanus nigrovittatus* (Diptera: Tabanidae). *Journal of Medical Entomology*, 42, 252-257.

Haselton, A.T., Stoffolano, J.G., Jr., Nichols, R., Yin, C.-M., 2004. Peptidergic innervation of the crop and the effects of an ingested nonpeptidal agonist on longevity in female *Musca domestica* (Diptera: Muscidae). *Journal of Medical Entomology*, 4, 684-690.

Feinberg, L., Jorgensen, J., **Haselton, A.**, Pitt A., Rudner, R., Margulis, L., 1999. *Arthromitus (Bacillus cereus)* symbionts in the cockroach *Blaberus giganteus*: dietary influences on bacterial development and population density. *Symbiosis*, 27, 109-123.

Guerrero, R., **Haselton, A.**, Solé, M., Wier, A., Margulis, L., 1999. *Titanospirillum velox*: A huge, speedy, sulfur-storing spirillum from Ebro Delta microbial mats. *Proceedings of the National Academy of Sciences*, 96, 11584-11588.

Jorgensen, J., Dolan, S., **Haselton, A.**, Kolchinsky, R., 1997. Isolation and cultivation of spore-forming filamentous bacteria from *Porcellio scaber*. *Canadian Journal of Microbiology*, 43, 129-135.

Books:

Margulis, L., Matthews, C., **Haselton, A.**, eds. Environmental Evolution: Effects of the Origin and Evolution of Life on Planet Earth. Cambridge, MA: MIT Press, 2000.

Works in Progress:

The effects of diet and aging on circadian activity patterns in *Drosophila melanogaster*.

Alimentary function and ingested meal destination in *Drosophila melanogaster*.

Aaron Haselton

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