

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

**Education:**

<b>Degree</b>	<b>Date</b>	<b>Institution</b>	<b>Major</b>
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*”

My dissertation investigated specific aspects of the neuroendocrine regulation of feeding in the blow fly *Phormia regina*, and the horse fly, *Tabanus nigrovittatus*. My findings demonstrated that feeding behavior and nutrient processing are under the control 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:

- 2011 Fall Semester SUNY New Paltz Academic Year Undergraduate Research Experience (AYURE) Award with Preeti Dhar, Chemistry (\$750)
- 2011 SUNY New Paltz Summer Undergraduate Research Experience (SURE) Award with Ken Nystrom, Anthropology (\$4,300)
- 2011 Student Computing Access Program (SCAP) Award to expand and upgrade Animal Physiology Laboratory research stations (\$20,684)
- 2010 Fall Semester SUNY New Paltz Academic Year Undergraduate Research Experience (AYURE) Award with Preeti Dhar, Chemistry (\$750)
- 2010 Louis Stokes Alliance for Minority Participation/Collegiate Science & Technology Entry Program (AC<sup>2</sup>) Summer Research Program Award (\$6,250)
- 2010 National Science Foundation NSF MRI Grant, Title: Acquisition of an RT-PCR system for research in cell biology, physiology, protein biochemistry, supramolecular chemistry and anthropology at New Paltz College, Co-PI on proposal (\$42,000)
- 2009-2011 Merck/AAAS Undergraduate Science Research Program Award (as a co-PI/Participating Faculty) (\$60,000)
- 2009-2010 Provost's Research Award, SUNY New Paltz (\$10,000)
- 2009 Evolutionary Studies Program Internal National Science Foundation Grant to support collaborative research and course development (\$2,250)
- 2009 SUNY New Paltz Summer Undergraduate Research Experience (SURE) Award with Preeti Dhar, Chemistry (\$4,300)
- 2008 SUNY New Paltz Summer Undergraduate Research Experience (SURE) Award (\$3,900)
- 2007 SUNY New Paltz Summer Undergraduate Research Experience (SURE) Award (\$3,900)
- 2002-2003 University of Massachusetts Graduate School Fellowship
- 1996-1997 Hughes Undergraduate Research Award

## Publications (Journal Articles – Undergraduate co-authors underlined):

**Haselton, A. T.** and Dinsmore, J. E. The effects of dietary history on post-starvation re-feeding in *Drosophila melanogaster*. Manuscript in preparation for submission to the Journal of Insect Physiology.

**Haselton, A. T.**, Dhar, P., Acevedo, A., Kuruvilla, J., and Werner, E. Repellency of  $\alpha$ -pinene against the house fly, *Musca domestica* (Diptera: Muscidae). Journal of Medical Entomology. In review.

**Haselton, A. T.**, Halpern, R., Vinson, R., and Klein, R. 2011. Effects of nutrition on lifelong sleep and activity patterns in *Drosophila melanogaster* (Diptera: Drosophilidae). Annals of the Entomological Society of America 104: 749-760.

**Haselton, A. T.**, Fridell, Y-W. C. 2011. Insulin injection and hemolymph extraction to measure insulin sensitivity in adult *Drosophila melanogaster*. Journal of Visualized Experiments 52: e2722 (2011).

**Haselton, A. T.**, and Fridell, Y-W. C. 2010. Adult *Drosophila melanogaster* as a model for the study of glucose homeostasis. Aging 2: 1-4.

**Haselton, A. T.**, Sharmin, E., Schrader, J., Sah, M., Poon, P., Fridell, Y-W. C. 2010. Partial ablation of adult *Drosophila* insulin-producing neurons modulates glucose homeostasis and extends life span without insulin resistance. *Cell Cycle* 9: 3063-3071.

**Haselton, A.T.**, Downer, K.E., Zylstra, J., Stoffolano, J.G., Jr. 2009. Serotonin inhibits protein feeding in the Blow Fly, *Phormia regina* (Meigen). *Journal of Insect Behavior* 22: 452-463.

**Haselton A.T.**, Yin, C.-M., Stoffolano, J.G., Jr. 2008. 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* 8: 1-17.

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.

### **Publications (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.

### **Invited Talks**

Carbohydrate Homeostasis in the fly, *Drosophila melanogaster*. Hudson Valley Life Sciences Symposium, Bard College, May 2011.

Diet, Sex, and Aging for Supermodels (Supermodel Organisms, that is). Evolutionary Studies Seminar Series, State University of New York at New Paltz. April 2009.

Eating and Aging: Lessons from the Diptera. Department of Plant and Soil Sciences Entomology Division, University of Massachusetts Amherst. May 2008.

**Presentations (Undergraduate co-presenters underlined):**

Influence of dietary conditioning on territorial aggression in male *Drosophila melanogaster*. Jannett E. Dinsmore and Aaron T. Haselton. Entomological Society of America Annual Meeting, Reno, NV, November 2011.

The repellency of pinenes against the house fly, *Musca domestica* (Diptera: Muscidae). Eric Werner, Jacob Kuruvilla, Preeti Dhar, and Aaron T. Haselton. Entomological Society of America Annual Meeting, Reno, NV, November 2011.

Paleoparasitological analysis of Pelvis Soil Samples from a Historic Cemetery in Newburgh, NY. Summer Undergraduate Research Experience Symposium. Lauren Piven, Kenneth Nystrom, and Aaron Haselton. SUNY New Paltz Summer Undergraduate Research Experience Presentations, September 2011.

The repellency of pinenes against the house fly, *Musca domestica*. Eric Werner, Jacob Kuruvilla, Preeti Dhar, Aaron T. Haselton. National Council on Undergraduate Research, Ithaca, NY, April 2011.

Insecticidal properties of *Terminalia arjuna* against *Drosophila melanogaster*. Preeti Dhar, Aaron T. Haselton, Miles Marnell, Yan Li. National Meeting of the American Chemical Society, Anaheim, CA, March 2011; the 19<sup>th</sup> Annual State wide C-STEP student conference, Lake George, NY, April 2011.  
**Won First prize.**

Midgut involvement in nutrient detection leading to oogenesis in *Drosophila melanogaster*. Olivia Gliserman and Aaron Haselton. Entomological Society of America Annual Meeting, San Diego, CA, December 2010.

Effects of adipokinetic hormone on crop function in *Drosophila melanogaster*. Aruna Puthota, Leila Crisson, and Aaron Haselton. SUNY New Paltz Student Research Symposium, April 2010.

Developmental delays in *Musca domestica* due to DEET and the impact on the reconstruction of the post-mortem interval. Hana Akimoto, Kenneth Nystrom, and Aaron Haselton. SUNY New Paltz Student Research Symposium, April 2010.

Repellency of Pinenes Against the House Fly, *Musca domestica*. Angela Acevedo, Hannah Lewis-Rosenblum, Preeti Dhar, and Aaron T. Haselton. Entomological Society of America Annual Meeting, Indianapolis Indiana, December 2009; Hudson Valley Life Sciences Group Symposium, SUNY New Paltz, April 2010.

Buzz worthy: alpha pinene derivatives and *Musca domestica*. Angela Acevedo, Aaron Haselton, and Preeti Dhar. Hudson Valley Life Sciences Group Symposium, Vassar College, May 2009; SUNY New Paltz Student Research Symposium, May 2009.

The Effects of Dietary Regime on Post-starvation Feeding in *Drosophila melanogaster* Jannett Dinsmore and Aaron Haselton. Entomological Society of America's Eastern Branch Annual Meeting, Harrisburg, PA, March 2009.

Changes in activity/sleep patterns of *Drosophila* due to dietary control. Ryan Vinson, Richard Halpern, and Aaron Haselton. SUNY New Paltz Summer Undergraduate Research Experience Presentations, September 2008.

Post-starvation prandial behavior in the fruit fly. Jannett Dinsmore and Aaron Haselton. SUNY New Paltz Summer Undergraduate Research Experience Presentations, September 2008.

Effects of diet and aging on circadian activity patterns in *Drosophila melanogaster*. Regina Klein and Aaron Haselton. Hudson Valley Model Organisms Group, Vassar College, February 2008.

### **Works in Progress:**

Nutrient-mediated neuroendocrine signaling in *Drosophila melanogaster*.

The influence of nutrition on behavior in *Drosophila melanogaster*.

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

Neurohormonal involvement in sleep and activity in *Drosophila melanogaster*.

Carbohydrate metabolism and alimentary function in the house fly, *Musca domestica*.

Behavioral physiology underlying the repellent effects of  $\alpha$ -pinene and related derivatives on the house fly, *Musca domestica* - In collaboration with Dr. Preeti Dhar in the Department of Chemistry.

Aaron Haselton

November 1, 2011

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