

## Haruhiko Itagaki

### CURRICULUM VITAE

## Haruhiko (Harry) Itagaki

Professor  
Department of Biology  
Kenyon College  
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## Education

1975-79 Yale University, B.S. Biology (1979)  
1980 Marine Biological Laboratory (Neural Systems and Behavior Course)  
1979-84 Duke University, Ph.D. Zoology (1984)  
Dissertation Title: Physiological control of sex pheromone release behavior in the moths  
*Manduca sexta* (Sphingidae) and *Utetheisa ornatrix* (Arctiidae).  
1985 Marine Biological Laboratory (Neurobiology Course)

## Academic Appointments

### Present Position

2003- Professor of Biology, Kenyon College, Gambier, OH

### Previous Positions

1996-03 Associate Professor of Biology, Kenyon College, Gambier, OH  
1990-96 MacArthur Assistant Professor of Biology, Kenyon College, Gambier, OH  
1986-90 Research Associate, Arizona Research Laboratories, Division of Neurobiology,  
University of Arizona  
1984-85 Research Associate, Department of Anesthesiology, College of Medicine,  
University of South Alabama

## Teaching Experience

### Kenyon College

1990-2020 BIOL 113/115 Introductory Biology: From Cell to Organism/ Energy in Living  
Systems  
BIOL 109,110 Introduction to Experimental Biology  
BIOL 41,42 Animal Physiology and Laboratory  
NEUR 112 Introduction to Neuroscience  
NEUR 471 Current Research Topics in Neuroscience  
BIOL 266/267 and 366/367 Cell Biology and Laboratory  
BIOL 358/359 Neurobiology and Laboratory  
BIOL 385/386 Research in Biology Seminar  
BIOL 95/96, 497/498 Junior and Senior Honors Seminar

## **Haruhiko Itagaki**

BIOL 470 Senior Capstone Seminar: Size and Scaling in Biological Systems

BIOL 475 Senior Seminar

### **Selected External Grants**

2008-13 NSF Undergraduate Biology and Mathematics Grant (# UBM-0827208)  
Title: Investigating the Mathematical Biology of Metabolic Scaling using Manduca InSTaRs  
(Interdisciplinary Science Training and Research) Co-PI with A. Kerkhoff, C. Gillen, B. Hartlaub  
and J. Holdener (\$236,410)

1996-01 NSF Research at Undergraduate Institutions Grant (#IBN-9630943) Title:  
Central processing of gustatory information in flies. PI (\$171,954)

1998-01 NSF Instrumentation and Laboratory Improvement Grant (USE#-9850614)  
Title: Tissue culture core facility and equipment for investigative experiments in cell biology for  
the undergraduate curriculum. Co-PI with D. Marcey, C. Gillen and E. Ottinger. (\$36,882)

1993-96 NIH-AREA Grant (#R15-DC01939-01) Title: Central projections of taste-  
specific gustatory neurons. PI (\$100,828)

1991-93 NSF Instrumentation and Laboratory Improvement Grant (#USE-9152088)  
Title: Instrumentation for undergraduate neurobiology laboratory. PI (\$20,230)

### **Selected Awards, Honors, and Fellowships**

2008 Faculty Distinguished Service Award, Kenyon College

2000 Robert J. Tomsich Science Award, Kenyon College

1995 Trustee's Teaching Award for Junior Faculty, Kenyon College

1987-90 NIH Postdoctoral Fellowships (NRSA #2 F32 NS07990-01 and 03)

Title: Chemosensory information processing in caterpillars.

1980-83 NSF Graduate Fellowship

### **Professional Societies**

American Association for the Advancement of Science

Council for Undergraduate Research

Faculty for Undergraduate Neuroscience

International Society for Neuroethology

Sigma Xi

Society for Integrative and Comparative Biology

### **Research Interests**

Metabolic scaling relationships and their underlying mechanisms

Parasitic induction of host behavior

Neuroethology

Chemosensory processing in the central nervous system

### **Reviewer for Journals and Granting Agencies**

*Animal Behaviour*, *Biotropica*, *Canadian Journal of Zoology*, *Cell and Tissue Research*, *Journal of Comparative Neurology*, *Journal of Comparative Physiology A*, *Journal of Experimental*

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*Biology, Journal of Insect Physiology*, National Science Foundation (also served as panel member three times), *Naturwissenschaften*, *PLOS One*, Swiss National Science Foundation, U.S.D.A. Competitive Research Grants Office

### Selected Service to Kenyon College

Chair, Department of Biology, 1999-2003, 2019-Present  
Chair, Health Professions Advising Committee, 1998-2003, 2004-2013; Member, 2013 – 2017  
Co-Chair, Dept. of Neuroscience, 2012-2015  
Member, Academic Standards Committee, 2009-10, 2011-2013  
Chair, Grievance Committee, 2007- 2008 (Member 2006-2008)  
Faculty Marshal, 2005-2007, 2018-19  
Chair, Faculty Lectureships Committee, 2001-2003 (Member, 1996-1997; 2004-2006)  
Member, Academic Infractions Board, 1991-1997, Fall 2002

### Selected Publications (\* indicates Kenyon Student)

Petersen, S.C., J.M. McMahon, H.G. McFarlane, C.M. Gillen, H. Itagaki (2020) Mini-Review: Teaching Writing in the Undergraduate Neuroscience Curriculum: Its Importance and Best Practices. *Neur. Lett.* (In Press)

Itagaki, H. (2013) The use of mock NSF-type grant proposals and blind peer review as the capstone assignment in upper-level neurobiology and cell biology courses. *J. Undergrad. Neurosci. Educ.* 12:A75-A84.

Sears, K.E.\*, A.J. Kerkhoff, A. Messerman\* and H. Itagaki (2012) Ontogenetic scaling of metabolism, growth, and assimilation: testing metabolic scaling theory with *Manduca sexta* larvae. *Physiol. Biochem. Zool.* 85:159-173.

Gillen, C.M, C.R. Blair\*, N.R. Heilman\*, M. Somple\*, M. Stulberg\*, R. Thombre\*, N. Watson\*, K.M. Gillen and H. Itagaki (2006) The cation-chloride cotransporter, masBSC, is widely expressed in *Manduca sexta* tissues. *J. Insect Physiol.* 52:661-668.

Wasserman, S.L.\* and H. Itagaki (2003) The olfactory responses of the antenna and maxillary palp of the fleshfly, *Neobellieria bullata* (Diptera: Sarcophagidae), and their sensitivity to blockage of nitric oxide synthase. *J. Insect Physiol.* 49:271-280.

Mitchell, B., H. Itagaki and M.-P. Rivet (1999) Peripheral and central structures involved in insect gustation. *Microscop. Res. Tech.* 47:401-415.

Sheridan, S.L.\*, K.A. Iversen\* and H. Itagaki (1996) The role of chemical senses in seed-carrying behavior by ants: A behavioral, physiological, and morphological study. *J. Insect Physiol.* 42:149-159.

Christensen, T.A., H.K. Lehman, P.E.A. Teal, H. Itagaki, J. Tumlinson and J.G. Hildebrand (1992) Diel changes in the presence and physiological actions of octopamine in the female sex pheromone glands of Heliothine moths. *Insect Biochem. Mol. Biol.* 22:841-849.

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Mitchell, B.K. and H. Itagaki (1991) Physiology and morphology of gustatory interneurons in the subesophageal ganglion of the fleshfly *Sarcophaga bullata*. J. Comp. Physiol. A 171:213-230.

Christensen, T.A., H. Itagaki, P.E.A. Teal, R. Jasensky, J.H. Tumlinson and J.G. Hildebrand. (1991) Neural regulation of the sex pheromone gland in female *Heliothis* moths. Proc. Nat. Acad. Sci. USA 88:4971-4975.

Itagaki, H. and J.G. Hildebrand (1990) Olfactory interneurons in the brain of the larval tobacco hawkmoth, *Manduca sexta*. J. Comp. Physiol. A 167:309-320.