

**Gregory K. Davis**  
*Curriculum Vitae*

Department of Biology  
Bryn Mawr College

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**EDUCATION**

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- 2002 Ph.D. in Developmental Biology, Committee on Developmental Biology, University of Chicago  
Thesis title: The changing role of Pax3/7 genes and the evolution of segmentation  
*Committee Award for achievement in developmental biology*  
Advisor: Nipam H. Patel
- 1995 M.A. in History and Philosophy of Science, Department of History and Philosophy of Science,  
University of Pittsburgh  
Advisor: James G. Lennox
- 1992 B.S. in Biology and Philosophy (double major), Duke University  
*Magna Cum Laude, Phi Beta Kappa, Phi Eta Sigma*  
Certificate in Women's Studies

*Summer Seminars & Courses (at the Marine Biological Laboratory, Woods Hole)*

- 2001 From Embryology to EvoDevo, Dibner Seminar in the History of Biology
- 1997 Embryology (6-week course)
- 1994 Mass Extinction, Dibner Seminar in the History of Biology

**RESEARCH EXPERIENCE**

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- 2008- pres. Assistant Professor, Department of Biology, Bryn Mawr College
- 2002-2008 Visiting Research Fellow, Dept. of Ecology and Evolutionary Biology, Princeton University
- Investigated *Drosophila* evolution and aphid polyphenism in laboratory of David L. Stern
- 1996-2002 Graduate Student, Committee on Developmental Biology, University of Chicago
- Investigated evolving role of pax3/7 genes in laboratory of Nipam H. Patel
- 1992-1993 Luce Scholar, Institute for Biomedical Sciences, Academia Sinica, Taipei, Taiwan
- Investigated vocalization response of PAG in neurophysiology laboratory of C. Y. Chai
- 1991 Laboratory Technician, Duke University Medical Center, Durham, North Carolina
- Worked in electron microscopy laboratory of J. D. Robertson investigating morphological changes associated with learning and memory in octopus
- 1990 Independent Study, Duke University Marine Laboratory, Beaufort, North Carolina
- Investigated learning and memory in octopus in laboratory of J. D. Robertson
- 1988-1989 Laboratory Technician, Duke University Primate Center, Durham, North Carolina
- Assisted in husbandry of captive lemurs
  - Prepared and made casts of primate fossils in laboratory of P. J. Chatrath

**PUBLICATIONS** (\* denotes shared first authorship)

- Frankel, N, **Davis, GK**, Vargas, D, Wang, S, Payre, F and DL Stern (2010) Phenotypic robustness conferred by apparently redundant transcriptional enhancers. *Nature* 466: 490-493.
- Huang, TY, Cook, CE, **Davis, GK**, Shigenobu, S, Chen, RPY and CC Chang (2010) Anterior development in the parthenogenetic and viviparous form of the pea aphid *Acyrtosiphon pisum*: *hunchback* and *orthodenticle* expression. *Insect Molecular Biology* 19: 75-85.
- Shigenobu, S, Bickel, RD, Brisson, JA, Butts, T, Chang, CC, Christiaens, O, **Davis, GK**, Duncan, E, Janssen, R, Ferrier, DEK, Lu, HL, McGregor, AP, Miura, T, Smagghe, G, Smith, J, van der Zee, M, Velarde, R, Wilson, M, Dearden, P and DL Stern (2010) Comprehensive survey of developmental genes in the pea aphid, *Acyrtosiphon pisum*: frequent lineage-specific duplications and losses of developmental genes. *Insect Molecular Biology* 19: 47-62.
- International Aphid Genomics Consortium (2010) Genome Sequence of the Pea Aphid *Acyrtosiphon pisum*. PLoS Biol 8(2): e1000313.
- Davis, GK\***, Dietrich, MR\* and DK Jacobs (2009) Homeotic Mutants and the Assimilation of Developmental Genetics into the Evolutionary Synthesis, 1915-1952, in Cain, J and M Ruse (Eds.), *Descended From Darwin*, American Philosophical Society, Philadelphia, pp. 133-154. (*Transactions of the American Philosophical Society* 99(1): 133-154.)
- Brisson, JA and **GK Davis** (2008) Pea aphid, in Hunter, WB and C Kole (Eds.), *Genome Mapping and Genomics in Arthropods*, Springer, Berlin and Heidelberg, pp. 59-65.
- Davis, GK**, Srinivasan, D, Wittkopp, PJ and DL Stern (2007) The function and regulation of *Ultrabithorax* in the legs of *Drosophila melanogaster*, *Developmental Biology* 308: 621-631.
- Brisson, JA\*, **Davis, GK\*** and DL Stern (2007) Common genome-wide patterns of transcript accumulation underlying the wing polyphenism and polymorphism in the pea aphid, *Evolution & Development* 9: 338-346.
- Braendle, C, **Davis, GK**, Brisson, JA and DL Stern (2006) Wing dimorphism in aphids. *Heredity* 97: 192-9.
- Wilson, ACC, Dunbar, HE, **Davis, GK**, Hunter, WB, Stern, DL, and NA Moran (2006) A dual-genome microarray for the pea aphid, *Acyrtosiphon pisum*, and its obligate bacterial symbiont, *Buchnera aphidicola*. *BMC Genomics* 7: 50.
- Davis, GK**, D'Alessio, JA and NH Patel (2005) Pax3/7 genes reveal conservation and divergence in the arthropod segmentation hierarchy, *Developmental Biology* 285: 169-184.
- Davis, GK** and NH Patel (2003) Playing by pair-rules? *BioEssays* 25: 425-9.
- Davis, GK** and NH Patel (2002) Short, long and beyond: molecular and embryological approaches to insect segmentation, *Annual Review of Entomology* 47: 669-99.
- Davis, GK\***, Jaramillo, CA\* and NH Patel (2001) Pax group III genes and the evolution of insect pair-rule patterning, *Development* 128: 3445-58.

Browne, W, **Davis, GK** and J McClintock (2000) Ancestors and variants: tales from the cryptic, *Evolution & Development* 2: 130.

**Davis, GK** and NH Patel (1999) The origin and evolution of segmentation, *Trends in Genetics* 24: M68-M72.

## TEACHING EXPERIENCE

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- 2008- pres. Assistant Professor, Department of Biology, Bryn Mawr College
- 2001 Embryology (4-day segment of 6-week laboratory course, TA), Marine Biological Laboratory, Woods Hole
- 2001 Evolutionary Biology (week-long graduate lecture course, TA), Watson School of Biological Sciences, Cold Spring Harbor Laboratory
- 1998 Eucaryotic Molecular Biology (graduate course, TA), University of Chicago
- 1998 *Drosophila* Neurobiology (3-week laboratory course, TA), Cold Spring Harbor Laboratory
- 1997 Animal Development (undergraduate course, TA), University of Chicago
- 1995 Honors Introductory Biology (undergraduate course, TA), University of Pittsburgh
- 1995 Evolutionary Biology (TA), Talent Identification Program (for academically precocious youth, age 14-16), Duke University

## ORAL PRESENTATIONS

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- 2008 Davis, GK, Sillers, L, Parikh, P, McGregor, A, Orgogozo, V, Delon, I, Zanet, J, Srinivasan, D, Payre, F and DL Stern, Morphological evolution through *cis* regulatory mutations at an enhancer of a single gene, Annual Meeting of the Society for Integrative and Comparative Biology
- 2006 Davis, GK, Brisson, JA and DL Stern, Of wings and sex: genomic analysis of polyphenism in the pea aphid, BRIDGES Symposium in Evolutionary Biology, New York University
- 2005 Davis, GK, Wittkopp, P and DL Stern, The evolution and regulation of *Ultrabithorax* in the pupal legs of *Drosophila*, The Developmental Basis of Evolutionary Change IV, University of Chicago
- 2005 Davis, GK, Braendle, C, Brisson, JA and DL Stern, Approaches to polyphenism and polymorphism in the pea aphid, Plant & Animal Genome XIII
- 2002 Davis, GK and NH Patel, The changing role of pax3/7 genes during the evolution of protostomes, The Evolution of Developmental Diversity, Cold Spring Harbor Laboratory
- 2001 Davis, GK, Jaramillo, CA and NH Patel, Pax group III genes and the evolution of insect pair-rule patterning, Annual Meeting of the Society for Integrative and Comparative Biology, *Best Student Presentation in Division of Evolutionary Developmental Biology*

2000 Davis, GK, Jaramillo, CA and NH Patel, Expression of pairberry and the evolution of segmentation, Midwest Meeting of the Society for Developmental Biology

## FELLOWSHIPS & GRANTS

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- 2003 National Research Service Award Individual Fellowship, National Institutes of Health, for three years of postdoctoral training
- 2003 Life Sciences Research Fellowship Finalist
- 2001 \$1,000 from Hinds Fund, Committee on Evolutionary Biology, University of Chicago, to study polychaete worm development in lab of Mark Martindale at Kewalo Marine Laboratory, Honolulu
- 1995 Dean of the Graduate School Scholarship for a semester of graduate tuition at University of Pittsburgh
- 1992 Luce Scholarship for a year of research at the Institute for Biomedical Sciences, Academia Sinica, Taipei, Taiwan
- 1991 Beinecke Memorial Scholarship for two years of graduate study in the history and philosophy of science
- 1990 Howard Hughes Undergraduate Fellowship for research on learning & memory in octopus
- 1988 Alumni Scholarship for four years of partial tuition at Duke University

## SERVICE

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- Organizer: *The Developmental Basis of Evolutionary Change*, University of Chicago, May 1999 (co-wrote successful \$15,000 meeting grant from NASA, Life Sciences Division; invited speakers and organized meeting along with two fellow graduate students)
- Reviewer: *Biology of the Cell*  
*Development*  
*Gene*  
*Organisms, Diversity and Evolution*  
*Paleontological Research*  
National Science Foundation
- Member: Steering committee of EDEN (Evo-Devo-Eco Network), an NSF-funded research coordination network, 2009-present  
Society for Integrative and Comparative Biology  
Society for Developmental Biology  
Genetics Society of America