**Jonathan T. Eggenschwiler, Ph.D.**

Present Rank: Assistant Professor (tenure track)

Recommended rank: Associate Professor

Distribution of EFT: 0.25 Instruction, 0.5 Research

Graduate Faculty status: Primary: Genetics, Adjunct: Cellular Biology

Department of Genetics

Coverdell Building, Rm 201A University of Georgia

Athens, GA 30602

Tel: 706-542-2813, e-mail: [jeggensc@princeton.edu](mailto:jeggensc@princeton.edu)

**Personal information**

Birth date/place: April 11, 1966. Minneapolis, MN.

Citizenship: U.S.

Home address: 170 Chadd’s Walk, Athens, GA 30606

**Education and professional experience**

1984-1988 B.A., Biology

University of California

Santa Cruz, CA

1990-1998 Ph.D., M. Phil.

Department of Genetics and Development

College of Physicians and Surgeons

Columbia University, New York, NY

Dr. Argiris Efstratiadis, advisor

Effects of Insulin-like Growth Factor II overproduction in mice by relaxation of

imprinting and loss of IGF2R-mediated ligand turnover.

1998- 2003 Postdoctoral Research

Dorsal-ventral patterning of the mouse neural tube: Phenotypic analysis and positional cloning of the mouse *open brain* gene.

Dr. Kathryn V. Anderson, advisor

Molecular Biology Program, Sloan-Kettering Institute

2003-2012 Assistant Professor

Department of Molecular Biology

Princeton University

2012-2018 Assistant Professor

Department of Genetics

University of Georgia, Athens

2012-2018 Associate Professor

Department of Genetics

University of Georgia, Athens

**Fellowships and Awards**

1988Graduation with Honors in Biology, University of California

1991 Competitive Graduate Fellowship, Columbia Cancer Center

1998 Samuel W. and Lewis Rover Award for outstanding achievement in Genetics and Development

* 1. Postdoctoral Fellowship, American Cancer Society
  2. March of Dimes Basil O’Connor Starter Scholar Award

1. New Jersey Commission on Science and Technology, Individual Research Grant (declined)

**Research Funding**

2003-2005 Children’s Brain Tumor Foundation, Individual Research Grant.

Eggenschwiler, PI.

2004-2006 March of Dimes, Research Award. Eggenschwiler, PI.

* 1. NICHHD/NIH (R01). Hedgehog signaling and intracellular transport. ARRA supplement awarded 9/09-6/10. Eggenschwiler, PI.

2007-2009 New Jersey Commission on Spinal Cord Research, Individual Research Grant. Stem Cells and Hedgehog signaling. Eggenschwiler, PI

12/1/10-11/31/12 New Jersey Commission on Spinal Cord Research, Individual Research Grant. Channel-kinases and Hedgehog signaling. Eggenschwiler, PI.

### 7/1/10-6/31/12 NIGMS/NIH, program project grant (P01), Regulation of magnesium homeostasis by channel kinases. Alexey Ryazanov, PI. Eggenschwiler, member, project 3.

9/1/08-8/31/13 NCI/NIH (R01). Metadherin in Metastasis and Chemoresistance of Breast Cancer. Dr. Yibin Kang, PI. (Eggenschwiler, collaborator).

10/1/11-9/30/14 NICHHD/NIH (R03). Rab23 in TGF-beta signaling and vertebrate left-right patterning. Eggenschwiler, PI.

7/1/14-6/30/15 Ciliogenesis Projects laboratory for Undergraduate Research, Office of the Vice President for Instruction, University of Georgia, PIs: Eggenschwiler, Condie, Lechtreck.

2/1/15-1/31/16 UGA/State of Georgia Obesity Initiative pilot project funding, PI: Eggenschwiler.

7/1/16-6/30/17 Faculty Research Grant, UGA, OVPR. Rab23 in TGF-beta signaling, PI: Eggenschwiler.

7/18/17-7/17/19 NIH/NICHHD (R03). Regulation of Hedgehog signaling transcriptional responses by the cell cycle. PI: Eggenschwiler.

8/1/18-7/31/20 NIH/NICHHD (R03). Control of TGF-beta signals by Rab23 and Megf8 in mammalian left-right patterning, Eggenschwiler, PI.

9/1/18-8/31/21 NSF. EDGE: Establishment of genome-editing and transgenic tools in *Anolis* lizards. (Menke, Eggenschwiler, Lauderdale, Co-PIs)

**Publications**

Walsh, J.D., and Eggenschwiler, J.T. Development of a method for revertable CRISPR/Cas9-based mutagenesis in cell culture.***J. Biol Meth***(*submitted*).

Lupu, F., Burnett, J., and Eggenschwiler, J.T. (2018) nCell cycle-related kinase regulates mammalian eye development through positive and negative regulation of Hedgehog signaling. ***Dev Biol.*** Feb 1;434(1):24-35. doi: 10.1016/j.ydbio.2017.10.022. PMID: 29166577

Snouffer, A., Brown, D., Lee, H., Walsh, J. D., Lupu, F. L., Norman, R., Lechtreck,, K.,Ko, H.W., Eggenschwiler, J. (2017) Cell Cycle-Related Kinase (CCRK) regulates ciliogenesis and Hedgehog signaling in mice. ***PLoS Genet.*** Aug 17;13(8):e1006912. doi: 10.1371/journal.pgen.1006912. PMID: 28817564

Burnett, J., Lupu, F., and Eggenschwiler, J.T. (2-17) Proper ciliary assembly is critical for restricting Hedgehog signaling during early eye development in mice. ***Dev Biol****.* 2017 Aug 1. pii: S0012-1606(17)30324-X. doi: 10.1016/j.ydbio.2017.07.012. PMID:28778798

Wingfield. J.L., Mengoni I., Bomberger, H., Jiang, Y., Walsh, J.D., Brown, J.M., Picariello, T., Cochran, D.A., Zhu, B., Pan, J., Eggenschwiler, J.T., Gaertig, J., Witman, G.B., Kner, P., and Lechtreck, K. (2017) IFT trains in different stages of assembly queue at the flagellar base for consecutive release into cilia. ***eLife*** May 31;6. pii: e26609. doi: 10.7554/eLife.26609.

Sornborger, A. T., Li, J., Timmons, C., Lupu, F., Eggenschwiler, J., Takahama, Y., & Manley, N. R. (2017) MiCASA: A new method for quantifying tissue organization. ***Nat. Comm.***May 30;8:15619. doi: 10.1038/ncomms15619.

Moon, H., Song, J. Jeong-Oh Shin, J-O, Lee, H., Kim, H-K, Eggenschwiler, J., Bok, J. and Ko, H.W (2014). The endocrine-cerebro-osteodysplasia (ECO) syndrome protein, intestinal cell kinase is a key regulator of ciliary length control and Hedgehog signaling. ***Proc. Natl. Acad. Sci. U.S.A,***Jun 10;111(23):8541-6.

Fuller, K.P., Tse, J., Mauti, O., and Eggenschwiler, J.T. (2014) Rab23 regulates Nodal signaling in left-right patterning of the mouse embryo. ***Dev. Biol.*** Jul 15;391(2)

Eggenschwiler, J.T. and Liu, A. (2014) Identifying essential genes in mouse development via an ENU-based forward genetic approach. ***Meth. Mol. Biol.***;1092:95-118.

Eggenschwiler J.T. (2012). Hedgehog signaling and the cilium: in the zone. **Dev Cell.** 23: 677-8. PMID: 23079593

Chubanov, V, Eggenschwiler, J.T., Ryazanova, L, Gudermann T, and Ryazanov, A. (2012). The Emerging Role of TRPM7 in the Regulation of Magnesium Homeostasis. Book chapter in [***TRP Channels in Drug Discovery : Volume I***](http://www.springerprotocols.com/BookToc/doi/10.1007/978-1-62703-077-9?uri=/Abstract/doi/10.1007/978-1-62703-077-9_7). (Methods in pharmacology and Toxicology series, Springer) p. 127-139. DOI: 10.1007/978-1-62703-077-9\_7.

Nishio M., K. Hamada, K. Kawahara, M. Sasaki, F. Noguchi, S. Chiba, K. Mizuno, S.O. Suzuki, Y. Dong, M. Tokuda, T. Morikawa, H. Hikasa, J.T. Eggenschwiler, N. Yabuta, N. Nojima, K. Nakagawa, Y. Hata, H. , Nishina, K. Mimori, M. Mori, T. Sasaki, T.W. Mak, T. Nakano, S. Itami and A. Suzuki. (2012). Cancer susceptibility and embryonic lethality in Mob1A/1B double mutant mice. **J. Clin. Invest.** Dec 3;122(12):4505-18

Ochbina P.J.R., Eggenschwiler, J.T., Moskowitz, I., and Anderson, K.V. (2011). Complex Interactions Between Genes Controlling Trafficking in Primary Cilia. ***Nat. Genet.*** 43(6):547-53.

Qin, J., Lin, Y., Ko, H.W., and Eggenschwiler, J.T. (2011). IFT122 antagonizes Sonic Hedgehog signaling and controls ciliary localization of pathway components. ***Proc. Natl. Acad. Sci.****,* 108(4):1456-61.

Ko H.W., Norman R.X., Tran J., Fuller K.P., Fukuda M., Eggenschwiler J.T. (2010) Broad-minded links cell cycle-related kinase to cilia assembly and Hedgehog signal transduction. ***Dev. Cell***18: 237-247.

Walczak-Sztulpa J., Eggenschwiler J.T., Osborn D., Brown D., Emma, F., Klingenberg C., Hennekam R.C., Giuliano T., Garshasbi M., Tzschach A., Szczepanska M., Krawczynski M., Zachwieja J., Zwolinska, Beales, P.L., Ropers H., Latos-Bielenska A., Kuss A. (2010). Cranioectodermal dysplasia (Sensenbrenner Syndrome) is a ciliopathy caused by mutations in the IFT122 gene. ***Am. J. Hum. Genet.*** 86(6):949-56.

Norman R.X., Ko H.W., Huang V., Eun C.M., Abler L.L., Zhang Z., Sun X., Eggenschwiler J.T. (2009) Tubby-like protein 3 (TULP3) regulates patterning in the mouse embryo through inhibition of Hedgehog signaling. ***Hum. Mol. Genet*.** 18(10):1740-54.

Ko H.W., Liu A., Eggenschwiler J.T. (2009) Analysis of hedgehog signaling in mouse intraflagellar transport mutants. ***Meth. Cell Biol.*** Vol. 93*.* Eds: King, S.M. and Pazour, G.P. ISBN: 978-0-12-381377-0

Cho A., Ko H.W., Eggenschwiler J.T. (2008). FKBP8 cell-autonomously controls neural tube patterning through a Gli2- and Kif3a-dependent mechanism. ***Dev. Biol.*** Sep 1;321(1):27-39.

Eggenschwiler J.T., Anderson K.V. (2007). Cilia and Developmental Signaling. ***Ann. Rev. Cell Dev. Biol.*** 23:345-73.

Eggenschwiler, J.T., Qin, J., Bulgakov, O., Li, T. and Anderson, K.V. (2006). Mouse Rab23 regulates Hedgehog signaling from Smoothened to Gli proteins. ***Dev. Biol*.** 290(1):1-12.

García-García, M.J., Eggenschwiler, J.T., Caspary, T., Alcorn,, H.L., Wyler, M.W., Huangfu, D., Rakeman, A.S., Lee, J.D., Feinberg, E.H., Timmer, J.R., and Anderson, K.V. (2005). Analysis of mouse embryonic patterning and morphogenesis by forward genetics. ***Proc. Natl. Acad. Sci.***102 (17):5913-9.

Bulgakov, O.V**.** **\***,Eggenschwiler, J.T.**\***,Hong, D., Anderson, K.V., and Li, T. (2004). FKBP8 is a neural-specific negative regulator of Sonic hedgehog signaling. ***Development*** 131, 2149-59.

**\*** Equal contribution

Caspary, T., García-García, M.J., Huangfu, D., Eggenschwiler, J., Wyler, M.W., Rakeman, A.S., Alcorn, H.L., and Anderson, K.V. (2002) Mouse Dispatched homologue1 is required for long-range but not juxtacrine Hh signaling. ***Curr. Biol.*** 12, 1628-32.

Eggenschwiler, J., Espinoza, E., and Anderson, K.V. (2001). Rab23 is an essential

negative regulator of the mouse Sonic hedgehog signaling pathway. ***Nature*** 412,194-8.

Eggenschwiler, J. and Anderson, K. (2000) Dorsal and lateral fates in the mouse

neural tube require the cell-autonomous activity of the *open brain* gene. ***Dev. Biol.*** 227, 648-660.

Eggenschwiler,J., Ludwig, T., Fisher, P., Leighton, P., Tilghman, S. and Efstratiadis, A. (1997). Mouse mutant embryos overexpressing IGF-II exhibit phenotypic features of the

Beckwith-Wiedemann and Simpson-Golabi-Behmel syndromes. ***Genes Dev.*** 11, 3128-3142.

Ludwig, T., Eggenschwiler, J., Fisher, P., D'Ercole, A. J., Davenport, M. L. and

Efstratiadis, A. (1996). Mouse mutants lacking the type 2 IGF receptor (IGF2R) are

rescued from perinatal lethality in *Igf2* and *Igf1r* null backgrounds. ***Dev. Biol.*** 177, 517-35.

Leighton, P. A., Ingram, R. S., Eggenschwiler, J., Efstratiadis, A. and Tilghman, S. M.

(1995). Disruption of imprinting caused by deletion of the H19 gene region in mice.

***Nature*** 375, 34-9.

**Teaching experience**

1986-1988 Tutor in biology and written composition, University of California, Santa Cruz

1988-1990 Instructor of written and oral English as a second language, Suda Juku School, Fukuyama, Japan

1994,1995 Teaching Assistant, Advanced Eukaryotic Molecular Genetics (graduate course),

Columbia University, Department of Genetics and Development.

2001 Vertebrate Neural Development (graduate course). Weil Medical School, Cornell University/Rockefeller University. Guest lecturer.

2005-2008 Advanced Eukaryotic Molecular Genetics (graduate course), Columbia University, Department of Genetics and Development. Guest lecturer.

2008 Developmental Biology (graduate course. University of Medicine and Dentistry of New Jersey. Guest lecturer.

2010 Molecular Embryology of the Mouse. Cold Spring Harbor Laboratory.

Served as guest lecturer and performed lab demonstrations.

2004-2011 Teaching at Princeton University:

Mol507, Developmental Biology (graduate), S04-06.

Co-instructor with Prof. Rebecca Burdine (Molecular Biology).

Mol528, Developmental Genetics (graduate). F03-05.

Co-Instructor, Mol408, Cellular and Systems Neuroscience (undergraduate), F04-06.

Co-instructor with Profs. Samuel Wang (Molecular Biology), James Haxby (Psychology) and Elizabeth Gould (Psychology).

Neu501A, Neuroscience: from molecules to system (graduate), Co-Instructor. F09-F11.

Mol431, Advanced Topics in Developmental Neurobiology (undergraduate), F06-F11.

Teaching at the University of Georgia

2013F BCMB 4121H Human Biochemistry Honors (Guest lecture)

2013F-present GENE4310/6310: Genetic Approaches to Developmental Neuroscience

(undergraduate/graduate). 100% teaching credit

2014F, 2016S GRSC 7770 Graduate Seminar in Genetics Education. 100% teaching credit.

2015S, 2017S BCMB/CBIO/GENE 8112/8113/8212: Advanced Genetics, Cell, Biochemistry and Molecular Biology. 2 lectures/semester.

2015S-2017S GENE8880 Graduate Seminar in Graduate Research Communication. 100% teaching credit.

2015S-2016S GENE 4960H-4990H. Special section. Undergraduate “project lab” on genetic analysis of ciliogenesis. Team-driven research.

**Laboratory Mentoring**

***At the University of Georgia***

Assistant Research Scientists (UGA): Collaborators

Floria Lupu, PhD, 2013-present

Projects: Genetic Control of Ciliogenesis in Eye Development, CCRK in the spinal neural tube.

Julie Gordon, PhD, 2013- present

Projects: Role of Rab23 and Megf8 in TGF-beta secretion in mammalian left/right patterning.

Graduate Students

Ashley Snouffer (‘17), Genetics Graduate Student, UGA

Genetics Training Grant (2014, 2015). Linton and June Bishop Fellowship (2017). Projects: CCRK in Hedgehog signaling and ciliogenesis, CCRK in hydrocephalus. Relationship between CCRK and ICK in ciliogenesis and development. Currently a Postdoctoral fellow with Dr. Esther Van der Knapp at the University of Georgia

Jonathon Walsh (‘18), Graduate Student, UGA.

DBGSA president (2016), Mote Fellowship for Biomedical research (2017), Outstanding Teaching Assistant Award (2017). Projects: Role of CCRK in ciliogenesis, Undergraduate education in Genetics (project lab), Revertible mutagenesis in mammalian cells using CRISPR/Cas9, IFT complex recruitment to cilia, Role of CCRK in cytoskeletal regulation. Currently a Postdoctoral fellow at Rutgers University (INSPIRE Program).

Tyler Miyawaki (’19) Graduate Student, UGA.

GGSA president (2017), Outstanding Teaching Assistant Award (2017). Projects: Gating of Hedgehog responses by the Cell Cycle, Genome-wide mutagenesis screen for Hh pathway regulators using CRISPR/Cas9::GeCKO.

Jacob Burnett (’18) Graduate Student, UGA,

Genetics Training Grant (2015, 2016). Projects: The roles of Ift proteins and CCRK in mammalian eye development, Regulation of taste papillae specification by Hh signaling. Currently a Post-doctoral fellow at Baylor College of Medicine.

Anna Brinck Graduate Student, UGA. GGSA co-president (2018). Regulation of left-right patterning in the mouse by Nodal signaling and ciliary assembly.

Michael Nunnely, Graduate Student, UGA. DBGSA president (2018). Control of mammalian cell fate specification by the cell cycle.

Kush Bhatia, Graduate Student a UGA. Regulation of ciliary cargo transport.

Sukhada Samudra (‘20) Graduate Student, UGA. Genetic engineering of *Anolis* cells; Hedgehog signaling in squamates.

Undergraduates (21 students trained)

Philip Grayeski (’14).. Goldwater Fellowship, Foundation Fellow, Awarded Cynthia Kenyon Award for Undergraduate Achievement (2014). Currently pursuing MD/PhD studies at the University of North Carolina.

Akshey Wallia (’14). Completed CURO thesis in December 2014. Currently Post-Baccalaureate candidate at Mount Sinai Medical School.

Kaitlin Crockett (‘14) Currently nursing student at Emory University

Samantha Byrd (’14) Currently pursuing pharmacy post-graduate work (University of Florida)

Romik Srivastava (’15) Currently attending medical school (Mercer School of Medicine).

Nikki Bevilacqua (’17), Currently applying to medical school.

Blake Gowen (’16), Currently laboratory technician at Stanford University

Ethan Wright (‘16), Currently a research technician in the Dyer lab (to begin graduate school in Fall 2017 at University of Colorado).

Christopher Benson (’17) Currently undergraduate at UGA. LSAMP program

Jie Xu (’17), Starting PhD program at Emory University in Fall 2017.

Megan Wuthrich (’18), Currently pursuing MS at University of South Florida

Bisushi Chandra (’18), Currently graduate student at UGA

Darlington Pobee (’18), Currently undergraduate at UGA. LSAMP program

Hannah Maddux (’20), Currently undergraduate at UGA

Sarah Cutts (’19), Currently undergraduate at UGA

Emma Hope, (’20), Currently undergraduate at UGA

Jessica Perciaccante, (’21), Currently undergraduate at UGA

***Project Lab Team:***

Mary Abkemeier (’16), currently attending medical school (Augusta University)

Dhruv Patel (’16), Will start denistry school in Fall 2017.

Grace Johnson (’16), currently attending medical school (Emory University)

Catherine Waldron (’17), will begin medical school Fall 2017 (Mercer School of Medicine)

Vivian Vu (’16), currently attending medical school (Mercer School of Medicine)

Daniel Blumenthal (’16), currently attending medical school (Augusta University)

Kaley Desher (’17), will conduct 1 year internship followed by medical school in 2018.

*At Princeton University:*

Postdoctoral Fellows

Jian Qin (4/03-8/08). National Research Service Award (NICHD). Currently a research scientist with Gen-Probe, Stamford, CT

Trong (John) Tran (11/04-2/06). Currently an Ophthalmologist with South Jersey Eye Physicians.

Hyuk Wan Ko (4/05-8/09). New Jersey Commission on Spinal Cord Research fellowship. Currently a tenure-track assistant professor at Kyunghee University, Seoul, Korea.

Olivier Mauti (4/10-8/11). Swiss National Science Foundation fellowship, New Jersey Commission on Spinal Cord Research fellowship. Currently Lab Head of Alternative Technologies (Novartis).

Graduate Students

Ahyron Cho, PhD (4/04-2/08), New Jersey Commission on Spinal Cord Research fellowship.

Currently a postdoctoral fellow at Stanford University.

Ryan Norman, PhD (6/04-6/10), New Jersey Commission on Spinal Cord Research fellowship.

Currently in a lecturer position at Princeton University.

Kimberly P. Fuller, PhD (2/06-12/2011), New Jersey Commission on Cancer Research fellowship.

Currently a Technical Writer with MedErgy Healthgroup.

Desmond Brown, MD/PhD (8/08-4/12), Ruth L. Kirschstein National Research Service Award (predoctoral fellowship). Currently a Neurosurgery Resident at the Mayo Clinic

Halley Mellor, PhD (2/2009-7/2014). Finished graduate work with Danelle Devenport (co-mentor) at Princeton University. Currently a Research Scientist in industry (Context Therapeutics).

Undergraduates

Christine Eun (’04), Molecular Biology. Student at Harvard Business School.

Ms. Eun’s senior thesis received a departmental award for outstanding thesis research.

Joyce Tse (’05), Molecular Biology. PhD student at Harvard University.

Jennifer Hong (’06), Religion (Neurosciences Certificate). Undergraduate volunteer in 2003-04. Currently a medical student at Stanford University

Tina Mitra (‘06), Molecular Biology. Currently a Senior Associate for recruiting and human resources, Tower Research Capital, New York, NY.

Ania Dabrowski (‘07), Molecular Biology. Currently an MD/PhD student at the University of Michigan Medical School.

Alexanda Svornos (‘07), Molecular Biology. Currently a medical student at Columbia University Medical School. Ms. Svornos’ senior thesis received a departmental award for outstanding thesis research.

Sara Slifka (’07), Molecular Biology. Currently a Biotech consultant with Morgan Stanley, New York, NY.

Viola Huang (’08), Molecular Biology. Currently a medical student at Columbia University Medical School.

Leland Hull (’08), Molecular Biology. Currently a medical student at Stony Brook University Medical Center.

Christopher Spears (2008). Morehouse University. HHMI Summer Undergraduate Research Program.

Anmol Gupta (’09), Molecular Biology. Currently a medical student at Rutgers University/Robert Wood Johnson Medical School.

Ms. Gupta’s senior thesis received a departmental award for outstanding thesis research.

Carolyn Smith-Lin (’10), Molecular Biology. Currently working for the Asia Injury Prevention Foundation (non-profit), Vietnam. Applying for admission to medical school in 2011.

Cat Phong (Cathy) Vu (’11). Currently an intern in South east asia (public service) and applying for medical school admission.

Bing Chiu (’11). Currently a medical student at Rutgers University/Robert Wood Johnson Medical School.

Sebastian Franco (’12). Senior thesis research (Princeton). Currently a Masters student at Case Western University

Research Assistants

Yulian Lin (3/03-2/09), Currently teaching laboratory assistant, Princeton University.

Jamie Francisco (10/09-7/10). Currently in a post-baccalaureate program (CUNY).

**Departmental and University Service**

At the University of Georgia

2012-present Undergraduate Affairs Committee (Genetics)

2012-present University Research Animal Resources, Faculty Advisory Committee

2013-present AIR-DB Organizing Committee, Faculty-Graduate Student Liaison

2012-present Served/serving on 29 graduate student thesis committees: Ashley Snouffer, Jonathon Walsh, Tyler Miyawaki, Jacob Burnett, Estefania Olivar, John, O’Neil, Erin Baker, Kristen Peissig, Rodney Jarvis, Sukada Samudra, Shirley Wang, Lishann Ingram, Nickolas Morffy, Aaron Harris, Jenna Wingfield, Anna Bobilev, Ashley Rasys, Karl Kudyba, Stephanie Herringer, Chen Liang, Fathima Nawaz, Ping Yu, Jayesh Tindal, Aimee Williams, Munisha Muningjiang, Nurgul Kaya, Suganthan Amirthagunathan, and Emily Krach.

2012-presnt Developmental Biology (“Damocles”) Group meeting/Coverdell

2015 Developmental Biology floor meeting organizer.

Service (Princeton University)

2003-06 Faculty Academic Advisor, Forbes College

2003-2012 Qualifying Exam Committees (18 Molecular Biology Students)

2003-2012 PhD Thesis Committees (21 Molecular Biology Students)

* 1. Department of Molecular Biology Seminar Series (2005-2008, as Chair).

2004 Molecular Biology Facilities Committee

2004-06 University Committee on Examinations and Academic Standing

2005,2008 Faculty search committees for Molecular Biology (Developmental Biology) and the Princeton Neurosciences Institute

2005-08 Molecular Biology Transgenic Facility (Faculty supervisor)

2006-08 Ad hoc reviewer of Molecular Biology Graduate Admission applications

2008 Princeton University’s Institutional Animal Care and Use Committee, Chair

2009 AAALAC program review committee.

**Seminar/meeting speaking engagements**

1999 Society for Developmental Biology National Meeting

2000 Cold Spring Harbor Meeting, Mouse Molecular Genetics

2001 Gordon Conference, Developmental Biology

2002 Yale University Medical School, Department of Genetics

2002 University of Pennsylvania, Dept. of Cell and Developmental Biology

2002 Yale University, Dept. of Molecular, Cellular and Developmental Biology

2002 California Institute of Technology, Division of Biology

2002 Princeton University, Department of Molecular Biology

2002 Cornell University, Department of Molecular Biology and Genetics

2002 Johns Hopkins University, Department of Biology

2002 Stowers Institute for Medical Research

2003 Society for Developmental Biology Mid-Atlantic Regional Meeting

2003 Society for Developmental Biology National Meeting

1. American Association of Anatomists National Meeting
2. Rutgers University, Dept. of Neuroscience and Cell Biology
3. Society for Developmental Biology, Northeast Regional Meeting
4. Columbia University, Department of Genetics and Development
5. New York University, Department of Cell Biology

2006 EMBO – Hedgehog Signaling Workshop

1. Mount Sinai School of Medicine, Department of Developmental and Regenerative Biology
2. Santa Cruz Developmental Biology meeting

2008 FASEB Summer Research Conference

2010 Temple University, School of Medicine, Department of Neuroscience

2010 EMBO workshop on Hedgehog signaling

2010 FASEB Summer Research Conference, Biology of cilia and flagella

2010 University of Pennsylvania, Dept. of Cell and Developmental Biology

2010 University of Pittsburgh, Department of Biological Sciences

2010 University of Medicine and Dentistry of New Jersey/Robert Wood Johnson Medical School, Neuroscience and Cell Biology

2010 Yale University, Department of Genetics

2010 Keystone Symposium; Cilia, Signaling and Human Disease

2010 University of California, San Francisco, Department of Developmental and Stem Cell Biology

2010 Emory University, Department of Human Genetics

2011 University of North Carolina, Department of Genetics

2011 Vanderbilt University Medical Center, Department of Cell and Developmental Biology

2011 Cancer Institute of New Jersey, Cell Death and Survival Signaling.

2012 Hedgehog Signaling in Development and Disease Meeting. Institute of Molecular and Cell Biology, Singapore.

2012 State University of New York Medical Center, Downstate.

2012 University of Georgia, Genetics Department

2012 Case Western University, Biology Department

2012 Institute for Clinical Research, Montreal Canada

2013 University of Georgia, Department of Cell Biology

2013 University of Helsinki

2013 FASEB meeting on Cilia Biology

2014 Southeast Regional Neuroscience Meeting

2014 Georgia Regents University (Neuroscience)

2014 National Society for Developmental Biology (SDB) meeting

2015 University of Georgia College of Veterinary Medicine, Dept. of Pathology.

2016 Augusta University (Cellular Biology)

2016 University of Georgia, Neursocience Club

**Extramural Service**

2003-present *ad hoc* manuscript reviewer for *Science*, *Science Signaling, Genes and Development. Development*, *Developmental Biology*, *Mechanisms of Development,* *Developmental Cell*, *Journal of Cell Science, Journal of Biology,* *Genesis*, *Molecular Biology of the Cell*, *Trends in Molecular Medicine, Journal of Clinical Investigation, FEBS letters, Nature Methods, Human Molecular Genetics, PLoS Biology,* *PLoS Genetics*, *Proceedings of the National Academy of Science, EMBO reports*, *Current Biology, Clinical and Molecular Teratology,* and *Biology Open*.

2003-present *ad hoc* research grant proposal reviewer for the National Science Foundation, American Cancer Society, Medical Research Council (MRC, UK), Children’s Brain Tumor Foundation, Vienna Science and Technology Fund, German Israeli Foundation, European Research Council, and the Biotechnology and Biological Sciences Research Council (UK), Netherlands Organization for Scientific Research, and NIH/NIGMS.

2007 Mid-Atlantic Regional meeting for the Society of Developmental Biology, co-organizer.

2009 Center for Scientific Review Special Emphasis Panel (ARRA AREA grants), National Institutes of Health.

2011-present Editorial board member for *Cilia*. Peter Jackson and Philip Beales, Sr. Eds.

2014 Southeast Regional Society for Developmental Biology (co-organizer)

2014 -present Associate Editor, *Development*

2014, 2016 Faculty mentor in Young Dawgs summer research program (Kayla Sepsik, Sadhana Durba)

2013-17 LSAMP mentor (Christopher Benson and Darlington Pobee)

2014, 2015 Speaker, JW Fanning Summer program, Leadership Without Limits, Clarke College Preparation.

*Membership*

1999-present The Society for Developmental Biology

2004-present American Society for Cell Biology

2009-2012 New York Academy of Science

2009-2015 Faculty of 1000, member (Pattern Formation)

2010-2012 Cancer Institute of New Jersey (Cell Death and Survival Signaling)