Samuel Todd Lamitina

Curriculum vitae

Personal Information

Born	November 15, 1972; Atlanta, Georgia
Mailing address	Vanderbilt University, Department of Anesthesiology 1161 21st Avenue South MCN T4202 Nashville, TN 37232
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Education

2002	Ph.D., Cell and Developmental Biology, Emory University
1995	B.S., Biology, Emory University

Academic and Professional History

2002-present	Postdoctoral Fellow, Vanderbilt University School of Medicine
1998-2002	Graduate student, Emory University
1995-1997	Research Technician, Emory University School of Medicine

Honors and Awards

2005-2006	National Kidney Foundation Postdoctoral Research Fellowship (competitive 3rd year renewal)
2003-2005	National Kidney Foundation Postdoctoral Research Fellowship
2003	American Heart Association Postdoctoral Research Fellowship recipient (declined)

2003	Training grant recipient, NIH Training Program in Neurogenomics, Vanderbilt University (declined)
2002-2003	Trainee, NIH Training Program in Ion Channel and Transporter Biology, Vanderbilt University
1999-2001	Trainee, NIH training program in Biochemistry, Cellular, and Molecular Biology, Emory University
1998	Woods Hole Marine Biological Lab Summer Fellowship – Physiology: Cellular and Molecular Biology Course

Invited Talks

1. "Genome-wide analysis of osmotically regulated gene expression" American Society for Nephrology Conference, November 8-13, 2005, Philadelphia, PA.
2. "Identification of novel regulators of osmotically induced gene expression by genome-wide RNAi screening" Parallel session lecture – 15th International *C. elegans* meeting, June 25-29, 2005, University of California, Los Angeles.
3. "Genetic analysis of osmotically regulated gene expression in *C. elegans*" Featured Topic Speaker - "Complex Pathways of Function and Disease Deduced from the Whole Genome Perspective" 35th annual IUPS/FASEB meeting, April 2-6, 2005, San Diego, CA.
4. "Physiological, genetic, and functional genomic analysis of cellular osmoregulation in *C. elegans*" Plenary Lecture, International Symposium on Animal Physiology – "Proteins in Adaptation and Evolution", German Society of Zoologists (DZG), June 3-5, 2004, Griefswald, Germany
5. "Null mutations in *wee-1.3* are recessive lethal but rare dominant mutations specifically arrest the sperm cell cycle." Parallel Session lecture – Cell Cycle. 13th International *C. elegans Meeting*, June 22-26, 2001, University of California, Los Angeles.
6. "A Wee-1 kinase homologue is required for meiosis during spermatogenesis in *C. elegans*." Plenary Session lecture, East Coast Worm Meeting, June 9-11, 2000, Emory University, Atlanta, GA.

Publications

Journal Articles

1. Huang, G., Agre, P, and Strange, K, **Lamitina, S. Todd.** (2005). Isolation of *C. elegans* deletion mutants following ENU mutagenesis and thermostable restriction enzyme PCR screening. Molecular Biotechnology, *In press*.
2. **Lamitina, S. Todd** and Strange, K. (2004). Transcriptional targets of the DAF-16 insulin signaling pathway protect *C. elegans* from extreme hypertonic stress.

Am. J. of Physiol; Cell Physiol. 288(2): C467-474. **Reviewed by Dow, J.T., 'Salty Worms', J Exp Biol 2005 208: vii-a.*

3. **Lamitina, S. Todd**, Morrison, R., Moeckel, G.W., and Strange, K. (2004). Adaptation of the nematode *C. elegans* to extreme osmotic stress. *Am. J. of Physiol; Cell Physiol.* 286(4):C785-91.
4. **Lamitina, S.T.** and S.W. L'Hernault. (2002). Dominant mutations in the *Caenorhabditis elegans* Myt1 ortholog *wee-1.3* reveal a novel domain that controls M-phase entry during spermatogenesis. *Development*. 129; 5002-5009.
5. Quimby, B.B., **Lamitina, T.**, L'Hernault, S.W., Corbett, A.H. (2000). The mechanism of Ran import into the Nucleus by Nuclear Transport Factor 2. *Journal of Biological Chemistry*. 275(37); 28575-28582.
6. Klein, Janet D., **Lamitina, S. T.**, O'Neill, W.C. (1999). JNK is a volume-sensitive kinase that phosphorylates the Na-K-2Cl cotransporter in vitro. *Am. J. of Physiol*. 277(3 Pt 1):C425-31.

Manuscripts in Preparation

1. **Lamitina, S.T.** and Strange, K. Functional genomic analysis of osmosensitive gene expression in *C. elegans*.
2. Huang, G.H., **Lamitina, S.T.**, Agre, P., and Strange, K. Systematic analysis of the aquaporin gene family in *C. elegans*.

Book Chapters

1. **Lamitina, S.T.** Functional genomic approaches in the nematode *C. elegans*. (2005). *Methods in Molecular Biology*, Kevin Strange editor, Humana Press, *Submitted.*

Abstracts

1. **Lamitina, S.T.** and Strange, K. (2005). Functional genomic analysis of osmosensitive gene expression. Gordon Research Conference on Cellular Osmoregulation.
2. Huang, G.H., **Lamitina, S. T.**, Agre, P., and Strange, K. (2005). Analysis of the aquaporin gene family of *C. elegans*. Gordon Research Conference on Cellular Osmoregulation.
3. Kroft, T.L., Gleason, E.J., **Lamitina, S.T.**, L'Hernault, S.W. (2005). FER-14 and SPE-42, two transmembrane proteins required for sperm-egg interaction during *C. elegans* fertilization. 15th International *C. elegans* meeting, A182.
4. **Lamitina, S.T.**, and Strange, K. (2005). Identification of novel regulators of osmotically regulated gene expression by genome wide RNAi screening. 15th International *C. elegans* meeting, A153.
5. **Lamitina, S.T.**, Huang, G.H., and Strange, K. (2005). Genetic analysis of osmotically regulated gene expression in *C. Elegans*. National Kidney Foundation Meeting.
6. **Lamitina, S.T.**, Huang, G.H., and Strange, K. (2005). Genetic analysis of osmotically regulated gene expression in *C. Elegans*. FASEB meeting, A134.7.

7. Huang, G.H., **Lamitina, S. Todd**, Agre, P., and Strange, K. (2005). Identification and functional characterization of aquaporins in *C. elegans*. FASEB meeting, A671.26.
8. **Lamitina, S.T.**, Morrison, R., Moeckel, G., and Strange, K. (2004). Physiological and genetic analysis of the osmotic stress response in the nematode *C. elegans*. FASEB meeting, A847.5.
9. **Lamitina, S.T.** and Strange, K. (2004). Transcriptional targets of the DAF-16 insulin signaling pathway protect the nematode *C. elegans* from extreme hypertonic stress. FASEB meeting, A847.6.
10. **Lamitina, S.T.**, and Strange, K. (2004). Functional genomic analysis of the osmotic stress response in *C. elegans*. FASEB meeting, A847.7.
11. **Lamitina, S.T.**, Baman, K., Morrison, R., Moeckel, G., Strange, K. (2003). Adaptation of the nematode *C. elegans* to extreme osmotic stress. 14th International *C. elegans* meeting, 382A.
12. **Lamitina, S.T.** and Strange, K. (2003). Microarray analysis of the hypertonic stress response in *C. elegans*. 14th International *C. elegans* meeting, 383B.
13. **Lamitina, S.T.**, Waters, L., Strange, K. (2003). Inhibition of an insulin-like signaling pathway in *C. elegans* increases resistance to hypertonic stress. 14th International *C. elegans* meeting, 384C.
14. Kroft, T., Gleason, E., **Lamitina, S.T.**, L'Hernault, S.W. (2003). Phenotypic characterization and mapping of *fer-14* and *spe-42*, mutants defective in fertilization. 14th International *C. elegans* meeting, 1068C.
15. **Lamitina, S.T.** and Strange, K. (2003). Whole genome microarray analyses of cellular osmoregulation in the nematode *C. elegans*. FASEB Meeting, A581.2.
16. **Lamitina, S.T.**, Baman, K., Morrison, R., Moeckel, G., Strange, K. (2003). Genetic and physiological characterization of cellular osmoregulation in the nematode *C. elegans*. FASEB meeting, A581.3.
17. **Lamitina, S.T.**, Waters, L., Strange, K. (2003). Inhibition of an insulin-like signaling pathway in the nematode *C. elegans* increases resistance to hypertonic stress. FASEB meeting A581.4.
18. **Lamitina, Todd**, L'Hernault, S.W. (2002). Cell cycle-dependent localization of the *C. elegans* Myt1 ortholog *wee-1.3*. East Coast Worm Meeting, A156.
19. **Lamitina, Todd**, L'Hernault, S.W. (2001). Null mutations in *wee-1.3* are recessive lethal but rare dominant mutations specifically arrest the sperm cell cycle. 13th International *C. elegans* Meeting, A223.
20. **Lamitina, Todd**, L'Hernault, S.W. (2001). Progress towards the cloning of *fer-14*, a gene required for fertilization in *C. elegans* sperm. 13th International *C. elegans* Meeting, A485.
21. **Lamitina, Todd**, L'Hernault, S.W. (2000). A Wee-1 kinase homologue is required for meiosis during spermatogenesis in *C. elegans*. East Coast Worm Meeting, A58.
22. **Lamitina, Todd**, L'Hernault, S.W. (1999). Dominant Spermatogenesis-defective mutants in *C. elegans*. 12th International *C. elegans* Meeting, A514.
23. Klein, J.D., **Lamitina, S.T.**, O'Neill, W.C. (1997) Protein kinases that phosphorylate the Na-K-2Cl cotransporter. *J. Amer. Soc. Nephrology*. 8:A173.

24. O'Neill, W.C., Tuli, A.J., Watkins, H., **Lamitina, S.T.**, Klein, J.D. (1996). A Volume Sensitive Phospholipase A_2 mediates swelling activated K^+ fluxes in vascular endothelial cells. *FASEB J.* 10(3):A504.

Teaching Experience

Individuals Trained

1. George Huang, 2004-present, Graduate student, Johns Hopkins University. Training duties shared with the lab of Dr. Peter Agre.
2. Yillu Chen, 2005, summer undergraduate research student, University of Chicago.
3. Faye Sun, 2004, IGP rotation student, Vanderbilt University.
4. Brandon Lute, 2003, IGP rotation student, Vanderbilt University.
5. Laura Waters, 2003, Neuroscience independent study student, Vanderbilt University.

Classroom Instruction

1. Center for Science Outreach, Vanderbilt University, videoconference meeting with elementary schools on the use of *C. elegans* in biological research, 2005.
2. Elementary and High School Science Outreach, University School of Nashville, 2003-present.
3. Course Instructor, IGP Methodology Course, Vanderbilt University, 2003.
4. Teaching Assistant, Undergraduate Cell Biology Course, Emory University, Instructor Dr. Ari Eisen, 1997.

References

1. **Kevin Strange, Ph.D.**
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2. **Steven W. L'Hernault, Ph.D.**
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3. Peter Agre, M.D.
   Vice Chancellor, Science & Technology
   Professor of Cell Biology
   Duke University
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   Durham, NC 27710
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4. **Gilbert Moeckel, M.D., Ph.D.**
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   Vanderbilt University, Department of Pathology
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