

## Rudolf A. Bohm, Ph.D.

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### Research Interests:

Genetic dissection of neural circuitry; Effects of altering neural activity on behavioral output; Epigenetic mechanisms of adaptation; Cell biology of non-electrical neuronal signaling.

### Education:

- Doctor of Philosophy in Biology, December 2000  
University of Texas at Austin  
Supervising Professor: Nigel S. Atkinson
- Cold Spring Harbor Summer Course, Summer 1995  
Neurobiology of *Drosophila*
- Bachelor of Science in Molecular Biology, August 1992  
University of Texas at Austin

### Work Experience:

- Research Assistant, January 2010 – present  
University of Texas at Austin  
Supervising Professors: Nigel Atkinson
- Post-doctoral Fellow, July 2008 - October 2009  
University of Oklahoma  
Supervising Professor: Bing Zhang
- Post-doctoral Fellow, October 2005 - July 2008  
Brandeis University  
Supervising Professor: Jeff C. Hall
- Post-doctoral Fellow, October 2000 - October 2005  
Children's Hospital, Harvard Medical School  
Supervising Professor: Thomas L. Schwarz
- RLM-RACE Kit Design for Ambion Inc.: Summer 1999
- Teaching Assistant or Graduate Research Assistant: Alternating Semesters 1993-2000

### Honors and Awards:

- Kirschstein NIH National Research Service Award Post-doctoral Fellow 2005 - 2007
- Ambion Scholars Program, 1998
- Center for Developmental Biology Scholarship, 1998
- Kojima Genetics Fellowship, 1995
- Genetics Foundation Dorothea Bennett Memorial Scholarship, 1995

### Publications:

**R. A. Bohm**, W. P. Welch, L. K. Goodnight, L. W. Cox, L.G. Henry, T. C. Gunter, H. Bao and B. Zhang (2010). A genetic mosaic approach for neural circuit mapping in *Drosophila*. *Proceedings of the National Academy of Sciences of the United States of America*. **107**: 16378-16383. **On the cover of the September 14, 2010 edition.**

- S. L. Ferri, **R. A. Bohm**, H. E. Lincicome, J. C. Hall, and A. Vilella (2008). *fruitless* gene products truncated of their male-like qualities promote neural and behavioral maleness in *Drosophila* if these proteins are produced in the right places and the right times. *Journal of Neurogenetics*. **22**: 17-55.
- A. Ghezzi, Y. M. Al-Hasan, L. E. Larios, **R. A. Bohm**, and N. S. Atkinson (2004). *slo* K<sup>+</sup> channel gene regulation mediates rapid drug tolerance. *Proceedings of the National Academy of Sciences of the United States of America*. **101**: 17276-17281.
- R. A. Bohm**, B. Wang, R. Brenner, and N. S. Atkinson (2000). Transcriptional control of Ca-activated K channel expression: identification of a second, evolutionarily conserved, neuronal promoter. *The Journal of Experimental Biology* **203**: 693-704.
- W. M. Chang, **R. A. Bohm**, J. C. Strauss, T. Kwan, T. Thomas, R. B. Cowmeadow, and N. S. Atkinson. (2000). Muscle-specific transcriptional regulation of the slowpoke Ca<sup>2+</sup>-activated K<sup>+</sup> channel gene. *The Journal of Biological Chemistry* **275**: 3991-3998.
- N. S. Atkinson, R. Brenner, **R. A. Bohm**, J. Y. Yu, and J. L. Wilbur (1998). Behavioral and electrophysiological analysis of Ca-activated K channel transgenes in *Drosophila*. *Annals of the New York Academy of Sciences* **860**: 296-305.
- G. M. Rennebeck, E. Lader, Q. Chen, **R. A. Bohm**, Z. Cai, C. Faust, T. Magnuson, L. Pease, and K. Artzt (1995). Is there a *Brachyury the second*? Analysis of a transgenic mutation involved in notochord maintenance in mice. *Developmental Biology* **172**: 206- 217.

#### Conference Presentations:

- R. A. Bohm**, W. P. Welch, T. C. Gunter, L. K. Goodnight, L. G. Henry, L. W. Cox, G. Books J.C. Hall, and B. Zhang. FLIPPASE-based genetic dissections of neuronal circuits underlying behavior. Presented to the Neurobiology of *Drosophila* Conference, Cold Spring Harbor, NY. September 29-October 3, 2009.
- R. A. Bohm**, W. P. Welch, T. C. Gunter, L. K. Goodnight, L. G. Henry, L. W. Cox, J.C. Hall, and B. Zhang. Deconstructing neural circuits underlying fly behaviors and decision-making using new molecular genetic tools. **Presented by invitation** to improving the Toolkit for *Drosophila* Neurogenetics Conference, Janelia Farm Research Campus, HHMI, Ashburn, VA. October 4-7, 2009.
- R. A. Bohm**, H. Bao, G. Books, J. C. Hall, and B. Zhang. Developing molecular genetic tools for studying neural circuits and behaviors in *Drosophila*. **Presented by invitation** to the Genetic Manipulation of Neuronal Activity Conference, Janelia Farm Research Campus, HHMI, Ashburn, VA. November 2-5, 2008.
- R. A. Bohm**, D. W. Allan, and T. L. Schwarz. Analysis of the role of *Synaptotagmin IV* in neuropeptide release. Presented to the Neurobiology of *Drosophila* Conference, Cold Spring Harbor, NY. October 5-9, 2005.
- R. A. Bohm**, and N.S. Atkinson. Modulation of ion channel gene expression by electrical excitability. Presented to the Neurobiology of *Drosophila* Conference, Cold Spring Harbor, NY. October 6-10, 1999.
- R. A. Bohm**, R. Brenner, and N.S. Atkinson. Mapping the major neuronal promoter for *slowpoke*, a calcium – activated potassium channel gene. Presented to the 40th Annual *Drosophila* Research Conference, Bellevue, WA. March 24-28, 1999.
- R. A. Bohm**, R. Brenner, N.S. Atkinson. Dissection of *slowpoke*'s neuronal promoter. Presented to the 38th Annual *Drosophila* Research Conference, Chicago, IL. April 16-20, 1997.

#### Undergraduate Directed Research:

Ph.D.'s or candidates: Alfredo Ghezzi, Yazan Al-Hasan and Ysabel Milton  
 M.D. candidates: Kwasi Menu, William Welch, Tyler Gunter and Mona Homafar

#### References:

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|-----------------------------|-------------------------|---------------------|
| • Nigel S. Atkinson, Ph.D., | NigelA@mail.utexas.edu  | (512) 471-1785      |
| • Jose L. Agosto, Ph.D.,    | jose.agosto1@upr.edu    | (787) 764-0000x2523 |
| • Jeff Hall, Ph.D.,         | jeffreyhall14@gmail.com | (207) 277-3083      |
| • S. John Mihic, Ph.D.,     | mihic@mail.utexas.edu   | (512) 232-7174      |

