CURRICULUM VITAE
RUDOLF A. BOHM

Department of Biological and Health Sciences
MSC 158, BESB. Rm 203A
Texas A&M University-Kingsville
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EDUCATION

Bachelor of Science: Zoology, Molecular Biology; University of Texas-Austin, August 1992.

Neurobiology of Drosophila Course; Summer 1995. Cold Spring Harbor Lab, Cold Spring Harbor, New York
Instructors: Paul Taghert, Allan Bieber, Roger Hardie

Doctor of Philosophy - Molecular Biology; University of Texas-Austin, December, 2000.
Dissertation Title: Transcriptional Modulation of *slowpoke*, a Calcium-activated Potassium Channel by Genetic Excitability and Environmental Agents
Major Professor: Nigel S. Atkinson

Nanopore DNA Sequencing for Educators, DNA Learning Center at City Tech, Brooklyn, New York, 2023.
Instructors: David Miklos, Jason Williams, Anna Fetzinger

EMPLOYMENT

Associate Professor, Department of Biological and Health Sciences, Texas A&M University-Kingsville, Kingsville, Texas, September 2018-present.

Assistant Professor, Department of Biological and Health Sciences, Texas A&M University-Kingsville, Kingsville, Texas, September 2012-2017.

RESEARCH TRAINING

Research Associate, Division of Biological Sciences, University of Texas, Austin, Texas, February 2010-October 2012.

Senior Postdoctoral Researcher, Department of Biology, University of Oklahoma, Norman, Oklahoma, July 2008-October 2009. Bing Zhang Lab.

Postdoctoral Researcher, Department of Biology, Brandeis University, Waltham, MA, October 2005-June 2008. Jeff Hall Lab.

Postdoctoral Researcher, Department of Neurology, Children's Hospital, Harvard Medical School, Boston, MA January 2001-October 2005. Tom Schwarz Lab.

LIST OF COURSES TAUGHT MOST

BAFFIN BAY DEVELOPMENTAL BIOLOGY SUMMER COURSE

BIOL 1306: Introduction to Biology

BIOL 4401: Molecular Biology.

BIOL 4410: Research Experience in Genetics and Genomics.

BIOL 4304: Research Projects/Problems in Biology.

BIOL 5302: Graduate Readings: Classical Papers in Molecular Biology.

BIOL 5318: Graduate Medical Neurobiology

BIOL 5402: Graduate Topics in Cell and Molecular Biology.

MCAT TEST PREP: Biology Section

SELECTED PUBLICATIONS

Refereed Journal Articles

Park A, Tran T, Gutierrez L, Stojanik CJ, Plyler J, Thompson GA **Bohm RA**, Scheuerman EA, Smith DP, Atkinson NS. Alcohol-induced aggression in *Drosophila.*Addiction Biology September 2021; 26(5). PMID: 34044470.

Smith BN, Ghazanfari AM, **Bohm RA**, Welch WP, Zhang B, Masly JP. A Flippase-Mediated GAL80/GAL4 Intersectional Resource for Dissecting Appendage Development in Drosophila. G3: Genes|Genomes|Genetics. 2015;5(10):2105-2112. PMID26276385.

Huang P, Sahai-Hernandez P, **Bohm RA**, Welch WP, Zhang B, Nystul T. Enhancer-Trap Flippase Lines for Clonal Analysis in the Drosophila Ovary. G3: Genes|Genomes|Genetics. 2014;4(9):1693-1699. PMID: 25024257.

Fore TR, Ojwang AA, Warner ML, Peng X, **Bohm RA,** Welch WP, Goodnight LK, Bao H, Zhang B. Mapping and Application of Enhancer-trap Flippase Expression in Larval and Adult Central Nervous System. J Vis Exp. 2011. Jun 3; (52): 2649. PMID: 21673643.

Bohm RA, Welch WP, Goodnight LK, Cox LW, Henry LG, Gunter TC, Bao H, Zhang B. A genetic mosaic approach for neural circuit mapping in *Drosophila*. Proc. Natl. Acad. Sci. USA. 2010 Sept.14; 107(37): 16378-83. PMID: 20810922. ***From the cover.***

Ferri SL, **Bohm RA**, Lincicome HE, Hall, JC, Villella A. *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 at the right times. J. Neurogenet. 2008 Jan-Mar; 22(1) 17-55. PMID: 18363163.

Bohm RA, Wang B, Brenner R, Atkinson NS. Transcriptional Control of Ca(2+)-activated K(+)-channel expression: identification of a second, evolutionarily conserved, neuronal promoter in *Drosophila*. J. Exp. Biol. 2000 Feb; 203
Ann N Y Acad. Sci. 1998 Nov 16; 860:296-305. PMID 9928320.

Submitted Journal Articles
Bohm RA, Allen M, Baymon D, Tipps ME, Atkinson NS, and Mihic SJ. Contrasting effects of alcohols and volatile anesthetics on the *Drosophila* Rdl GABA-A receptor: implications for mechanisms of alcohol action. Molecular Pharmacology. *Submitted ,will allow resubmission after addressing reviewer comments.*

PRESENTATIONS

Invited Lectureships (State and National)
Bohm

Natalia Flores, Melissa Cruz, Michael Morales, Sejal Bakhati, **(PI: Rudolf Bohm).** CRISPR Based Undergraduate Research. Talk presented at: 2021 Virtual Southwest Society for Developmental Biology Meeting; 2021 May 12-14.

Rudolf Bohm. Harry Crate Lecture Series*: How to Use Courting Flies to Fix Neurological Disorders: From Genetics to Pharmaceuticals.* Schreiner University, Kerrville, Texas, April 6, 2017.

Rudolf Bohm. TOPICOS seminar series: *Genetic Mosaic Analysis of Neuronal Circuits in Drosophila*. University of Puerto Rico-Rio Piedras, San Juan, Puerto Rico. January 2013.

Rudolf Bohm. TAMHSC-Irma Lerma Rangel College of Pharmacy Research Colloquium*: Potassium channel mutants in Drosophila as models of epilepsy.* IRL-COP Seminar Room, Kingsville, Texas, June 28, 2013.

MEDIA

Corpus Christi TV News:
https://www.kiiitv.com/article/news/local/elite-developmental-program-at-tamu-k-shows-students/503-4663cf2d-a7c6-4c2f-b500-7924fad06871

Kingsville Paper
http://www.kingsvillerecord.com/news/ut-austin-and-tamuk-professors-bring-developmental-biology-to-south-texas/article_e676ce06-1a60-11ed-8d54-e33f230166f4.html

UT:
https://cns.utexas.edu/news/research/bringing-developmental-biology-south-texas

GRANTS AND FUNDING

Ongoing Research Support

Moxley Family Foundation (MFF Award)
Title: Phenogenetics and Novel Analytical Technics to Evaulate Epileptogenesis in a Drosophila Model System. PI Rudolf Bohm, December 15, 2024-December 15, 2028. Direct Costs **$40,000**

NIH R16 NS091009-01. Support for Research Excellence (SuRE) Program.
Title: CRISPR Generated Genomic Templates to Evaluate Epileptogenesis. PI Rudolf Bohm. Funding Source: NIH- National Institute of General Medical Sciences (NIGMS). September 15, 2024-August 31, 2028. **Direct Costs: $400,000**

Prior Funded Research Support

Moxley Family Foundation (MFF Award)
Title: Mechanisms of Excitotoxicity in Channelopathies and Ataxias in a *Drosophila* Model System. PI Rudolf Bohm, January 15, 2020-September 15, 2024. Direct Costs **$40,000**

Greater Texas Foundation
Title: A Tiered Approach to Student Engagement and Retention Through Undergraduate Research at Texas A&M University-Kingsville. PI Thomas Spencer, Role: Faculty Mentor. June 2021- June 2024. Direct Costs **$289,741.91**

Title V: Integrating a Culture of Academic and Research Engagement (I-CARE) course redesign.
Title: Molecular Biology, BIOL 4401 Course Redesign to Include Research. Co-PI **Rudolf Bohm**; PI Agnes Flores. Funding Source: Title-V I-CARE Funds. 2017. **$2500**

NIH MBRS-SC2 Support of Competitive Research Pilot Project Application.
Title: Novel Genetic Approaches to Evaluate Dominant Gain of Function Toxicity in Poly-glutamine Diseases. PI **Rudolf Bohm**. Funding Source: NIH-MBRS Program. September 11, 2014-August 31, 2018. **$404,377**

Title V/PPOHA Program:
US Department of Education Federally Funded Grant to Hispanic Serving Institutions. Title: Mentoring Hispanic Students through Projects in Molecular Biology: Investigating Ion Channel Function. Co-PI **Rudolf Bohm**; PI Mary Gonzalez. Funding Source: V/PPOHA Program Funds. 2013. **$15,000**

TAMUK Council for Undergraduate Research (TCUR).
Title: Scorpion Toxins as Epileptogenic Channel Blockers. PI **Rudolf Bohm**. Funding Source: Texas A&M Kingsville Council on Undergraduate Research. Offices of Sponsored Research. 2013. **$1,500**

College of Pharmacy and TAMUK Collaborative Research Awards.
Title: Channelopathies in Epilepsy: Electrophysiological Study of Two Differentially Acting Potassium Channels. Co-PI **Rudolf Bohm**, Enrique Massa, and Bret Bessac. Funding Source: College of Pharmacy and Texas A&M University Kingsville Offices of Sponsored Research. December 2012-May 2013. **$15,000**

PERSONAL HONORS

- Kojima Genetics Fellowship, University of Texas, 1995
- Genetics Foundation Dorothea Bennett Memorial Scholarship, University of Texas, 1995
- Ambion Scholar, Ambion Inc. 1998
- Center for Developmental Biology Scholarship, University of Texas, 1998
- Kirschstein—National Research Service Award Postdoctoral Fellowship, NIH, 2005
- Invited Lecturer for Topics in Biology Seminar, University of Puerto Rico, Rio Piedras, 2013
- Harry Crate Invited Lecture Series. Schreiner University, Kerrville Texas, 2017
- Olan Kruse Faculty Award for Research and Teaching Excellence, TAMUK, 2018

LAB HONORS

- 3rd Place Poster (**Sarai Salinas**), TAMUHSC College of Pharmacy Symposium, 2013
- College of Pharmacy Collaborative Award, Irma Rangel TAMU-Health Science Center, 2013
- 2nd Place Poster (**Amrithesh Kumar Arun**), Javelina Symposium, TAMUK, 2014
- 1st Place Poster (Deshawn Banks), Undergraduate Biology Poster, TAMUK, 2016
- 2nd Place Poster (Stephanie Garcia), Undergraduate Biology Poster, TAMUK, 2016
- Distinguished Undergraduate Scholar (Nicholas Salyers), Honors College, TAMUK, 2016
- 2nd Place Master's Student Poster (**Elyse Dyan Grilli**), Javelina Symposium, TAMUK, 2017
- 2nd Place Poster (Feyisao Edalere), Javelina Symposium, TAMUK, 2017
- 3rd Place Poster (Eric Cardona), Javelina Symposium, TAMUK, 2017
- 2nd Place Poster (Feyisao Edalere), TAMU Pathways, Prairie View, 2017
- 1st Place Poster (Roger Garcia), Javelina Symposium, TAMUK, 2018
- 3rd Place Oral Presentation (Natalia Flores, Melissa Cruz, Michael Morales, Sejal Bakhati) Southwestern Society of Developmental Biology, Salt Lake City, UT, 2021
- Commencement Speaker, TAMUK Graduation (Natalia Flores), 2022
- Distinguished Graduate Scholar (**Huyen-Tran Nguyen**) Graduate College, TAMUK, 2022

REFERENCES

Post-Doctoral ***(Postdoctoral Advisor): Retired, difficult to reach, but will give strong support to one current project (spring-boarding from his lab)***

Dr. Jeffrey C. Hall, Nobel Laurate 2017, Professor Emeritus in Genetics, University of Maine and Brandeis University, jeffreyhall14@gmail.com.

Graduate ***(Graduate Mentor): Graduate Mentor who can speak to strong foundation in fly models and systematic study of Drosophila***

Dr. Nigel Atkinson, Professor of Neuroscience, Division of Biological Sciences, University of Texas, nsatkinson@austin.utexas.edu. (512) 232-3404.

Collaborator: ***Collaborator on Chronic Wasting Disease model in the fruitfly, Drosophila***

Dr. Jacob Galan, Associate Professor, Department of Genetics, South Texas Diabetes and Obesity Institute, University of Texas - Rio Grande Valley, School of Medicine, jacob.galan@utrgv.edu (956) 882-7636.

Remote Collaborator ***(alt): Collaborator on Nanopore Sequencing and Genomics in Drosophila and other Insects***

Dr. José Luis Agosto-Rivera, Professor, Department of Biology, University of Puerto Rico- Rio Piedras, jose.agosto1@upr.edu.

Remote Collaborator ***(alt2): Collaborator on Baffin Bay Developmental Biology***

Dr. John Wallingford, Professor; Mr. and Mrs. Robert P. Doherty, Jr. Regents Chair in Molecular Biology; Molecular Biosciences, wallingford@austin.utexas.edu.