

Murray Blackmore

Assistant Professor

Department of Biomedical Sciences
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EDUCATION

- 1999-2005 University of Minnesota
Ph.D. in Neuroscience
(Advisor: Paul Letourneau)
- 1992-1996 Stanford University
B.S. in Biological Earth Sciences

PROFESSIONAL EXPERIENCE

- 2011- Assistant Professor
Department of Biomedical Sciences, Marquette University
- 2009-2011 Research Assistant Professor
The Miami Project to Cure Paralysis, University of Miami
- 2005-2009 Postdoctoral Fellow
The Miami Project to Cure Paralysis, University of Miami
(Mentors: Vance Lemmon and John Bixby)

ACADEMIC HONORS AND AWARDS

- 1996 Award for highest GPA in major (4.0)
- 2000-2005 Howard Hughes Predoctoral Fellowship
- 2000 NSF Predoctoral Fellowship (declined)
- 2000 University of Minnesota, Morris Smithberg Memorial Prize
(top performing first year Neuroscience Graduate Student)
- 2010 Cellome Award, Thermo Fisher, "*Best published peer-reviewed scientific paper using high-content screening in 2009*"

PUBLICATIONS

Articles:

1. *In preparation*: **M. Blackmore**. Across the Regenerative Divide: Expression Profiling, High Throughput Screening, and the Hunt for Regeneration Associated Genes. Invited review for *International Review of Neurobiology*.

2. **M. Blackmore***, Z. Wang, D. Motti, J. L. Goldberg, V. P. Lemmon, and J. L. Bixby (2012). KLF7 engineered for transcriptional activation promotes axon regeneration in the adult corticospinal tract. *Proceedings of the National Academy of Sciences* 109(18) 6845-6851.
* Corresponding Author
3. **M. Blackmore**, D. L. Moore, R. P. Smith, J. L. Goldberg, J. L. Bixby, and V. P. Lemmon (2010). High content screening of cortical neurons identifies novel regulators of axon growth. *Molecular and Cellular Neuroscience*, 44(1):43-54.
4. D. L. Moore*, **M. Blackmore***, Y. Hu, K. H. Kaestner, J. L. Bixby, V. P. Lemmon, and J. L. Goldberg (2009). KLF family members regulate intrinsic axon regeneration ability. *Science* 5950(326): 298-301. *These authors contributed equally
5. **M. Blackmore** and P. Letourneau (2007). Protein synthesis in distal axons is not required for axon growth in the embryonic spinal cord. *Developmental Neurobiology* 67: 976-86.
6. **M. Blackmore** and P. Letourneau (2006). L1, beta1 integrin, and cadherins mediate axonal regeneration in the embryonic spinal cord. *Journal of Neurobiology* 66: 1564-83.
7. **M. Blackmore** and P. Letourneau (2006). Changes within maturing neurons limit axonal regeneration in the developing spinal cord. *Journal of Neurobiology* 66: 348-60.
8. **M. Blackmore** and P. M Vitousek (2000). Cattle grazing, forest loss, and fuel loading in a dry forest ecosystem at Pu'u Wa'aWa'a ranch, Hawai'i. *Biotropica* 32:625-632.

Abstracts and Presentations:

1. **M. Blackmore**, Z. Wang, P. Zheng, C. Shields, V. P. Lemmon, J. L. Bixby (2011) In vivo testing of candidate genes to promote neuron-intrinsic growth ability and axon regeneration in the injured spinal cord. *International Symposium on Neural Regeneration*
2. **M. Blackmore**, Z. Wang, P. Zheng, C. Shields, V. P. Lemmon, J. L. Bixby (2011) In vivo testing of candidate genes to promote neuron-intrinsic growth ability and axon regeneration in the injured spinal cord. *Society for Neuroscience*
3. **M. Blackmore**, D. L. Moore, D. Motti, J. Bixby, V. P. Lemmon, J. L. Goldberg (2010). Krüppel-like transcription factors regulate axon growth in neurons: target identification and structure/function analysis. *FASEB Conference, "The Biology and Pathobiology of KLF Transcription Factors"*
4. D.L. Moore, **M. Blackmore**, J.L. Bixby, V.P. Lemmon, J.L. Goldberg (2009). The role of KLF4 in the developmental loss of intrinsic axon growth ability in retinal ganglion cells. *Society for Neuroscience*.
5. D.L. Moore, **M. Blackmore**, J.L. Goldberg (2009). Transcriptional Control of the intrinsic loss of axon growth ability in retinal ganglion cells. *Keystone Symposia, "Axonal Connections: Molecular Cues for Development and Regeneration"*

6. **M. Blackmore**, D. L. Moore, J. L. Goldberg, J. Bixby, V. P. Lemmon (2008). A developmentally regulated family of transcription factors controls axon growth in CNS neurons. *Society for Neuroscience*.
7. D.L. Moore, **M. Blackmore**, J.L. Goldberg (2008). Transcriptional control of intrinsic axon growth ability in retinal ganglion cells. *Society for Neuroscience*.
8. W. Buchser, Y. Shi, D. Gonzalez, **M. Blackmore**, T. Slepak, J. L. Bixby, V. P. Lemmon (2008). From High Content Screening to Scoring Hits: Standard Reporting for Screening Primary Neurons. *Cambridge Healthtech Institute, High Content Analysis, San Francisco, CA. Award for Outstanding Poster*.
9. **M. Blackmore**, T. Slepak, V. P. Lemmon (2007). A high throughput screen to identify novel regeneration associated genes in the developing corticospinal tract. *Reeve-Irvine Symposia and Roman Reed Research Meeting. University of California Irvine*.
10. **M. Blackmore** and P. Letourneau (2004). Neuron-Intrinsic Limitations to Axon Regeneration in the Developing Spinal Cord: The Role of Integrin, N-cadherin, and L1 Expression. *Society for Neuroscience*.
11. **M. Blackmore** and P. Letourneau (2003). Neuron-intrinsic limitations to Axon Regeneration in the Developing Spinal Cord. *Tenth International Symposium on Neural Regeneration*.
12. **M. Blackmore** and P. Letourneau (2002). Neuron-intrinsic factors are important in ending the permissive period for axonal regeneration during the development of the chicken brainstem-spinal projection. *Society for Neuroscience*.
13. **M. Blackmore** and P. Letourneau (2001). An in situ model of axon regeneration in the developing chicken brainstem-spinal projection. *Ninth International Symposium on Neural Regeneration*.

INVITED PRESENTATIONS

1. New Genes to Promote CNS Axon Regeneration (Oct 2011). *Neuroscience Seminar Series, University of Wisconsin, Milwaukee, WI*
2. High Content Screening Identifies Novel Regulators of Axon Regeneration (July 2011). *National Neurotrauma Symposium, Hollywood, FL*
3. High Content Screening Identifies Novel Regulators of Axon Regeneration (February 2011). *Neuroscience Seminar Series, Drexel University College of Medicine, Philadelphia, PA*.
4. A family feud: KLF transcription factors as positive and negative regulators of CNS axon regeneration (March 2010). *University of Minnesota Neuroscience Seminar Series, Minneapolis, MN*
5. Using HCA to Identify a Transcription Factor Family that Regulates the Intrinsic Ability of Neurons to Extend Axons (January 2010). *Seventh Annual High Content Analysis Meeting, San Francisco*.

6. High Content Screening of Neurons: Quality control, Spotfire, and API (September 2008).
Cellomics user meeting, Bridgewater, NJ.

COMPLETED RESEARCH SUPPORT

State of Florida, James & Esther King Biomedical Research Program, 09KW-05 1/2010 – 9/2011
Combination Therapy in SCI: Proof of Concept for New Compounds & Candidate Genes.
\$300,000/yr (direct costs)
P.I.: John Bixby
Role on Project: Co-investigator

Department of Defense 9/2010-9/2011
Manipulation of KLF Target Genes to Promote Axon Regeneration
\$70,000/year (direct costs)
Role on Project: Co-investigator

ONGOING RESEARCH SUPPORT

Craig H. Nielsen Foundation 7/2010-6/2012
Functional Testing of Regeneration-Associated Genes in Spinal Cord Injury
\$125,000/year (direct costs)
Role on Project: PI

Craig H. Nielsen Foundation 7/2012-6/2014
Combinatorial KLF7-based strategies to promote corticospinal tract regeneration
\$135,000/year (direct costs)
Role on Project: PI