

# Dr. Frank Miskevich

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Dept of Biology and Environmental Science  
Texas A&M University, Commerce  
Commerce, TX 75428

## Academic Positions

2004- Assistant Professor, molecular/cellular biology  
Texas A&M University, Commerce

1999-2004 postdoctoral fellow/associate, developmental neurobiology  
Massachusetts Institute of Technology, Yale University  
P. I. Dr. Martha Constantine-Paton, Professor of Biology  
postdoctoral associate, developmental neurobiology

1997-1998 Washington University School of Medicine, St. Louis, MO  
P.I. Dr. Joshua R. Sanes, Professor, Department of Anatomy and Neurobiology  
Ph.D. Molecular Biology and Biochemistry

1990-1996 California Institute of Technology, Pasadena, CA  
Advisor: Dr. William J. Dreyer, Professor, Division of Biology  
B.S. Concentration in Bio-Organic Chemistry (high honors)

1986-1990 Eckerd College, St. Petersburg, FL

## Grants Awarded

2005 A&M Commerce Mini-Grant \$600  
2005 A&M Commerce Research Enhancement Grant \$13,162  
2005 Licor DNA Sequencer Matching Grant (with Lance Whaley, Chemistry) \$34,560  
2006 A&M Commerce Research Enhancement Grant \$5,662  
2006 TEES-NASA Grant 'Use of LEDs for Biological Imaging' (with Mary Johnson and Ben Cranor, Engineering) \$89,840  
2008 NSF-MRI grant "Acquisition of a Mass Spectrophotometer" \$300,000 (co-PI with Laurence Angel)  
2008 A&M Commerce Research Collaboration Grant \$30,000 (with Nenad Kostic and Laurence Angel)  
"Proteomics of the Cellular Membrane"  
2008 A&M Commerce Mini-Grant \$600  
2008 TEES-NASA Grant "Biology Beyond the Earth" \$25,000  
2009 Dept of Energy- multi-user computer cluster for scientific processing \$369,000  
2009 TEES-NASA Grant "Biology Beyond the Earth" \$20,000

## Invited Presentations

"Palladium Complexes as Tools for Membrane Proteomics" Southwest Regional Meeting, American Chemical Society, Little Rock, AK Oct 3, 2008

"In Search of an Avian Neural Progenitor Cell" Texas Women's University, Denton, TX Nov 9, 2007

"In Search of an Avian Neural Progenitor Cell" Massachusetts Institute of Technology, McGovern Institute for Brain Research, Boston, MA June 23, 2007

"RNA Interference of *Xenopus* NMDA Receptor NR1 *in vivo* and *in vitro*." GTCbio conference on RNA interference- Therapies and Technique. San Diego, CA. Dec 1-2, 2005

## Abstracts

Davis A, Coon J, Kostic N, Miskevich F, Angel LA. Proteomics of the Cellular Membrane. Pathways A&M Symposium. Texas A&M University, Commerce. Nov 7-8, 2008.

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Coon J, Davis A, Utley B, Vatanpour L, Kostic N, Angel LA, Miskevich F. Separation, Fractionation, and Analysis of Membrane Proteins via Pd Ions. Pathways A&M Symposium. Texas A&M University, Commerce. Nov 7-8, 2008.

McNeal B, Miskevich F. Flow Cytometry of Neural Stem Cells. Pathways A&M Symposium. Texas A&M University, Commerce. Nov 7-8, 2008.

Williams E, Miskevich F. Glycolipid Analysis of Neural Stem Cells. Pathways A&M Symposium. Texas A&M University, Commerce. Nov 7-8, 2008.

Vatanpour L, Davis A, Miskevich F, Angel LA. Proteomics of the Cellular Membrane. ACS Southwest Regional Meeting, Little Rock, AK Oct 1-4, 2008.

Fanous T and Miskevich F. Calcium Ion Signaling in *Xenopus laevis* Tectal Neurons. American Chemical Society SW Regional Meeting, Lubbock, TX Nov 3-6, 2007.

Metaferia S, Cutting C, Miskevich F. 'An Instrument and Method for Environmental Monitoring in Space' A&M Pathways Symposium. Tarleton State University, Nov 2-3, 2007.

Harvey J, and Miskevich F. 'Development of a Portable Fluorescent Bacterial Detector' A&M Pathways Symposium. Tarleton State University, Nov 2-3, 2007.

von Duvillard SP, Bell J, Dieckmann I, Hamra J, Alford K, Miskevich F, Slovak JP. Determination of Lactate Turn Points by Respiratory Gas Exchange Measures, Salivary  $\alpha$ -Amylase and Salivary Testosterone in Healthy Male Subjects. *Medicine and Science in Sports and Exercise*, Volume 39:5 Supplement.

Chen T-L, Schultz R, Tabaczcoski P, Miskevich F, Stallings RL, Tomlinson GE. Characterization of Hepatoblastoma Cancer Cell Lines. University of Texas, San Antonio Research Conference March 30-31, 2007.

Covington J, and Miskevich F. 2006. Localization of GFP-NFAT in the Tadpole Brain after Treatment with Drugs Altering Calcium Metabolism. Tri-Beta Southcentral Regional Meeting March 30-31, 2007.

Harry A, Banuelos M, and Miskevich F. 2006. Immunolocalization of Tomato Lectin Positive Stem Cells in the Chick Cerebellum. A&M Pathways System Symposium November 9-10.

Banuelos M, Harry A, and Miskevich F. 2006. Stationary and Migrating Stem Cells in the Chick Optic Tectum Identified Using Tomato Lectin. A&M Pathways System Symposium, November 9-10.

Covington J, and Miskevich F. 2006. Localization of GFP-NFAT in the Tadpole Brain after Treatment with Drugs Altering Calcium Metabolism. A&M Pathways System Symposium, November 9-10.

C. Arias, Pedrosia Y, Selvidge T, Metaferia S, Monday N, Sangregory N, Covington J, Pitchford D, Smith G, Martin D, VanAcht V, Blackburn W, and Miskevich F. 2006. Quantitative Analysis of Organisms in Various Fresh Water Samples Using Fluorescence. Tri-Beta Southcentral Regional Meeting, April 7-9, 2006.

Mongomery J. and Miskevich F. 2006. Fluorescein Lyopersicon esculentum (Tomato) Lectin Staining in the Chick Optic Tectum. Tri-Beta Southcentral Regional Meeting, April 7-9, 2006.

V. VanAcht Zhang Y, and Miskevich F. 2006. Synergistic Effects of the Transcription Factors NFAT and CREB. Tri-Beta Southcentral Regional Meeting, April 7-9, 2006.

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F. Miskevich, Doench, J., Townsend, T.M., Sharp, P.A., Constantine-Paton, M. 2003. Probing the NMDA Receptor's Role in Synapse Formation Using RNAi. Soc. Neurosci. Abs. 29:784.12.

F. Miskevich, W. Liu, S-Y. Lin, and M. Constantine-Paton. 2001. Type II mGluRs and NMDA Receptors Mediate Sprout Suppression at Nascent Synapses. Soc. Neurosci. Abs. 27: 251.11.

F. Miskevich, Y. Zhu, C. Tierney, B. Ranscht, J. R. Sanes. 1997. Laminar Distribution of Cadherins in the Chick Optic Tectum. Soc. Neurosci. Abs. 23(2): 1975.

D.D. Grove, R.P. Spencer, F. Miskevich, C.C. Smith, J.R. Corte. 1991. Intramolecular Freidel-Crafts Alkylations Involving Dicobalt Hexacarbonyl-Stabilized Propargyl Cations-- Application of the Nicholas Reaction to the Synthesis of Morphinans. Abs. Pap. ACS. v201(APR): pp. 373-ORGN.

## **Publications**

Mishevich F. Imaging Fluid Flow and Cilia Beating Pattern in *Xenopus* Brain Ventricles. in revision, J Neurosci Methods

Mishevich, F, Montgomery J, Banuelos M, Harry A, Campbell A. Identification of a Late Stage Neural Stem/Progenitor Cell Marker. Submitted to glycobiology, requires revision and resubmission

Mishevich, F., Townsend, T.M., Punnoose, A., and Constantine-Paton, M. Cellular and Synaptic Effects of NMDA Receptor Activity on *Xenopus* Tectal Neurons. submitted to Neuroscience.

Chen TT, Rakheja D, Hung JY, Hornsby PJ, Tabaczewski P, Malogolowkin M, Feusner J, Mishevich F, Schultz R, Tomlinson GE. 2009. Establishment and characterization of a cancer cell line derived from an aggressive childhood liver tumor. *Pediatr Blood Cancer*. 53(6):1040-7.

Mishevich, F., Cochran, B., and Lunday, D. 2008. Quantitative Analysis of Amylase Enzyme Kinetics. *J. Chem. Ed.* 85(3): 401-4.

Mishevich, F., Doench, J., Townsend, T.M., Sharp, P.A., Constantine-Paton, M. 2006. RNA Interference of *Xenopus* NMDA Receptor NR1 *in vivo* and *in vitro*. *J. Neurosci Methods*. 152: 65-73.

Mishevich, F., Liu, W., Lin, S. and Constantine-Paton, M. 2002. Interaction between metabotropic and NMDA subtypes of glutamate receptors in sprout suppression at young synapses. *Journal of Neuroscience*. 22(1):226-238.

Mishevich, F. Laminar Redistribution of a Glial Subtype in the Chick Optic Tectum. 1999. *Developmental Brain Research*. 115: 103-109.

F. Mishevich, Y. Zhu, B. Ranscht, J. R. Sanes. 1998. Expression of Multiple Cadherins and Catenins in the Chick Optic Tectum. *Molecular and Cellular Neuroscience* 12: 240-255.

J. Vielmetter, X. Cheng, F. Mishevich, R. Lane, K. Yamakawa, J. Korenberg, W. J. Dreyer. 1997. Molecular characterization of human neogenin, a DCC related protein, and the mapping of its gene (neo1) to chromosomal position 15Q22.3-Q23. *Genomics*. 41:414-21.

D.D. Grove, F. Mishevich, C.C. Smith, J.R. Corte. 1990. Use of Dicobalt Hexacarbonyl-Stabilized Propargyl Cations in Intramolecular Freidel-Crafts Alkylations. *Tetrahedron Letters*. v31(44): pp. 6277-6280, 1990.