

PHARMACOLOGICAL SCIENCES

GRADUATE DIRECTOR: STYLIANI-ANNA (STELLA) E. TSIRKA

DEPARTMENT CHAIR: MICHAEL A. FROHMAN

❖ Grants, Fellowships, and Awards

- Ardito, Christine.** (2009) Kevin C. King and John A. Miller Memorial Travel Award, \$500. Department of Biochemistry and Cell Biology, *Stony Brook University*, Stony Brook, NY.
- Ardito, Christine.** (2009) Best Student Poster Award at the Gordon Research Conference on Matrix Metalloproteinases, \$250. *Gordon Research Conferences*, West Kingston, RI.
- Hall, Jason.** (2009-2011) Louis Stokes Alliances for Minority Participation (LSAMP) Fellowship, \$90,000. *The National Science Foundation*, Arlington, VA.
- Leiton, Cindy V.** (2009-2012) Graduate Research Fellowship, \$30,000. *National Science Foundation*, Arlington, VA.
- Love, Damon.** (2009) Brady William Russell Award, \$25,000. *Stony Brook University Medical Center*, Stony Brook, NY.
- Nguyen, Tom.** (2009) van der Kloot Award for excellence in research, \$500. Molecular and Cellular Pharmacology Graduate Program, *Stony Brook University*, Stony Brook, NY.
- Orelli, Barbara.** (2009) Student Travel Award for ASM Conferences, \$400. *Third American Society for Microbiology Conference on DNA Repair and Mutagenesis*, Whistler, BC.
- Torres, Luisa.** (2009-2011) Louis Stokes Alliances for Minority Participation (LSAMP) Fellowship, \$90,000. *The National Science Foundation*, Arlington, VA.
- Tzvetanova, Iva.** (2009) Young Investigator Educational Enhancement (YIEE) Travel Grant from the American Society for Neurochemistry, \$500. *American Society for Neurochemistry*, Windermere, FL.
- Tzvetanova, Iva.** (2009) Kevin C. King and John A. Miller Memorial Travel Award, \$500. Department of Biochemistry and Cell Biology, *Stony Brook University*, Stony Brook, NY.
- Tzvetanova, Iva.** (2009) David L. Williams Memorial Travel Award, \$1,000. Department of Pharmacological Sciences, *Stony Brook University*, Stony Brook, NY.
- Yao, Yao.** (2010) Sigma Xi Travel Award, \$150. *Sigma Xi, The Scientific Research Society*, Research Triangle Park, NC.
- Yao, Yao.** (2010) Gordon Research Conference Travel Award, \$500. *Gordon Research Conference: Chemotactic Cytokines*, Lucca (Barga), Italy.
- Yeku, Oladapo.** (2009) van der Kloot Award for excellence in research, \$500. Molecular and Cellular Pharmacology Graduate Program, *Stony Brook University*, Stony Brook, NY.

❖ Jointly Authored Publications/Research Reports/Reviews

- Ardito, Christine M.,** Briggs, C.D., Crawford, H.C. (2008) Targeting of extracellular proteases required for the progression of pancreatic cancer. *Expert Opinion on Therapeutic Targets* 12(5): 605-19.
- Wu, J., **Bonsra, Akua N.,** Du, G. (2009) pSM155 and pSM30 vectors for miRNA and shRNA expression. *Methods Mol Biol.* 487: 205-19.

- Hambardjjeva, Elena, **Derkunt, S. Burak**, Yakubovskaya, E., Mejia, E. and Garcia-Diaz, M. (2010) Bypass of 8-oxo-G by DNA polymerase lamda. *FASEB J. 24*: 1b50.
- Emmetsberger, Jaime**, Mirrione, Martine M., Zhou, C., Siddiq, M., Fernandez-Monreal, M., Tsirka, S.E. (In Press) Tissue Plasminogen Activator alters intracellular sequestration of zinc through interaction with the transporter ZIP4. *J. Neurosci.*
- Galvin, J., **Eyermann, Christopher**, Colognato, H. (In Press) Dystroglycan modulates insulin-like growth factor signaling to promote oligodendrocyte differentiation. *J. Neurosci. Res.*
- Li, F.Q., Mofunanya, A., **Fischer, Victoria**, Hall, Jason, Takemaru, K. (2010) Nuclear-cyto-plasmic shuttling of Chibby controls beta-catenin signaling. *Mol. Biol. Cell. 21*(2): 311-22.
- Mirrione, Martine M., Konomos, D.K., **Gravanis, Iordanis**, Dewey, S.L., Aguzzi, A., Heppner, F.L., Tsirka, S.E. (2010) Microglial ablation and lipopolysaccharide preconditioning affects pilocarpine-induced seizures in mice. *Neurobiol Dis.* doi: 10.1016/j.nbd.2010.04.001
- Pothakos, K., Robinson, J.K., **Gravanis, Iordanis**, Marsteller, Douglas A., Dewey, S.L., Tsirka, S.E. (2010) Decreased serotonin levels associated with behavioral disinhibition in tissue plasminogen activator deficient (tPA^{-/-}) mice. *Brain Res. 1326*: 135-42.
- Li, F.Q., Mofunanya, A., Fischer, Victoria, **Hall, Jason**, Takemaru, K. (2010) Nuclear-cyto-plasmic shuttling of Chibby controls beta-catenin signaling. *Mol. Biol. Cell. 21*(2): 311-22.
- Hambardjjeva, Elena**, Derkunt, S. Burak, Yakubovskaya, E., Mejia, E. and Garcia-Diaz, M. (2010) Bypass of 8-oxo-G by DNA polymerase lamda. *FASEB J. 24*: 1b50.
- Knipscheer, P., Räschle, M., Smogorzewska, A., Enoiu, M., **Ho, The Vinh**, Schärer, O.D., Elledge, S.J., Walter, J.C. (2009) The Fanconi Anemia Pathway Promotes Replication-Dependent DNA Interstrand Cross-Link Repair. *Science* 326: 1698-1701.
- Ho, The Vinh** and Schärer, O.D. (2010) Translesion DNA Synthesis Polymerases in DNA Interstrand Crosslink Repair. *Environ. Mol. Mutagen.* doi 10.1002/em.20573
- Huang, Huang**, Frohman, M.A. (2009) Lipid signaling on the mitochondrial surface. *Biochim Biophys Acta. 1791*(9): 839-44.
- Osisami, M., **Huang, H.**, Frohman, M.A. (2009) Monitoring insulin-stimulated production of signaling lipids at the plasma membrane. *Methods Mol. Biol. 590*: 61-70.
- Kuo, E., Park, D.K., Tzvetanova, Iva D., **Leiton, Cindy V.**, Cho, B.S., Colognato, H. (2010) Tyrosine Phosphatases Shp1 and Shp2 Have Unique and Opposing Roles in Oligodendrocyte Development. *J. Neurochem. 113*: 200-212 .
- Pothakos, K., Robinson, J.K., Gravanis, Iordanis, **Marsteller, Douglas A.**, Dewey, S.L., Tsirka, S.E. (2010) Decreased serotonin levels associated with behavioral disinhibition in tissue plasminogen activator deficient (tPA^{-/-}) mice. *Brain Res. 1326*: 135-42.
- McCann, James J.**, Choi, U.B., Zheng, L., Weninger, K., Bowen, M.E. (In Press) Optimizing Methods to Recover Absolute FRET Efficiency from Immobilized Single Molecules. *Biophysical Journal.*
- Emmetsberger, Jaime, **Mirrione, Martine M.**, Zhou, C., Siddiq, M., Fernandez-Monreal, M., Tsirka, S.E. (In Press) Tissue Plasminogen Activator alters intracellular sequestration of zinc through interaction with the transporter ZIP4. *J. Neurosci.*
- Mirrione, Martine M.**, Konomos, D.K., Gravanis, Iordanis, Dewey, S.L., Aguzzi, A., Heppner, F.L., Tsirka, S.E. (2010) Microglial ablation and lipopolysaccharide preconditioning affects pilocarpine-induced seizures in mice. *Neurobiol Dis.* doi: 10.1016/j.nbd.2010.04.001
- Barros, C.S., **Nguyen, Tom**, Spencer, K.S., Nishiyama, A., Colognato, H., Müller, U. (2009) Beta1 integrins are required for normal CNS myelination and promote AKT-dependent myelin outgrowth. *Development* 136(16): 2717-24.

- Orelli, Barbara**, McClendon, T.B., Tsodikov, O.V., Ellenberger, T., Niedernhofer, L.J., Schärer, O.D. (2010) The XPA-binding domain of ERCC1 is required for nucleotide excision repair but not other DNA repair pathways. *J. Biol. Chem.* 285(6): 3705-12.
- Scotto-Lavino, Elizabeth**, Garcia-Diaz, M., Du, G., Frohman, M.A. (2010) Basis for the isoform-specific interaction of myosin phosphatase subunits protein phosphatase 1c beta and myosin phosphatase targeting subunit 1. *J. Biol. Chem.* 285(9): 6419-24.
- Song, Yan**, Washington, M.K., Crawford, H.C. (2010) Loss of FOXA1/2 is essential for the epithelial-to-mesenchymal transition in pancreatic cancer. *Cancer Res.* 70(5): 2115-25.
- Relucio, J., **Tzvetanova, Iva D.**, Ao, W., Colognato, H. (2009) Laminin Alters Fyn Regulatory Mechanisms and Promotes Oligodendrocyte Development. *J. Neurosci.*, 29(38): 11794-806.
- Kuo, E., Park, D.K., **Tzvetanova, Iva D.**, Leiton, Cindy V., Cho, B.S., Colognato, H. (2010) Tyrosine Phosphatases Shp1 and Shp2 Have Unique and Opposing Roles in Oligodendrocyte Development. *J. Neurochem.* 113: 200-212 .
- Nishikimi, A., Fukuhara, H., **Su, Wenjuan**, Hongu, T., Takasuga, S., Mihara, H., Cao, Q., Sanematsu, F., Kanai, M., Hasegawa, H., Tanaka, Y., Shibasaki, M., Kanaho, Y., Sasaki, T., Frohman, M.A., Fukui, Y. (2009) Sequential regulation of DOCK2 dynamics by two phospholipids during neutrophil chemotaxis. *Science* 324(5925): 384-7.

❖ **Abstracts, Conferences/Colloquia, Presentations, Symposiums, Workshops**

- Yakubovskaya, E., Mejia, E., Byrnes, J., **Hambardjjeva, Elena**, Garcia-Diaz, M. (2010) A unique DNA binding mode enables human mterf1 to modulate transcription. *2010 ASBMB Annual Meeting*. Anaheim, CA.
- Leiton, Cindy V.** (2009) Team Project Judge. Regional Leadership Development Conference. *Society of Hispanic Professional Engineers (SHPE)*. Charlottesville, VA.
- Leiton, Cindy V.** (2009) Research Methods Instructor, Summer Research Institute. *Alliance for Graduate Education and the Professoriate*. Stony Brook, NY.
- Leiton, Cindy V.** (2009) The Role of Matrix Metalloproteinases in Oligodendrocyte Development. *Preparing for the Professoriate, Alliance for Graduate Education in the Professoriate Annual Conference*. Albany, NY. *Annual Conference in Science and Engineering*. City University of New York Graduate Center, New York, NY.
- Love, Damon.** (2010) Tumor cell specific inhibition of oncogenic Wnt signaling. *101st AACR Meeting*. Washington, DC.
- Love, Damon.** (2009) Altered lung morphogenesis in chibby-null mice. *Wnt 2009 Annual Meeting*. Washington, D.C.
- McCann, James J.**, Choi, U.B., Zheng, L., Weninger, K., Bowen, M.E. (2010) Recovering Absolute Fret Efficiency from Single Molecules: Comparing Methods of Gamma Correction. *Biophysical Society 54th Annual Meeting*. San Francisco, CA.
- Orelli, Barbara**, Tsodikov, O. V., Ellenberger, T. and Schärer, O.D. (2009) The nature of the substrate affects late steps in NER. *8th Structural Cell Biology of DNA Repair Machines (SBDR) Workshop*. Berkeley, CA.
- Orelli, Barbara**, McClendon, T.B., Tsodikov, O.V., Ellenberger, T., Niedernhofer, L.J. and Schärer, O. D. (2009) Mutations in the XPA-binding region of ERCC1 affect NER but not ICL repair. *3rd American Society for Microbiology Conference on DNA repair and mutagenesis*. Whistler, BC.
- Orelli, Barbara**, Madireddy, A., McClendon, T.B., Tsodikov, O.V., Ellenberger, T., Niedernhofer, L.J. and Schärer, O. D. (2010) Interstrand crosslink repair, but not NER, is responsible for cellular sensitivity to cisplatin. *New York Biotechnology Association (NYBA) 20th Annual Meeting*. New York, NY.

- Tzvetanova, Iva D.** (2009) Helping to Stop and Start Myelination: Csk Has Development. *American Society for Neurochemistry Annual Meeting*. Charleston, SC.
- Tzvetanova, Iva D.,** McKlenahan, F.K., Colognato, H. (2009) Helping to Start and Stop Myelination: Csk Has Dual Regulatory Functions during Oligodendrocyte Development. *9th European Meeting on Glial Cells and Disease*. Paris, France.
- Yao, Yao,** Zhou, Chun, Tsirka, Stella. (2009) Cleavage of monocyte chemoattractant protein-1 (MCP1) by plasmin enhances its activity to compromise BBB. *Society for Neuroscience the 39th Annual Meeting*. Chicago, IL.
- Yao, Yao,** Tsirka, Stella. (2010) The C-terminus of mouse Monocyte Chemoattractant Protein 1 (MCP1) mediates MCP1 dimerization while blocking its chemotactic potency. *Gordon Research Conference: Chemotactic Cytokines*. Lucca (Barga), Italy.

❖ **Post-Doctorates Obtained and Professional Appointments**

- Cheney, Laura.** (2009) MSTP Candidate. Third-Year Medical Student, School of Medicine, *Stony Brook University*, Stony Brook, NY.
- Corrales-Higuera, Alexandra.** (2009) Postdoctoral Fellow. Alliance for Graduate Education in the Professoriate Annual Conference (AGEP), Center for Inclusive Education, *Stony Brook University*, Stony Brook, NY.
- Love, Damon.** (2009) Postdoctoral Fellow. *Weill Cornell College of Medicine*, New York, NY.
- Song, Yan.** (2009) Postdoctoral Fellow. Department of Pharmacological Sciences, *Stony Brook University*, Stony Brook, NY.
- Su, Wenjuan** (2009) Postdoctoral Fellow. Department of Cell Biology and Pharmacology, *New York University Cancer Institute*, New York, NY.