

EAST TENNESSEE STATE UNIVERSITY
JAMES H. QUILLEN COLLEGE OF MEDICINE

SUMMARY OF SCHOLARLY ACTIVITIES

Department of Biomedical Sciences
2011 – 2012

2011-12 Extramural Funding:

Total New Extramural Grants Awarded to Biomedical Sciences P.I.: \$2,398,355

Total New Annual Funding to Biomedical Sciences P.I.: \$511,151

“Acute and chronic evaluation of VNS for treatment of heart failure.” Cyberonics, Inc.; Jeffrey L. Ardell, P.I.; E. M. Southerland, Co-I; project funding period 1/1/12 to 12/31/13; Total Award: \$403,676.

“Characterization of a novel host pathway that regulates chlamydial development.” NIH/National Institute of Allergy and Infectious Disease; R01 AI095637-01; Robert V. Schoborg, P.I., Michelle M. Duffourc (Consultant); J Hall (co-I); project funding period 8-17-2011 to 7-31-2015; Total Direct Costs: \$1,123,754; Total Award: \$1,950,179.

“Swiss National Science Foundation International Short Visit Award.” Robert V. Schoborg, grant writer. Officially awarded to Dr. Nicole Borel/University of Zurich (the host investigator/institution); project funding period 4-8-2012 to 7-1-2012; Total Award: \$10,500.

“Faculty sponsor for Rees Burt awarded an undergraduate summer research fellowship.” American Physiological Society; Robert Wondergem, PI; project funding period Summer 2012; Total Award: \$4,000.

“Pharmacokinetic evaluation of Drugs.” University of Colorado School of Pharmacy; Donald H. Hoover, PI; project funding 7-1-2011 to 6-30-2013; Total Award: \$30,000.

Total New Extramural Funding for Grants Awarded to non-DBMS P.I.:

“Undergraduate Research in Integrative Developmental Biology.” – National Science Foundation – Research Experience for Undergraduates (REU) Site Grant DBI-1062645. Rebecca Pyles –PI, Tom Ecay, James Stewart, Donald Hoover, Dennis Defoe, Theresa Harrison (Co-investigators); project funding period 9-15-2011 to 9-14-2014; Total Direct Costs: \$169,496; Total Award: \$184,499.

Continuing Grant Awards

Total Continuing Extramural Grants Awarded to Biomedical Sciences P.I.: \$11,987,375

Total Continuing Annual Funding for Grant Awards to Biomedical Sciences P.I.: \$ 1,422,314

“Myocardial Ischemia Remodels the Cardiac Nervous System.” National Heart Blood and Lung Institute; R01 HL071830 (competing renewal); Jeffrey L. Ardell, P.I.; Donald B. Hoover, C.I.; E. Marie Southerland, C.I., Jean Hardwick (Ithaca College consultant); project funding period 4-1-2010 to 3-31-2014; Annual Direct Costs: \$250,000; Total Award: \$1,417,100.

“Role of Neurturin in the Development of Cardiac Cholinergic Neurons,” Greater Southeast Affiliate of the American Heart Association; Grant-in-Aid; Donald B. Hoover, P.I.; project funding period 7-1-2010 to 6-30-2012; Total Direct Costs: \$150,000; Total; Award: \$165,000. (No cost extension to 6/30/13).

“Remodeling of the guinea pig intrinsic cardiac plexus with chronic heart disease.” NIH: R01 HL098589; Jean Hardwick, Ithaca College, P.I., E. Marie Southerland, Co-PI, Jeffrey L. Ardell, Faculty; project funding period 1-1-2010 to 12-31-2013; Annual Direct Costs: \$125,000; (\$50,000 annual direct to ETSU); Total Award: \$494,865.

“Medical Student Fellowship Program in Neurocardiology.” American Heart Association. PI: Jeffrey L. Ardell, Ph.D.; project funding period 1-1-2009 to 1-31-2014; Annual Direct Costs: \$13,500; Total Award: \$27,000 + \$40,500 = \$67,500.

“Structure-Function Relationships of C-reactive Protein.” NHLBI, NIH; R01 HL071233; Alok Agrawal, P.I.; Donald A. Ferguson, collaborator; project funding period 8-1-2008 to 6-30-2012; Total Direct Costs: \$900,000; Total Award: \$1,240,000. (No cost extension 06/30/13).

“Features of bacterial ribosomal subunit assembly intermediates.” NIH AREA 1R15GM086783; Scott Champney, P.I.; project funding period 9-1-2009 to 8-31-2012; Total Direct Costs: \$150,000; Total Award: \$208,025.

“An investigation of the fluoroketolide antibiotic CEM101 on bacterial ribosome biogenesis; Cempra Pharmaceuticals”; Scott Champney, P.I.; project funding period 4-1-2011 to 8-31-2012; Total Direct Costs: \$52,000; Total Award: \$74,400.

“Embryonic calcium nutrition: testing a model for developmental calcium deprivation. Alpha Omega Alpha Carolyn L. Kuckein Student Research Fellowship.” Whitney Trotter Ross, PI, Tom W. Ecay, (Advisor); project funding period 5-15-2011 to 8-15-2011; Total Award: \$6,000.

“Effects of New Drugs on Hyperlocomotor Activity.” Merz Pharmaceuticals; Richard Kostrzewa, P.I.; Russ Brown, Investigator; project funding period 5-1-2011 to 9-1-2011.; Annual Direct Costs: \$16,881; Total Award: \$21,101.

“Glia Pathology in Autism.” Autism Speaks AS#7330; Gregory A. Ordway, P.I.; project funding period 3-1-2011 to 2-28-2013; Total Award: \$120,000.

“Noradrenergic System in Depression.” NIMH; R01 46692; Gregory A. Ordway, P.I.; Michelle M. Duffourc, Co-PI; Attila Szebeni and Katalin Szebeni, Co-PI. Project funding period 7-1-2008 to 3-31-2013; Annual Direct Costs: \$225,000; Total Award: \$1,605,938.

“Glutamatergic Signaling in the Locus Coeruleus in Depression and Suicide.” Gregory A. Ordway, P.I.; Atilia Szebeni and Katilin Szebeni, Co-PIs. Distinguished Investigator Award, American Foundation for Suicide Prevention; project funding period 2-10-2009 to 8-31-2011; Total Award: \$85,000.

“Neurobiological Correlates of Stress and Norepinephrine Transporter.” NIMH R01MH080323; Meng-Yang Zhu, P.I.; Gregory A. Ordway, Co-investigator; project funding period 4-1-2009 to 3-31-2013; Annual Direct Costs: \$204,800; Total Award: \$1,156,238.

“Quillen College of Medicine Building 119 Renovation.” NIH/NCRR; 1C06RR030651, Philip Bagnell, P.I.; Gregory A. Ordway, primary author; project funding period 3-18-2010 to 3-17-2015; Total Award: \$9,127,509.

“Role of prelamin A in cell quiescence.” NIH R15; Antonio Rusinol, P.I.; project funding period 7-01-2008 to 6-30-2011. Total Direct Costs: \$150,000; Total Award: \$213,000; (No cost extension 9/30/12).

“Development of an *in vivo* model of chlamydial persistence.” NIH/National Institute of Allergy and Infectious Disease; R21 AI082322-01; Robert V. Schoborg, PI; project funding period 6-1-2009 to 5-31-2011; Total Direct Costs: \$275,000; Total Award: \$386,504; (No cost extension 5/31/12).

“Can chlamydial infection increase host mutation frequency?” NIH/National Institute of Allergy and Infectious Disease; R15 AI078373-01A1; Robert V. Schoborg, PI; Michelle M. Duffourc, Co-PI; project funding period 1-15-2009 to 1-14-2011; Total Direct Costs: \$150,000; Total Award: \$210,946; (No cost extension 1/14/12).

“Checkpoint Signaling and Repair of UV Damage to Human DNA.” National Institutes of Health (NIH/NCI); Type: R01CA086927/R56CA086927; Yue Zou, P.I.; project funding period 7-1-2000 to 7-31-2013; Total Direct Costs: \$861,005; Total Award: \$1,173,640.

“Molecular Mechanisms of Genome Instability in HGPS.” Progeria Research Foundation; Yue Zou, P. I. project funding period 3-01-2011 to 2-28-2013; Total Award: \$100,000.

“Sequence Effects of Arylamine-DNA Adducts: Repair and Replication.” National Institutes of Health (NIH/NCI) Type: R01CA098296; Yue Zou, Co-P.I.; P.I.: Bongsup Cho); project funding period 3-1-2010 to 2-28-2014; Total Direct Costs: \$161,785; Total Award: \$229,734.

“ER stress: role in myocyte apoptosis and myocardial remodeling.” Dept. of Veterans Affairs VA Merit Review; Krishna Singh, P.I., Mahipal Singh, Co-PI; project funding period 7-1-2010 to 6-30-2014; Total Direct Costs: \$901,764.

“Extracellular ubiquitin: role in myocyte apoptosis and myocardial remodeling.” NIH R21; Krishna Singh, P.I. Mahipal Singh, Co-PI. Project funding period: 5-10-2009 to 3-31-2013; Total Direct Costs: \$275,000; Total Award \$391,750. (No cost extension 3/31/13).

“Role of ATM in cardiac myocyte loss and myocardial remodeling.” NIH R21; Krishna Singh, P.I. Mahipal Singh, Co-PI; project funding period 8-1-2008 to 5-31-2012; Total Direct Cost: \$275,000; Total Award: \$391,750. (No cost extension 5/31/12).

“Relationship between cardiac ischemic nociceptor signaling, electroneuromodulation and central vanilloid receptors.” AHA Grant-in-Aid; Krishna Singh, P.I.; project funding period 1-21-2011 to 6-30-2012 (No cost extension). This grant was originally awarded to Dr. Carole Williams (Period 7/01/2009 – 6/30/2011). Dr. Singh assumed the responsibility for this award on 1-21-2011; Total Direct amount: \$165,000; Total Award: \$180,000.

“Role of prolyl-hydroxylase O₂-sensor in cardioprotection.” 5R01HL084302 NHLBI; Gary Wright, P.I.; project funding period 9-1-2007 to 8-31-2012; Total Direct Costs; \$225,000; Total Award: \$317,500; (No cost extension to 8/31/2013).

“Effects of spinal cord stimulation on cardiac remodeling in mitral regurgitation/myocardial infarction. St. Jude Medical, Inc., Jeffrey Ardell, P.I.; project funding period 3-31-2010 to 5-31-2011; Annual direct costs: \$159,908; Total Award \$199,880; (No cost extension to 12-31-12).

Internally Funded Grants:

Internally Funded Grant Award Total: \$75,934

“Role of the transcription factor NF- κ B in C-reactive protein gene expression”; Student-Faculty Collaborative Grant from The Honors College at ETSU; Shuang Zhang and Alok Agrawal; project funding period 1-1-2012 to 6-30-2012; Total Award: \$1,000 .

“Quantification of GDNF alterations in neurturin knock-out mice.” Small RDC ETSU; Cherie Bond, PI; Donald Hoover, Co-PI; project funding period 4-2011; Total Award: \$1,396.

“In vitro characterization of neurturin and GDNF adaptations to oxidative stress” Major RDC ETSU, Cherie Bond, PI; project funding period 9-2011; Total Award \$10,000. (Additional support for the GDNF projects listed above provided by: Ronald McNair Post Baccalaureate Achievement Program – TRIO - \$1,000 USD Research stipend) Jared Cranmore, McNair Scholar, 08/2011.)

“A Resource for Mosaic Analysis in Mice.” ETSU Research Development Committee (RDC #12-030M); PI: Dennis M. Defoe; project funding period 7-1-2011 to 6-30-2012; Total Award: \$10,000.

“Technology Access Fee grant for iPads in the gross anatomy lab.” Kwasigroch, T, PI. Total Award: \$27,800.

“The effects of serotonin depletion in developing zebrafish.” Dept Anatomy and Cell Biology; Monaco, P.; project funding period 7-1-11 to 6-30-2012; Total Award: \$1,738.48.

“ETSU Student-Faculty Collaborative Grant for Tim DiPeri. Ordway, GA (Advisor); project funding period Summer 2012; Total Award: \$1000.

“The role of CB₂ receptors in atherogenesis.” ETSU RDC grant; Thewke, D. PI, Rusinol, A. Co-PI. project funding period 7-1-2011 to 6-30-2012; Total Award: \$9,000.

“Effect of beta caryophyllene on atherosclerosis.” Thewke, D., PI, ETSU Major RDC grant; project funding period 7-1-2011 to 6-30-2012; Total Award: \$10,000.

Journal Publications:

Singh S.K., Thirumalai A., Hammond D.J., Jr, Pangburn M.K., Mishra, V.K., **Johnson D.A., Rusiñol A.E., Agrawal, A.** Exposing a hidden functional site of C-reactive protein by site-directed mutagenesis. *J Biol Chem.* 2012 Jan 27;287(5):3550-8. Epub 2011 Dec 9. PubMed PMID: 22158621; PubMed Central PMCID: PMC3271008; (2012).

Girasole, A.E., Palmer, C.P., Corrado, S.L., **Southerland, E.M., Ardell, J.L.**, and Hardwick, J.C. Angiotensin II potentiates adrenergic and muscarinic modulation of guinea pig intracardiac neurons. *Am. J. Physiol. Regul. Interg. Physiol.*, 301: R1391-1399; (2011).

Gibbons, D.D., **Southerland, E.M., Hoover, D.B.**, Beaumont, E, Armour, J.A. and **Ardell, J.L.** Neuromodulation targets intrinsic cardiac neurons to attenuate neuronally-mediated atrial arrhythmias. *Am. J. Physiol. Regul. Interg. Physiol.* 302: R357-364; (2012).

Southerland, E.M., Gibbons, D.D., Smith, S.B., Sipe, A., Williams, C.A., Beaumont, E., Armour, J.A., Foreman, R.D and **Ardell, J.L.** Activated cranial cervical neurons affect left ventricular infarct size and the potential for sudden cardiac death. *Autonomic Neuroscience: Basic and Clinical*, 169:34-42; (2012).

Shin-Kang, S.; Ramsauer, V.P.; Lightner, J.; Chakraborty, K.; Stone, W.; **Campbell, S.**; Reddy, S.A.; Krishnan, K. Tocotrienols inhibit AKT and ERK activation and suppress pancreatic cancer cell proliferation by suppressing the ErbB2 pathway. *Free Radic. Biol. Med.* 51:1164-1174; (2011).

Stone, W.L.; **Campbell, S.E.**; Krishnan, K. The Role of Vitamin E in Prostate Cancer. In: Douglas.R.Spitz; Kenneth J.Dornfeld; Koyamangalath Krishnan; David Guis eds. *Oxidative Stress in Cancer Biology and Therapy.* New York, NY: Humana Press; 333-354; (2012).

Fan, Y., Huang, J., **Duffourc, M.**, Kao, R., **Ordway, G.**, Huang, R., and **Zhu, M-Y.** (Transcription factor Phox2 upregulates expression of norepinephrine transporter and dopamine β -hydroxylase in adult rat brains. *Neuroscience* 192:37-53. Epub 2011 Jul 16. PMID: 21763404; (2011).

Ordway, G.A., Szebeni, A., Chandley, M.J., Stockmeier, C.A., Xiang, L., Newton, S.S., Turecki, G., **Duffourc, M., Zhu, MY.**, Zhu, H., and **Szebeni, K.** Low gene expression of bone morphogenetic protein 7 in brainstem astrocytes in major depression. *Int J of Neuropsychopharmacol* Sep6:1-14. PMID: 21896235; 2011.

Watkins, C., Litchfield, J., Song, E.K., Jaishankar, G.B., Misra, N., Holla, N., **Duffourc, M.**, and Krishnaswamy, G. Chronic Granulomatous Disease, the McLeod Phenotype and the Contiguous Gene Deletion Syndrome – A Review. *Clin Mol Allergy.* 2011 Nov 23; 9:13. PMID: 22111908; 2011.

Stewart, J.R., **Ecay, T.W.**, Heulin, B., Fregoso, S.P., and Linville, B.J. Developmental expression of calcium transport proteins in extraembryonic membranes of oviparous and viviparous *Zootoca vivipara* (Lacertilia, Lacertidae). *J. Exp. Biol.* 214:2999-3004; 2011.

Stinnett, H.K., Stewart, J.R., **Ecay, T.W.**, Pyles, R.A., Herbert, J.F., and Thompson, M.B. Placental development and expression of calcium transporting proteins in the extraembryonic membranes of a placental lizard. *J. Morph.* 273: 347-359; (2011).

Fregoso, S.P., Stewart J.R., and **Ecay, T.W.** Expression of calcium transport proteins in the extraembryonic membranes of a viviparous snake, *Virginia striatula*. *J Exp. Zool. Part B: Molec. Dev. Evol.* 318:250-256; (2012).

Brudecki, L, **Ferguson, D.A.**, McCall, C.E., and Gazzar, M.E. Myeloid-derived suppressor cells evolve during sepsis and can enhance or attenuate the systemic inflammatory response. *Infect. Immun.*, 80(6): 2026; (2012).

Brudecki, L., **Ferguson, D.A.**, Yin, D., Lesage, G.D., McCall, C.E., and Gazzar, M.E. Hematopoietic stem-progenitor cells restore immunoreactivity and improve survival in late sepsis" (IAI05480-11R1). *Infect. Immun.*, 80 (2): 602; (2012).

Wright, T.H. and **Ferslew, K.E.** Biotransformation of Ethanol to Ethyl Glucuronide in a Rat Model After a Single High Oral Dosage. *Alcohol*, 46:159-164 (2011).

Hall, J.V., Schell, M., Dessus-Babus, S., Moore, C.G., Whittimore, J.D., Sal, M., Dill, B.D., and **Wyrick, P.B.** *The Multifaceted Role of Estrogen in Enhancing Chlamydia trachomatis Infection in Polarized Human Endometrial Epithelial Cells.* *Cellular Microbiology*, 13(8), 1183-1199; (2011).

Mabe, A.M, and **Hoover, D.B.** Remodeling of cardiac cholinergic innervation and control of heart rate in mice with streptozotocin-induced diabetes. *Auton Neurosci.* 162:24-31, 2012.

Smith, J.K, Smith, D.L., **Joyner, W.L.**, Fun in the sun- solar radio astronomy for the amateur. *Sky & Telescope.* 6-7; (Nov. 2011)

Ferdyn-Drosik, M., Nowak, P., Bojanek, K., Bałasz, M., Kasperski, J., Skaba, D., Muchacki, R., **Kostrzewa, R.M.** Neonatal DSP-4 treatment impairs 5-HT_{1B} receptor reactivity in adult rats. *Behavioral and biochemical studies. Pharmacol. Rep.* 62: 608-620. PMID: 20885001. In pub med, (Jun 2011).

Joško, J., Drab, J., Nowak, P., Szkilnik, R., Kőrőssy, E., D Boroń, D., Brus, H., **Kostrzewa, R.M.**, and Brus, R. Thioperamide, an H₃ receptor antagonist, prevents [³H]glucose uptake in adult rats lesioned as neonates with 5,7-dihydroxytryptamine. *Neurotox. Res.* 20(1): 93-96, 2011. PMID: 20838953; (Jul 2011)

Archer, T., Fredriksson, A., Szulz, E., **Kostrzewa, R.M.** Influence of physical exercise on neuroimmunological functioning and health: aging and stress. Epub 2010 Oct 15. DOI: 10.1007/s12640.010-9224-9. *Neurotox. Res.* 20(1): 69-83. Epub 2010 Oct 15. PMID: 20953749 [Review article]; (Jul 2011).

Joško, J., Drab, J., Jochem, J., Nowak, P., Szkilnik, R., Korossy-Mruk, E., Boroń, D., **Kostrzewa, R.**, and Brus, R. Ontogenetic serotonergic lesioning alters histaminergic activity in rats in adulthood. *Neurotox. Res.* 20(2): 103-108. Epub. Sept. 14, 2010. PMID: 20838952. [Original data, scientific paper]; (Aug 2011).

Archer, T., **Kostrzewa, R.M.** Physical exercise alleviates ADHD symptoms: regional deficits and development trajectory. *Neurotox Res.* 21(2), 195-209. Epub 2011 Aug 18. PMID: 21850535. [Review article]; (Feb. 2012).

Brus R., Jochem J., Nowak P., Adwent M., Boroń D., Brus H., **Kostrzewa, R.** Effect of pre- and postnatal manganese exposure on brain histamine content in a rodent model of Parkinson's disease. *Neurotox. Res.* 21(2):143-148. Epub 2011 Aug 6. PMID: 21822760; (Feb 2012).

Kostrzewa, R.M., Kostrzewa, F.P. Neonatal 6-hydroxydopamine lesioning enhances quinpirole-induced vertical jumping in rats that were quinpirole-primed during postnatal ontogeny. *Neurotox. Res.* 21(2): 231-235. Epub 2011 Aug 19. PMID: 21853388; (Feb 2012).

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Lowman, D. W. , West, L. J., Bearden, D. W., Wempe, M. F. , Power, T.D. , Ensley, H. E., Haynes, K. , Williams, D. L. and **Kruppa, M.D.** New insights into the structure of (1→3,1→6)-β-D-glucan side chains in the *Candida glabrata* cell wall. *PLoS One* 6(11):e27614; (2011).

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Airhart, M.J., Lee, D.H., Wilson, T.D., Miller, B.E., Miller, M.N., **Skalko, R.G.** & **Monaco, P.J.** Adverse Effects of Serotonin Depletion in Developing Zebrafish. *Neurotoxicology and Teratology* 4, 152–160; (2012).

Tang, H., B. Hilton, **Musich, P.R.**, Fang, D.Z., and **Zou, Y.** "Replication Factor C1, the Large Subunit of Replication Factor C, Is Proteolytically Truncated in Hutchinson-Gilford Progeria Syndrome." *Aging Cell* 11(2): 363-365; (2011).

Musich, P. R. and **Zou, Y.** "DNA-damage accumulation and replicative arrest in Hutchinson-Gilford progeria syndrome." *Biochemical Society Transactions* 39(6): 1764-1769; (2011).

Li, Z., **Musich, P.R.**, Serrano, M.A., Dong, Z., and **Zou, Y.** "XPA-mediated regulation of global nucleotide excision repair by ATR is p53-dependent and occurs primarily in S-phase." *PLoS one* 6(12): e28326; (2011).

Li, Z., **Musich, P.R.**, and **Zou, Y.** "Differential DNA damage responses in p53 proficient and deficient cells: cisplatin-induced nuclear import of XPA is independent on ATR checkpoint in p53-deficient lung cancer cells." *Int. J. Biochem. Mol. Biol.* 2(2): 138-145; (2011).

Brown R.W., Noel D.M., Smith J.J., Smith M.L., Huggins K.N., **Szebeni, K., Szebeni, A., Duffourc, M., Chandley, M.**, and **Ordway, G.A.:** Eszopiclone Facilitation of the Antidepressant Efficacy of Fluoxetine Using a Social Defeat Stress Model. *Pharmacol., Biochem. and Behav.*, 99:648-658, 2011. Epub (2011 Jun 15. PMID:21699914; (2011).

Singh, S.K., Thirumalai, A., Hammond, D.J. Jr., Pangburn, M.K., Mishra, V.K., **Johnson, D.A.**, **Rusiñol A.E.**, and **Agrawal, A.** Exposing a hidden functional site of C-reactive protein by site-directed mutagenesis. *J Biol Chem.* 2012 Jan 27;287(5):3550-8. Epub 2011 Dec 9. PubMed PMID: 22158621; PubMed Central PMCID: PMC3271008; (2012).

Schoborg, R.V. "Chlamydial Persistence-a Tool to Dissect Chlamydia-Host Interactions." Solicited review; *Microbes and Infection*, Vol. 13: pp. 649-662; (Jul 2011).

Foster, C.R., **Singh, M.**, Subramanian, V., **Singh, K.** Ataxia telangiectasia mutated kinase plays a protective role in beta-adrenergic receptor-stimulated cardiac myocyte apoptosis and myocardial remodeling. *Mol. Cell. Biochem.* 353:13-22; (2011).

Amin, P., **Singh, M.**, **Singh, K.** β -adrenergic receptor-stimulated cardiac myocyte apoptosis: Role of β 1 integrins. *J. Signal Transduction.* Volume 2011, Article ID 179057, 9 pages doi:10.1155/2011/179057 (Review article) (2011).

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Foster, C.R., Zha, Q., Daniel, L.L., **Singh, M.**, **Singh, K.** Lack of ATM induces structural and functional changes in the heart: Role in β -adrenergic receptor-stimulated apoptosis. *Exp. Physiol.* 2012, 97:506-515. (Article published with a viewpoint; Ataxia telangiectasia mutated kinase in the heart: currency for myocyte apoptosis. Gorr, M.W., Stevens, S.C.W. and Wold, L.E. *Exp. Physiol.* 2012, 97:476.); (2012).

Xie, Q., **Wundergem, R.**, Shen, Y., Cavey, G., Ke, J., Thompson, R., Bradley, R., Daugherty-Holtrop, J., Xu, Y., Chen, E., Omar, H., Rosen, N., Wenkert, D., Xu, H.E., Vande Woude, G.F. Benzoquinone ansamycin 17AAG binds to mitochondrial voltage dependent anion channel and inhibits cell invasion. *Proc Natl Acad Sci U S A.* 108(10):4105-10; (2011).

Hall, J.V., Schell, M., Sessus-Babus,S., Moore, C.G.,Whittimore, J.D., Sal., Dill, B.D., and **Wyrick, P.B.** The multifaceted role of estrogen in enhancing *Chlamydia trachomatis* infection in polarized human endometrial epithelial cells. *Cell. Micro.* doi:j.1462-5822.2011.01608; (2011).

Rank, R.G., Whittimore, J., Bowlin, A.K., and **Wyrick, P.B.** The intimate relationship between polymorphonuclear leukocytes and the chlamydial developmental cycle: an in vivo ultrastructural analysis. *Infect. Immun.* 79 (8):3291-3301 [Highlighted]; (2011).

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Chen P., Fan Y., Li Y., Sun, Z.W., Bissette G., and **Zhu M.-Y.**: Chronic social defeat up-regulates expression of norepinephrine transporter in rat brains. *Neurochemistry International*, 60:9-20; (2012).

Jain, V., Hilton, B., Chiarelli, P., **Zou, Y.**, Patnaik, S., Cho, B. Conformational probing of the nucleotide excision repair of aminofluorene- and 2-acetylaminofluorene dG adducts in the NarI sequence *Nucleic Acids Res.* 2012 Jan 12. [Epub ahead of print]; (Jan 2012).

Jiang, G., **Zou, Y.**, and Wu, X (2012) Replication Mediated Disassociation of Replication protein A-XPA complex upon DNA Damage: Implications for RPA Handing off. *Cell Biol Int.* 2012 May 11. [Epub ahead of print]; (2012).

Papers, Abstracts and/or Presentations:

Hammond, D.J., Jr., Thirumalai, A., Voleti, B., Zhang, S., and **Agrawal, A.** Oct-1 acts as a repressor of reactive protein gene expression. *J. Immunol.* 188: 172.13, 2012. (Abstract)

Gang, T.B., Hammond, D.J., Jr., Singh, S.K., **Ferguson, D.A., Jr.**, and **Agrawal, A.** C-reactive protein-mediated initial protection of mice from pneumococcal infection. *J. Immunol.* 188: 112.4, 2012. (Abstract)

Gang, T.B., and **Agrawal, A.** Mechanism of anti-pneumococcal function of C-reactive protein. Tennessee Physiological Society Meeting, COM, ETSU, October 13-14, 2011. (oral and poster)

Thirumalai, A., and **Agrawal, A.** Exposing a hidden functional site of C-reactive protein by site-directed mutagenesis. Tennessee Physiological Society Meeting, COM, ETSU, October 13-14, 2011. (oral and poster)

Hammond, D.J., Jr., Thirumalai, A., Voleti, B., Zhang, S., and **Agrawal, A.** Oct-1 acts as a repressor of C-reactive protein gene expression. Immunology 2012 Meeting, Boston, MA. (poster)

Gang, T.B., Hammond, D.J., Jr., Singh, S.K., **Ferguson, D.A., Jr.**, and **Agrawal, A.** C-reactive protein-mediated initial protection of mice from pneumococcal infection. Immunology 2012 Meeting, Boston, MA. (poster)

Hammond, D.J., Jr., Thirumalai, A., Voleti, B., Zhang, S., and **Agrawal, A.** Oct-1 acts as a repressor of C-reactive protein gene expression. Appalachian student research forum, ETSU, April 5, 2012. (poster)

Zhang, S.A., Thirumalai, A., Hammond, D.J, Jr., and **Agrawal, A.** Transcriptional regulation of C-reactive protein gene expression in Hep3B cells. Appalachian student research forum, ETSU, April 5, 2012. (poster)

Gang, T.B., Hammond, D.J., Jr., Singh, S.K., **Ferguson, D.A., Jr.**, and **Agrawal, A.** Development of modified C-reactive protein for treating pneumococcal infection. Appalachian student research forum, ETSU, April 5, 2012. (poster)

Thirumalai, A, Singh, S.K., Hammond, D.J., Jr., **Johnson, D.A., Rusinol, A.E.**, and **Agrawal, A.** Engineering a C-reactive protein molecule for prevention of atherosclerosis. Appalachian student research forum, ETSU, April 5, 2012. (oral and poster) (won 1st place award for poster).

Hardwick, J.C., Girasole, A.E., Ryan, S.E., **Southerland, E.M.**, and **Ardell, J.L.** Chronic heart disease alters synaptic efficacy in the guinea pig intrinsic cardiac nervous system. Society for Neuroscience, 2011.

Hardwick, J.C., Ryan, S.E., Wilson, M.J., **Southerland, E.M.**, and **Ardell, J.L.** Inhibition of AT1 receptors alters remodeling of the guinea pig cardiac plexus following chronic MI. *FASEB J.* 26, 2012.

Ardell, J.L. Foundations of Neurocardiology: Neural control of the normal and diseased heart. *FASEB J.* 26, 2012.

Milord, I., and **Bond, C.E.** Increasing awareness of the progress and benefits of neuroscience research through the exploration of common brain myths. *2012 Appalachian Student Research Forum*, Millenium Center, Johnson City, TN. USA. (Poster and letter of recommendation submitted for competitive Scholarship, won first prize: Broward Women's Alliance, Fort Lauderdale, FL.; \$1,500 Award)

Cranmore, J., **Hoover, D.B.**, and **Bond C.E.** In vitro characterization of neurotrophic factor adaptations to oxidative stress. *2012 Boland Undergraduate Research Symposium (talk) and 2012 Appalachian Student Research Forum (poster)*, Millenium Center, Johnson City, TN. USA. (WON FIRST PRIZE IN BIOMED SCI CATEGORY)

Bond, C.E., Zhu, H., and **Hoover, D.B.** Quantification of glial-derived neurotrophic factor alterations in neurturin knock-out mice. Program No. 31.08. 2011 Neuroscience Annual Meeting Planner. Washington, D.C.: Society for Neuroscience, 2011. Online.

Frazier, A.D., and **Champney, W.S.** The Vanadyl Ribonucleoside Complex Inhibits Ribosome Synthesis in *Escherichia coli*. American Society for Microbiology meeting, New Orleans, May, 2011

Frazier, A.D., and **Champney, W.S.** Enhanced Aminoglycoside Sensitivity of Ribonuclease Mutants of *Escherichia coli* ASM Biodefense meeting, Washington D.C., February, 2012

Ross, W.T., Pyles, R.A., Stewart, J.R., and **Ecay, T.W.** (2012) Removal of eggshell calcium impacts the development of corn snake embryos. *FASEB J.* 26:886.16. (Abstract).

Ross, W.T., Pyles, R.A., Stewart, J.R., and **Ecay, T.W.** (2012) Removal of eggshell calcium impacts the development of corn snake embryos. *FASEB J.* 26:886.16. Poster presentation at Experimental Biology 2012. WT Ross awarded Scholander Award (second place) for presentation by grad student/postdoc. (Apr. 2012, San Diego, CA).

Ross, W.T., Pyles R.A., Stewart, J.R., and **Ecay T.W.** (2012). Removal of eggshell calcium impacts the development of corn snake embryos. Poster presentation at the Appalachian Student Research Forum. WT Ross awarded second place in Pharmacy and Medical Student division. (Apr. 2012, Johnson City, TN).

Stockwell, M., Stewart, J.R., and **Ecay T.W.** (2012). Development of nucleic acid tools to study expression of calcium transport proteins in reptiles. Poster presentation at the Appalachian Student Research Forum. (Apr. 2012, Johnson City, TN).

Tant, M.R., Wempe, M.F., Rice, P.J., and **Ecay T.W.** (2011). A Pharmacokinetic Study of Sucrose Acetate Isobutyrate as an Excipient for Oral Delivery of Clarithromycin. Poster presentation at the Tennessee Physiological Society meeting (Oct. 2011, Johnson City, TN).

Harrell, C., McCormick, W.F., Stephens, G., Campbell, T., Benson, P., Cline-Parhamovich, K., Lemieux, E., and **Ferslew, K.E.** The Effects of Drugs and Alcohol on Autopsy Cases Performed at the William L. Jenkins Forensic Center from 2003-2009. *Proceedings of the American Academy of Forensic Sciences* 17:422-423 (2011).

Haupt, T., and **Ferslew, K.E.** Biotransformation of Ethanol to Ethyl Glucuronide in a Rat Model After a Single Oral Dosage. *The Toxicologist (Supplement to Toxicological Sciences)* 120:389 (Supplement 2, March, 2011).

Wright T.H., Cline-Parhamovich, K., Lajoie, D., Parsons, L., Dunn, M., and **Ferslew, K.E.** Deaths Involving Methylenedioxypropylvalerone (MDPV) in Upper East Tennessee. *Proceedings of the American Academy of Forensic Sciences* 18:463 (2012).

Harrell, C., McCormick, W.F., Stephens, G., Campbell, T., Benson, P., Cline-Parhamovich, K., Lemieux, E., and **Ferslew, K.E.** The Effects of Drugs and Alcohol on Autopsy Cases Performed at the William L. Jenkins Forensic Center from 2003-2009. Presented at the 63rd Meeting of the American Academy of Forensic Sciences, Chicago, Illinois, February 23, 2011.

Haupt, T., and **Ferslew, K.E.** Biotransformation of Ethanol to Ethyl Glucuronide in a Rat Model After a Single Oral Dosage. Presented at the 50th Meeting of the Society of Toxicology, Washington, D.C., March 9, 2011.

Wright, T. H., and **Ferslew, K.E.** Comparison of Postmortem Vitreous Humor Ethyl Glucuronide Concentrations in Humans and Sprague Dawley Rats Following Ingestion of Alcohol. Presented at the Appalachian Student Research Forum, Center at Millennium Park, Johnson City, Tennessee, March 24, 2011.

Wright, T.H., and **Ferslew, K.E.** Comparison of Postmortem Vitreous Humor Ethyl Glucuronide Concentrations in Humans and Sprague Dawley Rats Following Ingestion of Ethanol. Presented at the Society of Forensic Toxicologists/The International Association of Forensic Toxicologists Meeting, San Francisco, CA, September, 2011.

Wright T.H., Cline-Parhamovich, K., Lajoie, D., Parsons, L., Dunn, M., and **Ferslew, K.E.** Deaths Involving Methylenedioxypropylvalerone (MDPV) in Upper East Tennessee. Presented at the 64th American Academy of Forensic Sciences Meeting, Atlanta, GA, February, 2012.

Fulmer, M., Wright, T., Lemieux, E., and **Ferslew, K.E.** Detection of Phenazepam by Thin-Layer Chromatography. Presented at the 2012 Appalachian Student Research Forum, Centre at Millennium park, Johnson City, TN, April 5, 2012.

Hall, J.V., Schell, M., Dessus-Babus, S., Moore, C.G., Whittimore, J.D., Sal, M., Dill, B.D., and **Wyrick, P.B.** *Membrane estrogen receptors contribute to the success of Chlamydia trachomatis infections in the human endometrial Ishikawa cell line.* *Chlamydia Basic Research Society, 5nd Biennial Conference*, Redondo Beach, California, 2011.

Marissa Bambino, **Hall, J.V.**, Kintner, J., and **Schoborg, R.V.** *Activation of Host Cell Signaling Pathways by Chlamydia trachomatis/Herpes Simplex Virus Type II Co-Infection of Response to Viral Attachment/Entry.* Appalachian Student Research Forum, ETSU, 2011.

Hoover, D.B., Girard, B.M., Hoover, J.L., Parsons, R.L. PAC1 receptors mediate positive chronotropic responses to PACAP27 and VIP in isolated mouse atria. Program No. 283.23. 2011 Neuroscience Meeting Planner. Washington, D.C.: Society for Neuroscience, 2011. Online.

Fregoso, S.P., and **Hoover, D.B.** Characterization of glial cells in the developing heart and cardiac parasympathetic ganglia of mice. Program No. 717.05. 2011 Neuroscience Meeting Planner. Washington, D.C.: Society for Neuroscience, 2011. Online.

Gunter, B.R., and **Hoover, D.B.** Localization of the Neurturin Receptor, GFR α 2, in Cholinergic Neurons of the Neonatal and Adolescent Mouse Heart. 2012 Appalachian Student Research Forum: April 5, 2012.

Recombinant expression of human enteropeptidase light chain in *Pichia pastoris* Eliot T Smith, Mallory McGhee, and **Johnson, D.A.** Poster presentation at the 2012 ASBMB meeting in San Diego in April. Eliot had an ASBMB travel Award.

Expression of recombinant native and codon optimized human mast cell chymases in *Pichia pastoris* by Karie Hodges, Eliot T. Smith and **Johnson, DA** – Second Place Award at the 2012 Appalachian Research Forum. April 5, 2012.

Expression of Recombinant Human Neutrophil Elastase in *Pichia pastoris* by Eliot T Smith and **Johnson, D.A.** – First Place Award in the Graduate student oral presentations. April 5, 2012.

Joyner, D, and **Joyner, W.L.** GoTrybe Presents, National Parents Teacher Association. Coronado Convention Center, Orlando, Florida, November, 2011.

Joyner, W.L. An Epidemic-Childhood Obesity: Physical Activity with GoTrybe as part of the solution, Association of Chairs of Departments of Physiology (ACDP), 2010 Fall Meeting, Riviera Maya, Mexico, December 2011.

Kostrzewa, R.M., Nowak, P., Kostrzewa, R.A., Skaba, D., Brus, R., Kostrzewa, J.P. Hydroxyl Radicals in striatum of Parkinsonian rats. 42nd Society for Neuroscience meeting, New Orleans LA, October 2012. (Abstract)

Kruppa, R., Co-presenter with Dr. David Williams at the 11th Conference on *Candida* and Candidiasis, March 2012, San Francisco. Poster entitled “Evidence for a novel cyclical (1 \rightarrow 3,1 \rightarrow 6)-glucan isolated from *Candida albicans* hyphae”.

Replication factor C1, the large subunit of replication factor C, is proteolytically truncated in Hutchinson-Gilford progeria syndrome. Hilton, B., Tang, H. **Musich, P.R.**, Fang, DZ and **Zou, Y.** ETSU 2012 Appalachian Student Research Forum, 5 April 2012:

A comprehensive study for the effects of DSP4 on the expression of noradrenergic phenotypes in cultured cells and its potential mechanisms. Wang, Y. **Musich, P.R. You, Y** and **Zhu, MY.**

Replication factor C1, the large subunit of replication factor C, is proteolytically truncated in Hutchinson-Gilford progeria syndrome. Hilton, B, Tang, H, **Musich, P.R.**, Fang, D.Z., and **Zou, Y.** 14th Annual Midwest DNA Repair Symposium in Cincinnati, Ohio on the 18 through the 20th of May 2012.

Elucidation of Xeroderma Pigmentosum Complementation Group A Binding to Double-Strand/Single-Strand DNA Junctions. Hilton, B, Shkriabai, N, Roginskaya, M, **Musich, P.R.**, Mamuka Kvaratskhelia, and **Yue Zou.** 14th Annual Midwest DNA Repair Symposium in Cincinnati, Ohio on the 18 through the 20th of May 2012.

Taking Vitamin E or not: γ -Tocopherol induces XPA over-expression and promotes Nucleotide Excision Repair (NER). Li, Z, Wang, H, **Campbell, S.E.**, Guo, H., **Musich, P.R.** and **Zou, Y.** 14th Annual Midwest DNA Repair Symposium in Cincinnati, Ohio on the 18 through the 20th of May 2012

Phosphorylation of Replication Protein A Promotes DNA Damage-Induced Apoptosis. Serrano, M.A., **Musich, P.R.**, and **Zou, Y.** 14th Annual Midwest DNA Repair Symposium in Cincinnati, Ohio on the 18 through the 20th of May 2012.

Novel functions of ataxia telangiectasia and Rad3 related (ATR) in the cytoplasm. Li, Z., **Musich, P.R.**, McGrath, J.A., Tanaka, A., and **Yue Zou, Y.** 14th Annual Midwest DNA Repair Symposium in Cincinnati, Ohio on the 18 through the 20th of May 2012.

Differential utilization of importin α 4 and importin α 7 for UV-induced nuclear import of XP. Zhengke, A, Li, **Musich, P.R.**, Cartwright, C, Glaunsinger, BA, and **Zou, Y.** 14th Annual Midwest DNA Repair Symposium in Cincinnati, Ohio on the 18 through the 20th of May 2012.

Ordway, G.A., Szebeni, A., DiPeri T., Stockmeier CA, **Szebeni K.**: Shortened telomere length in white matter oligodendrocytes from major depressive subjects. Society for Biological Psychiatry, May 4, 2012.

DiPeri T. et al. Reduced caspase-3 expression level in hippocampus post-myocardial infarction after spinal cord stimulation, Appalachian Research Forum, 2012.

Szebeni A., Szebeni K. DiPeri T. Stockmeier C.A., and **Ordway G.A.**: Accelerated Glia Aging by Shortened Telomere Length in White Matter Oligodendrocytes and Astrocytes in Major Depression, Cold Spring Harbor, Glia in Health and Disease, 2012.

Keasler J., Bridges C., and **Rusiñol A.E.** Nuclear Translocation Of Foxo3 Transcription Factor During Prelamin A-Induced Cell Cycle Arrest in 3T3 Cells. ETSU Bolland Research Forum. Johnson City TN. (2012)

Thirumalai, A., Singh S.K., Hammond, S., Rusiñol A.E., Johnson D.A. and **Agrawal, A.**, (2012) Exposing A Hidden Functional Site Of C-Reactive Protein By Site-Directed Mutagenesis. Appalachian Students Research Forum. Johnson City TN.

Schell, M., Moore, C., Novak, M., Leonard, C., Hossain, M., Price, J., **Hall, J.**, and **Schoborg, R.V.** "C. *trachomatis* Infection Increases Host Cellular Mutation Frequency." 7th Meeting of the European Society for Chlamydia Research, Amsterdam, The Netherlands; July 2012. (Abstract)

Novak, M., **Schell, M., Moore, C.**, and **Schoborg, R.V.** "Distribution of DNA Damage and Repair Proteins in in *Chlamydia trachomatis*-infected Cells." Annual TN/KY Regional ASM Meeting; Oct. 2011. (Abstract).

Novak, M., Moore, C. and **Schoborg, R.V.** "Distribution of DNA Damage and Repair Proteins in in *Chlamydia trachomatis*-infected Cells." The 5th Annual QCOM/ETSU Undergraduate Summer Research Symposium; August 2011. (Abstract)

Novak, M., **Schell, M., Moore, C.** and **Schoborg, R.V.** "Distribution of DNA Damage and Repair Proteins in in *Chlamydia trachomatis*-infected Cells." Fall Meeting of the ETSU ASM Student Branch; Oct. 2011. (Abstract)

Novak, M., Moore, C., Schell, M., and **Schoborg, R.V.** "Increased DNA Damage and Redistribution of DNA Repair Proteins in *Chlamydia trachomatis* Infected Host Cells." The 6th Annual ETSU Undergraduate Research Symposium; April 2012. (Abstract)

Novak, M., Moore, C., Schell, M., and **Schoborg, R.V.** "Increased DNA Damage and Redistribution of DNA Repair Proteins in *Chlamydia trachomatis* Infected Host Cells." The 27th Annual ETSU Student Research Forum; April 2012. (2nd place, Undergraduate Division). (Abstract)

Phillips-Campbell, R., Kintner, J. and **Schoborg, R.V.** "Development of an *In Vivo* Murine Model of Chlamydial Persistence." The 28th Annual ETSU Student Research Forum; April 2012. (Abstract)

Hardwick, J.C., Ryan, S.E., Wilson, M.J., **Southerland, E.M.**, and **Ardell, J.L.** Inhibition of AT1 receptors alters remodeling of the guinea pig cardiac plexus following chronic MI. FASEB J. 26, 2012

Daniels C.R., Foster, C.R., **Singh, M.**, and **Singh, K.** Exogenous ubiquitin inhibits chronic β -adrenergic receptor-stimulated cardiac myocyte apoptosis and myocardial remodeling. 3rd annual Tennessee Physiological Society Meeting (Poster presentation, Oct 14, 2011; East Tennessee State University, Johnson City, TN; (*Winner of EB2012 travel award*).

Dalal, S., Foster, C.R., Das, B.C., **Singh, M.**, and **Singh, K.** β -adrenergic receptor stimulation induces endoplasmic reticulum stress in adult cardiac myocytes: role in apoptosis. 3rd annual Tennessee Physiological Society Meeting (Poster presentation, Oct 14, 2011; East Tennessee State University, Johnson City, TN).

Steagall, R.J., Sipe, A., Williams, C.A., **Joyner, W.L.**, and **Singh, K.** Substance P release during cardiac ischemia from the thoracic spinal dorsal horn is mediated by TRPV1. 3rd annual Tennessee Physiological Society Meeting (Poster presentation, Oct 14, 2011; East Tennessee State University, Johnson City, TN).

Yakoob S., Daniels C.R., Dalal, S., **Joyner, W.L.**, **Singh, M.**, and **Singh, K.** Extracellular ubiquitin modulates cardiac fibroblast differentiation and function. Appalachian student Research Forum (Poster presentation, April 05, 2012), *First place winner of undergraduate research category*.

Daniel, L.L., Foster, C.R., Daniels, C.R., **Joyner, W.L.**, **Singh, M.**, and **Singh, K.** Deficiency of ataxia telangiectasia mutated kinase improves left ventricular function after myocardial infarction. Role in myofibroblast differentiation and extracellular matrix deposition (Poster presentation; April 05, 2012). *First place winner of graduate research category*.

Daniels, C.R., Foster, C.R., Yakoob, S., **Singh, M.**, and **Singh, K.** Exogenous ubiquitin modulates chronic β -adrenergic receptor-stimulated cardiac myocyte apoptosis and myocardial remodeling (April 05, 2012; oral presentation).

Daniels, C.R., Foster, C.R., Yakoob, S., **Singh, M.**, and **Singh, K.** β -adrenergic receptor (β -AR)-stimulated cardiac myocyte apoptosis and myocardial remodeling are modulated by exogenous ubiquitin. Experimental Biology meeting, poster presentation, April 23-27, 2012, San Diego, CA.

Ordway, G.A., **Szebeni, A.**, Stockmeier, C.A., and **Szebeni, K.** Shortened Telomere Length In White Matter Oligodendrocytes From Major Depressive Subjects. (Society of Biological Psychiatry 67th Annual Scientific Convention & Program May 3-5, 2012)

DiPeri, T.P., Hunt, C.R., **Szebeni, K., Szebeni, A., Southerland, M.E., Ardell, J.L., and Ordway, G.A.** Reduced caspase-3 expression level in hippocampus post-myocardial infarction after spinal cord stimulation. Appalachian Research Forum. (Poster presentation) (2012).

Szebeni, A., Szebeni, K., DiPeri, T., Stockmeier, C.A., and **Ordway, G.A.** Accelerated Glia Aging by Shortened Telomere Length in White Matter Oligodendrocytes and Astrocytes in Major Depression. Glia Meeting of Cold Spring Harbor Laboratory Cold Spring Harbor, NY. (Poster presentation). (2012).

Netherland, C., and **Thewke, D.** Win55, 212-2 Decreases Plasma Triglycerides in Cannabinoid Receptor Type 2 (CB2) Deficient Ldlr-null Mice. NIH National Graduate Student Research Conference (Oct 17-18, 2011). (Abstract) (Presentation)

Wundergem, R., Simerly, T., Li, C., and Williams, D.L. Lipopolysaccharide directly inhibits rapid delayed rectifier k^+ current, i_{kr} , and calcium oscillations in hl-1 cardiomyocytes. Shock Society, Poster presentation. (2011).

Graves, B.M., **Wundergem, R,** Simerly, T, Li, C and Williams, D.L. Inhibition of calcium oscillations in HL-1 cardiomyocytes via the PI3Kinase pathway.. Poster presentation, Shock Society, 2011.

Wright, G. Hypoxia 2011 Davos Switerland “ HIF protection in Heart: remodeling of mitochondrial function and proteome.” Poster presentation.

Wu, J., Chen,P., Ardell, C. and **Wright, G.** “Tennessee Physiological Society 2011. Hif-1alpha and cardioprotection.” Poster.

Wu, J., and **Wright, G.** Appalachian Student research presentation. 2012.: Hif-1alpha in Heart: protective mechanisms.

Wyrick, P. Session Chair: Molecular Biology and pathogenesis. 10th European Chlamydia Meeting, 2012. Amsterdam, The Netherlands.

Fan, Y., Huang J.J., **Duffourc M,** Kao R.L., **Ordway, G.A,** Huang, R., and **Zhu, M.-Y.:** Transcription factor Phox2 upregulates expression of norepinephrine transporter and dopamine β -hydroxylase in adult rat brains. *Neuroscience*, 2011, 192:37-53.

Zha Q,Q,, Wang Y., Fan, Y., and **Zhu, M.-Y.:** Dexamethasone-induced up-regulation of the human norepinephrine transporter involves the glucocorticoid receptor and increased binding of C/EBP- β to the proximal promoter of norepinephrine transporter. *Journal of Neurochemistry*, 2011, 119(3):654-663.

Ordway, G.A., Szebeni, A., Chandley, M., Stockmeier C.A., Newton S.S., **Duffourc, M,, Zhu, M.-Y.,** Zhu H., and **Szebeni K.:** Low Gene Expression of Bone Morphogenetic Protein 7 in Brainstem Astrocytes in Major Depression. *International Journal of Neuropsychopharmacology*, 2011, 6:1-14.

Chen P., Fan Y., Li Y., Sun Z.W., Bissette G., and **Zhu M.-Y.:** Chronic social defeat up-regulates expression of norepinephrine transporter in rat brains. *Neurochemistry International*, 2012, 60:9-20.

Zou, Y., Shell, S.M., Li, Z., Shkriabai, N., Kvaratskhelia, M., Brosey, C., Serrano, M.A., Chazin, W.J., and **Musich, P.R.** Crosstalk between DNA Damage Checkpoints and Nucleotide Excision Repair: ATR Kinase

Promotes UV-DNA Damage Repair via Interaction with XPA. Society of Chinese Bioscientists in America 13th International Symposium, July 25-29, 2011. Guangzhou, China.

Hilton, B., Tang, H., **Musich, P.R.**, Fang, D.Z., and **Zou, Y.** Replication factor C1, the large subunit of replication factor C, is proteolytically truncated in Hutchinson-Gilford progeria syndrome. 14th Midwest DNA Repair Symposium, May 19-20, Cincinnati, OH.

Hilton, B., Shkriabai, N., Roginskaya, M., **Musich, P.R.**, Kvaratskhelia, M., and **Zou, Y.** Elucidation of Xeroderma Pigmentosum Complementation Group A Binding to Double-Strand/Single-Strand DNA Junctions. 14th Midwest DNA Repair Symposium, May 19-20, Cincinnati, OH

Li, Z., **Musich, P.R.**, McGrath, J.A., Tanaka, A., and **Zou, Y.** Novel functions of ataxia telangiectasia and Rad3 related (ATR) in the cytoplasm. 14th Midwest DNA Repair Symposium, May 19-20, Cincinnati, OH.

Li, Z., **Musich, P.R.**, Cartwright, B., Glaunsinger, B.A., and **Zou, Y.** Differential utilization of importin $\alpha 4$ and importin $\alpha 7$ for UV-induced nuclear import of XPA. 14th Midwest DNA Repair Symposium, May 19-20, Cincinnati, OH.

Li, Z., Wang, H., **Campbell, S.E.**, Guo, H., **Musich, P.R.**, and **Zou, Y.** Taking Vitamin E or not: γ -Tocopherol induces XPA over-expression and promotes Nucleotide Excision Repair (NER). 14th Midwest DNA Repair Symposium, May 19-20, Cincinnati, OH.

Serrano, M.A., Li, Z., Dangeti, M., **Musich, P.R.**, Patrick, S., Roginskaya, M., Cartwright, B., and **Zou, Y.** DNA-PK, ATM and ATR collaboratively regulate p53-RPA interaction to facilitate homologous recombination DNA repair. 14th Midwest DNA Repair Symposium, May 19-20, Cincinnati, OH.

Publications Submitted or in Press:

Frazier, A.D. and **Champney, W.S.** 2012 The vanadyl ribonucleoside complex inhibits ribosomal subunit formation in *Staphylococcus aureus*. J. Antimicrobial Chemo. (in press).

Labus, L., Nowak, P., Szkilnik, R., **Kostrzewa, R.M.**, Boroń D., Brus, R. (2012) Neonatal DSP-4 lesioning of central noradrenergic neurons: a model for the study of interaction with other neurotransmitter systems in the brain of adult rats. *Annales Acad. Med. Silesiensis* (in press). [Original data, scientific paper]

Korossy-Mruk, E., Kuter K., Nowak, P, Szkilnik, R, **Kostrzewa R.M.**, Brus. R. (2012) Neonatal DSP-4 treatment modifies analgesic effect of methandamide, a CB₁ receptor agonist in adult rats. *Neurotox. Res.* (in press). [Original data, scientific paper]

Brown, R.W., Maple, A.M., Perna, M.K., Sheppard, A.B., Cope, Z.A., **Kostrzewa, R.M.** (2012) Schizophrenia and substance abuse comorbidity: Nicotine addiction and the neonatal quinpirole model. *Dev. Neurosci.* (in press). [Review]

Serrano, M.A., Li, Z., Dangeti, M., **Musich, P.R.**, Patrick, S., Roginskaya, M., Cartwright, B., and **Zou, Y.** (2012). "DNA-PK, ATM and ATR collaboratively regulate p53-RPA interaction to facilitate homologous recombination DNA repair." *Oncogene* (in press)

Southerland, E.M., Gibbons, D.D., Smith, S.B., Sipe, A., Williams, C.A., Beaumont, E., Armour, J.A., Foreman, R.D., and **Ardell, J.L.** Activated cranial cervical neurons affect left ventricular infarct size and the potential for sudden cardiac death. *Autonomic Neuroscience: Basic and Clinical*, (in press), 2012.

Steagall, R.J., Sipe, A, Williams, C.A., **Joyner, W, Singh, K.** Release of thoracic spinal dorsal horn substance P during cardiac ischemia is mediated by TRPV1. **Neuroscience** 2012 (In Press).

Gao, M., Ha, T., Zhang, X., Liu, L., Wang, X., Kelley, J., **Singh, K.**, Kao, R., Gao, X., Williams, D., Li, C. TLR3 plays a central role in cardiac dysfunction during polymicrobial sepsis. *Critical Care Medicine* 2012 (In Press).

Invited Research Presentations:

- Agrawal A:** Invited Seminar (CME), Quillen College of Medicine, Department of Internal Medicine, March 2012. Lecture on “C-reactive protein (CRP).
- Ardell J:** Foundations of Neurocardiology: Neural control of the normal and diseased heart. *FASEB J.* 26, 2012.
- Ardell J:** Neuromodulation of the ischemic myocardium. Neural Interface Conference, Salt Lake City, UT (June 2012).
- Ardell J:** Current understanding of autonomic nervous system behavior in health and disease. 9th International Neurologic and Cardiac Electrophysiology Symposium, Chiang Mai, Thailand (June 2012).
- Ardell J:** Neural remodeling of the intrinsic cardiac nervous system associated with ischemic and non-ischemic heart disease: neural processing implications. 9th International Neurologic and Cardiac Electrophysiology Symposium, Chiang Mai, Thailand (June 2012).
- Bond C:** Glial responses to oxidative stress: implications for neurodegenerative diseases.” Delaware State University, Dover, DE. USA (Invited speaker: 03/30/2012).
- Campbell S:** 2nd International Congress on Tocotrienols, July 12-15 Las Vegas, Nevada. “Tocotrienols, but not Tocopherols regulate proliferation and survival in Pancreatic Cancer.” UTK Medical Center invited me to give a talk on my research. The purpose of the visit was to provide consultation on Prostate Cancer animal models to investigate the potential anti-cancer properties of a newly discovered protein, the Cancer and Immunology group are working on.
- Champney S:** Synthesis in *Escherichia coli*. American Society for Microbiology meeting, New Orleans, May, 2011.
- Champney S:** Frazier, A.D. and W. Scott Champney Enhanced Aminoglycoside Sensitivity of Ribonuclease Mutants of *Escherichia coli* ASM Biodefense meeting, Washington D.C., February, 2012.
- Ferguson D:** Gang, T. B., D. J. Hammond, Jr., S. K. Singh, D. A. Ferguson, Jr., and Alok Agrawal. C-reactive protein-mediated initial protection of mice from pneumococcal infection. Immunology 2012 Meeting, Boston, MA. (poster)
- Ferguson D.:** Gang, T. B., D. J. Hammond Jr., S. K. Singh, D. A. Ferguson Jr., and A. Agrawa Development of modified C-reactive protein for treating pneumococcal infection. Appalachian student research forum, ETSU, April 5, 2012. (poster).
- Hoover D:** Department of Molecular Pharmacology and Physiology, University of South Florida College of Medicine, Tampa, FL. Title - “Structure, Function, and Development of the Cardiac Parasympathetic Nervous System.” September 22, 2011.

- Hoover D.** Department of Natural Sciences, Maryville College, Maryville, TN. Title - "Neuronal Control of Heart Function." March 29, 2012.
- Kostrzewa R** Invitation as Keynote Speaker at The 3rd Annual World Congress of NeuroTalk-2012, Beijing, China, May 2012. Declined.
- Kostrzewa R:** The dopamine D₂ agonist quinpirole as a non-neurodegenerative neurotoxin. VI Neurotoxicity Society Meeting on Mechanisms of Neurodegenerative Disorders, Valdivia, Chile. March 2013. [Scheduled in the program] **CME Program, Proposal**
- Kwasigroch T:** Conference for the National Association of Nurse Anesthetists, Williamsburg, Virginia, November, 2011
- Ordway G** "Suicide, Depression, and Brain Biology." (Lecture/discussion). Dept. of Psychology Suicide Lecture Series, ETSU, Spring 2012.
- Schoborg R:** "Chlamydial Persistence-a Tool to Dissect Chlamydia-Host Interactions." Dept. of Microbiology, Midwestern University, Downer's Grove, IL: Sept. 16, 2011.
- Schoborg R:** "Chlamydial Persistence-a Tool to Dissect Chlamydia-Host Interactions." Dept. of Internal Medicine, QCOM, Johnson City, TN: Jan. 24, 2012.
- Schoborg R:** "Productive Viral Replication is Required for PEDV-induced, *C. pecorum* Persistence." Institut für Veterinärpathologie, Vetsuisse, University of Zurich, Switzerland: May 21, 2012.
- Schoborg R:** "*C. trachomatis* Infection Increases Host Cellular Mutation Frequency." Institut für Veterinärpathologie, Vetsuisse, University of Zurich, Switzerland: May 25, 1012.
- Thewke D:** Department of Biochemistry and Molecular Biology. "Effects of CB2 signaling on atherosclerosis and vascular calcification."
- Thewke D:** Vanderbilt University cardiovascular research unit. Role of CB2 in advanced atherosclerotic plaque stability.
- Zhu, M-Y:** "Correlation of chronic stress and dysfunction of the noradrenergic neurons for depression." Oral Presentation at Soochow University, China, May 18, 2012.

Books/Book Chapters/Reviews:

Books:

Palomo T, **RM Kostrzewa** and RJ Beninger (co-Editors) ***Staging Neuropsychiatric Disorders: Implications for Etiopathogenesis and Treatment***, Fundación Cerebro y Mente, Madrid, Spain, 2011 (Springer: New York).

Kostrzewa RM (Editor-in-Chief) *Handbook of Neurotoxicity*, Springer, New York NY. Target publication date, Fall 2012

Book Chapters:

Chandley, M.J., and **Ordway, G.A.** Chapter X. Noradrenergic dysfunction in depression and suicide. *In: Neurobiology of Suicide* (ed. Y. Dwivedi, G. Pandey), (in press).

Patent Awards/Disclosures:

M Duffourc:

Practical Chimeric Protein Standards for Quantitative Immunoblotting. Awarded in 6/2012.

D Johnson:

Expression of Recombinant Human Enteropeptidase (Enterokinase) Light Chain in *Pichia pastoris* – previously disclosed

Expression of recombinant human C-reactive protein in *Pichia pastoris*– previously disclosed.

University Activities/Committees:

A Agrawal:

Coordinator, Pharmacology/Biomedical Sciences, Biomedical Sciences, 2004-present;
Graduate Program Pharmacology/Biomedical Sciences faculty representative, Biosafety
Committee, 2006-present; Member, Biomedical Sciences Graduate Students Admissions
Committee, 2004-present.

J Ardell:

Chair: University Select Committee for Scientific conduct (2012); Medical School Student
Summer Research Committee (Director).

R Baisden:

University Committee For Animal Care – Co Chair; Committee to Support Student Health Faculty
Advisor.

C Bond:

Assistant Director Molecular Biology Core Facility; Poster judge for the 2012 Appalachian
Student Research Forum, 04/2012; Peer review of Major grants for Research Development
Committee, 03/2012-ongoing; Peer review of Student-Faculty Collaborative Grants, Honors Coll,
ETSU, 11/2011-ongoing; Peer review of Small grants for Research Development Committee,
04/2011-ongoing; Departmental First Aid provider/AED Operator.

S Campbell:

Faculty Senate and Faculty Senate Executive Committee; OIT Policy Survey Committee
Faculty Senate Secretary; Research Advisory Council; ETSU Research Development Committee
Review Panel; 2010 LCME Institutional Setting Academic Environment Committee –
Subcommittee Chair; Molecular Biology Core Facility Oversight Committee

S Champney:

ETSU Academic Council – member; ETSU Graduate Council – Chairman; Appalachian Regional
Research Forum – taskforce member; ETSU Research Advisory Committee – member.

D Defoe

University Committee on Animal Care (UCAC); College of Medicine Library Committee; Research
Advisory Committee to the Dean.

M. Duffourc:

Director of the Molecular Biology Core Facility, 2004-present; Pharmacology Seminar Series
Director, 2005 – present; Committee on Gender and Special Issues, 2007-present; Mass
Spectrometry Facility Oversight Committee, 2008-present; Promotions Committee, 2009 –
present; Communications Task Force, Chairman, 2010 – present; Educational Program for the
MD degree self study committee, 2010 – 2011; Integrated Grand Rounds Committee 2010-
present. Nominated for Caduceus Award - Professor of the Year from 2nd year med students;
Winner: Scarlet Sash Society

T Ecay:

ETSU Faculty Senate, 2005-present; ETSU Appalachian Student Research Forum Judge, 2012;
QCOM Learning Resources Advisory Committee, 2006-present; QCOM Student Promotions

Committee, 2010-present; QCOM LCME Self-Study Institutional Setting - Academic Environment Subcommittee, Chair.

K Ferslew:

Pharmacology Representative to the Faculty Advisory Council, JHCOM, 2006-2012; William L. Jenkins Forensic Center Planning Committee, 2003 – Present; Scholarship Advisory Committee, ETSU - 2001 – 2012; Member of Institutional Setting-Governance, LCME Self-Study Committee, QCOM, 2011.

R Hayman:

Nominated and awarded Caduceus Course of the Year & Basic Science Department of the Year by 2nd year medical students; Medical Student Promotions Committee; Chair – Ad Hoc Student Promotions Sub-committee on Educational Deficiency Communications; MS-2 Course Directors Committee; CME Educational Program for the MD Degree Self-Study Committee; Chair – Molecular Biology Core Facility Advisory Committee; Chair - Bill Mayberry Travel Award Committee; Chair - Jane E. Raulston Microbiology Endowment Award Committee ; Department of Microbiology Radiation Safety Officer; Ad Hoc – Dept.of Biological Sciences Committee on Promotion and Tenure Guideline Revisal.

D Hoover:

2012 Reviewer for Graduate Student Research Grants, School of Graduate Studies
Member Graduate Advisory Committee

D Johnson

Quillen Admissions Committee; Quillen MSEC Committee; Teaching: Cellular and Molecular Medicine, BMS-4 and in the Communications course for graduate students.

W Joyner:

Departmental Faculty Promotion, Tenure and Development; Innovative Education and Medical Training Program, Strategic Planning, MEAC Distribution; Graduate Program; Graduate Program; Basic Sciences Council Committee; Dean's Council; Student Promotions; Medical Education Committee; Veterans Affairs Standing Committee.

J Hall:

Elected to Faculty Senate: Term to begin August 2012.

R Kostrzewa:

ETSU College of Medicine, Faculty Promotion and Tenure Committee, 2011-; External reviewer for Dr. Kathleen Maguire-Zeiss, for award of tenure at Georgetown University, January 2012; ETSU Graduate School representative for M. Liendo's Master's Thesis defense in Mathematics, March 2012.

M Kruppa:

Biomedical Graduate Program committee; RDC major grants committee.

T Kwasigroch:

Admissions Committee, College of Medicine, Department of Physical Therapy; Student Promotions Committee; Dean of Medicine Leadership Group; Student Recruitment COM and Physical Therapy; Fund raising in conjunction with University Advancement.

P Monaco:

Medical Student Education Committee; Student Promotions Committee; Faculty Advisor Council; Financial Aid and Scholarship Committee; Biomedical Sciences Ad Hoc P&T Committee – chair: to develop guidelines.

P Musich:

Chair, Learning Resources Advisor Committee, Quillen College of Medicine; Radiation Safety Coordinator for Biochemistry & Molecular Biology Department (until 15 March 2012).

G Ordway:

Course director: Psychopharmacology for Psychiatry Residents; Member, Executive Council of Academic Chairs Committee, ETSU; Non-voting Member, University Planning Committee (representative from Council of Chairs); Member, Chairs Committee, ETSU/COM to March 2012; now Administrative Council; Chair, Scientific Oversight Committee for the Building 119 renovation project, ETSU/COM; Member, Renovation Leadership Team for the Building 119 renovation project, ETSU/COM; Chair, Proteomics Core Facility Oversight Committee, ETSU/COM; Member, Grand Rounds Committee, Department of Psychiatry, ETSU/COM; Member, Life Science Tennessee, Education and Work Force Development Committee; Member, Search committee for Department of Psychiatry Chair, ETSU/COM.

M Robinson:

Biomedical Graduate Program Committee (Chair); Biomedical Graduate Program Admission Committee (Chair); COM Promotions Committee; Graduate Program Academic Progress Committee; College of Pharmacy Strategic Planning Committee; ETSU Research Forum Task Force; ETSU Institute for Quantitative Biology Advisory Council; Host for TN Governor's School Science and Math Program.

B Rowe:

Financial Aid Committee; Biomedical Sciences Graduate Committee; Presidential Grant-in-Aid Committee, Chairman; Student Promotions Committee; BMS Promotion and Tenure Committee, ad hoc; College of Pharmacy Promotion and Tenure Committee; Graduate Program and Recruitment Coordinator.

A Rusinol:

QCOM Admission Committee. September 2010 –March 2011; ETSU Animal Care committee, 2005 present; ETSU Library Committee, 2011-present; Designed and maintained Department of Biochemistry Website; Building Safety Assistant Coordinator for Bldg 178-Biochemistry; Operated/Maintained the digital deconvolution microscope and imaging facilities available for QCOM faculty.

U Schambra:

ETSU Commission for Women Standing Committee; Committee on Gender and Special Issues (CGSI).

R Schoborg:

2010-2011: LCME Review Basic Science Faculty Sub-Committee, QCOM; 2012: Medical Course Director's Committee, QCOM; 2012: Student Promotions Committee, QCOM; Reviewer, Honors Student/Faculty Research Grants, ETSU; Internal grant reviewer for other QCOM faculty; Research forum judge; ETSU external dissertation defense reviewer.

M Southerland:

University Committee on Animal Care.

K Singh:

Member of Admissions Committee for College of Medicine; Member of Institutional Animal Care and Use Committee - VA representative since 2007; Seminar Co-ordinator - Dept of Physiology since 2002; Judge, Appalachian Research Forum (April 05, 2012); Oral thesis defense observe for thesis. Student name – Daniel R. Berry; Dept of Psychology, ETSU (May 11, 2011);

D Thewke:

ETSU Radiation Safety Committee-member; ETSU Research Development Committee-member; ETSU Committee on Animal Care-member; QCOM Faculty Advisory Council to the Dean- Chair; Department of Biochem & Mol Biol –Deputy Chair; Department of Biochem & Mol Biol- OSHA coordinator.

R Wondergem:

QCOM Faculty Advisory Council—Physiology Representative; Executive Director ETSU Research Foundation.

G Wright:

Learning Resources Advisory Committee (LRAC) member

M-Y Zhu:

Faculty Senator September 2008-present; Graduate faculty representative at the oral defense of the thesis or dissertation as an outside observer-Student: Donna Elizabeth Nelson; Dept. of Educational Leadership & Policy Analysis, College of Education.

Y Zou:

Biomedical Graduate Program Committee; ETSU Faculty Senate; Biomedical Sciences Department Ad Hoc Promotion and Tenure Committee; Faculty consultant for ETSU Chinese Students & Scholars Association.

External Activities:

A Agrawal:

Journal Ad hoc reviewer (2011):

Journal of Leukocyte Biology x 1

Journal of Immunology x 3

Atherosclerosis Thrombosis and Vascular Biology x 2

Brain, behavior, and immunity x 1

Circulation x 1

Virology Journal x 1

Inflammation Research x 1

Immunogenetics x 1

Open Journal of Immunology x 1

Molecular Medicine x 1

Interdisciplinary Sciences x 1

Journal Ad hoc reviewer (2012):

International Journal of Molecular Sciences x

Open Journal of Immunology x 2

Circulation x 1

Human Genetics x 1

Atherosclerosis Thrombosis and Vascular Biology x 1

NIH study section Ad hoc reviewer:

2011 Jun.: "Innate Immunity and Inflammation" Study Section, NIH (reviewed 10 grants)

2011 Oct.: "Innate Immunity and Inflammation" Study Section, NIH (reviewed 10 grants)

J Ardell:

Guest Referee:

American Journal of Physiology: Heart and Circulation

American Journal of Physiology: Regulatory, Integrative and Comparative Physiology

Journal of Applied Physiology

Circulation

Circulation Research

Cardiovascular Research

Journal of Physiology

Autonomic Neuroscience: Basic and Clinical

Journal of Interventional Cardiac Electrophysiology

Heart Rhythm

C Bond:

"Neuroscience MythBusters!" - Research Discovery Undergrad Student Project

Community Education Outreach for Brain Awareness Week (March 12-16, 2012).

Peer Review Manuscripts

Journal of Neurochemistry

FEBS Journal

International Journal of Biochemistry & Cell Biology

BBA - Molecular Cell Research

S Campbell:

Peer Reviewed manuscripts for publication for the following journals:

Free Radical Biology and Medicine

Nutrition and Cancer

International Journal of Cancer

Molecular Food and Nutrition

Cancer Letters

M Duffourc:

Reviewer – Journal of Biotech Research

ASPET member

T Ecay:

Tennessee Physiological Society

President and meeting organizer - 2011

Past President - 2012

American Physiological Society

Education Committee (2011-2013)

Joint Programming Committee (2012-13)

Comparative Section Secretary (2011-2013)

Chapter Advisory Committee, Tennessee delegate (2011-2012)

Strategic Planning Education Task Force (2011-12)

State Chapters and Undergraduate Education Subgroup Chair

K Ferslew:

Member of the Editorial Advisory Board of the Journal of Analytical Toxicology, 2009 to date.

Journal Reviewer for the Journal of Analytical Toxicology 2011 (3 papers) and 2012 (1 paper).

Journal Reviewer of the Journal of Forensic Sciences 2011 (1 paper) and 2012 (1 paper).

Certificant to the Examination Committee of the American Board of Forensic Toxicology, 2007 to date.

Toxicology Section Representative to the American Academy of Forensic Sciences Ethics Committee, 2010 - 2012 (to resolve ethics violation).

Chairman for the Toxicology Section of the American Academy of Forensic Sciences, 2010-2011.

Member of the Forensic Toxicology Council as Chairman of the Toxicology Section of the American Academy of Forensic Sciences, 2010 - 2011.

Representative for the Toxicology Section of the American Academy of Forensic Sciences to the Scientific Working Group in Toxicology (SWGTOX), 2010 - 2011. Appointed as a Member by the Forensic Toxicology Council (FTC).

S Champney:

Periodic review of manuscripts for several different journals in biochemistry and microbiology

J Hall:

Member of American Society of Microbiology

R Hayman:

Attended AMSMIC Microbiology & Immunology Course Directors 14th Educational Strategies Workshop.

D. Hoover:

External Reviewer and Dissertation Defense Chair:

Timetria Bonds, Ph.D. candidate, Department of Molecular Pharmacology and Physiology, University of South Florida College of Medicine, Tampa, FL. September 23, 2011.
Consultant – NIH and AHA grant applications

D. Johnson:

Board of Directors: J. H. Quillen V. A. Medical center biomedical research corporation since 2008.

W Joyner:

Extramural Review Branch (NIH), National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), July 11, 2011, (19).

Extramural Review Branch (NIH), Center for Scientific Research, Atherosclerosis and Inflammation in Cardiovascular Systems Study Section (AICS), January 17, 2012, (11).

Extramural Review Branch (NIH), National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), April 02, 2012, (9).

T Kostrzewa:

Liaison with Dr. Ryszard Brus, Emeritus Professor, Department of Pharmacology, Medical University of Silesia, Zabrze, Poland. He and I have collaborated in research for 20 years. We have coauthored more than 75 papers.

Liaison with Dr. Przemyslaw Nowak, Professor, Department of Pharmacology, Medical University of Silesia, Zabrze, Poland. Dr. Nowak has worked in my laboratory, we have coauthored more than 30 papers.

Liaison with Dr. Rosario Moratalla, Professor, Cajal Institute, Madrid Spain. I spent one month in her laboratory working on a project, and we've drafted one manuscript.

Editorial Activities:

Editor-in-Chief of the journal, *Neurotoxicity Research* - IMPACT FACTOR = **3.015** for 2010.

Editorial Board, *J. Neural Transmission* (Term continued through 2011). 3 papers, 2011

Editorial Board, *Neurochemical Research*. Jan 2012 - present

co-Editor-in-Chief (with Trevor Archer, Göteborg Univ., Sweden), Springer Science Book series on *Current Topics in Neurotoxicity*. Springer Science, NY. (Jan 2010 - current).

Editor-in-Chief of *Handbook of Neurotoxicity*, Springer Science, NY. Target date for publication, 2013. June 2011 – present.

Section Editor on "Neurotoxins". In *Handbook of Neurotoxicity*, Springer Science, NY. Planned publication, 2012

Manuscripts as Editor, for *Neurotoxicity Research*: ~150

Manuscripts as Editor, for *J. Neural Transm.*: 3

Manuscript peer-reviews: *Neurotox. Res.* (3), *Neuropharmacol.*, *Synapse*, *Neurochem. Res.*

Professional society activities

Treasurer, Neurotoxicity Society, through 2011

M Kruppa:

Deputy Editor for the journal *Mycoses*

Reviewer for:

Future Microbiology, Microbiological Research, Fungal Biology, Letters in Applied Microbiology, Medical Science Monitor, Current Microbiology, PLoS One, Applied and Environmental Microbiology, Medical Mycoses

P Monaco:

Treasurer – Southern Appalachian Society of Sigma Xi

P Musich:

Peer reviewer for *Nucleic Acids Research* (2), *Biochemistry* (1), and *Journal of Biological Chemistry* (2)

G Ordway:

Panel chairman, "New Approaches to Probe Pathology of the Human Brain", 2012 Winter Conference on Brain Research, Snowbird, Utah, January, 2012.
Member, External Scientific Advisory Board, Center for Psychiatric Neuroscience, University of Mississippi Medical Center
Member, Research Grants Committee for the American Foundation for Suicide Prevention; reviewed 3 grants
Field Editor for International Journal of Neuropsychopharmacology
Reviewed manuscripts for:
Psychopharmacology (2)
International J. of Neuropsychopharmacology (3)

M Robinson:

Chair, Program Review Committee, University of South Dakota,
Sanford College of Medicine Biomedical Sciences Graduate Program
Chair, Program Review Committee, Wright State University, Boonshoft School of Medicine
Biomedical Sciences Program
Life Sciences TN Workforce committee
International Association of Medical Science Educators
Association of Biochemistry Course Directors
AAMC - Group on Graduate Research Education and Training
Association of Practical and Professional Ethics

A Rusinol:

Council of Nutrition, Physical Activity and Metabolism (AHA)
Reviewed manuscripts for J. Lipid Research and Leucocyte Biology
Was grant reviewer for the Argentine Research Council

U. Schambra:

Autism Society of America
Autism Society of North Carolina
Residential Services of Chapel Hill, NC

R Schoborg:

2012: Swiss NSF International Short Visit Research Fellow. Institut für Veterinärpathologie, Vetsuisse, University of Zurich, Zurich, Switzerland: 4/08/12- 7/01/12 (see funded grants).
Journal reviews:
Ad hoc reviewer for *Avian Diseases* [1 manuscript], *Microbes and Infection* [2 manuscripts], *Journal of Biological Regulators and Homeostatic Agents* [1 manuscript], *Cellular Microbiology* [1 manuscript], and *Microbiology* [2 manuscripts].
Grant reviews:
Ad hoc reviewer for NIH grant review section ZGM1 MBRS-X (GC) [3 grants], NIH NIAID K22 grant review section, [1 grant], The Wellcome Trust [2 grants], and the Swiss National Science Foundation [1 grant].

K Singh:

Reviewer, National Fellowships Committee for Sigma Delta Epsilon, Graduate Women in Science, Feb 2012
Reviewer and member – Cardiac biology regulation (BSci 5; Basic and clinical-translational science) grant peer-review committee, American Heart Association (meeting date April 16 – 17, 2012; Dallas, TX)
Editorial Boards:
Associate Editor, Life Sciences (since 2010)
World J. Cardiology (since 2010)

ISRN Cardiology (2010)

Manuscripts reviewed (11 manuscripts):

AJP Heart and Circulatory Physiology (5 manuscripts)

Life Sciences (one manuscript)

Hypertension (one manuscript)

Experimental Physiology (one manuscript)

European J. Pharmacology (2 manuscripts)

African J. Biotechnology (one manuscript)

Grant Reviewer:

Reviewed 9 grants for AHA

Reviewed one grant for National Fellowships Committee for Sigma Delta Epsilon, Graduate Women in Science

D Thewke:

American Heart Association, Unified (National) Research Peer Review Study Committee (Vascular)

Wall Biology, Committee-AAG1 BSc1)

American Heart Association -Professional Member since 2001

Ad hoc reviewer of manuscripts for the following Journals:

Apoptosis,

J Lipid Res.,

LFS

R Wondergem:

Editorial Board and Referee—American Journal of Physiology: Cell Physiology

Editorial Referee—Journal of Critical Care

Editorial Referee—Progress in Biophysics and Molecular Biology

G Wright:

Associate of Journal of Molecular and Cellular Cardiology editorial board. (10+ reviews per annum)

American Journal of Physiology (2 reviews)

M-Y Zhu:

Peer-Reviewing of Papers:

The International Journal of Neuroscience, First review (Oct 24, 2011)

The International Journal of Neuroscience, Second review (Dec. 5, 2011)

Experimental Gerontology (First reviewing, January 5, 2012)

Experimental Gerontology (Second reviewing, Feb. 25, 2012)

International Journal of Clinical and Experimental Anatomy, (Feb. 10, 2012)

Journal of Neurochemistry, First reviewing, Feb. 14, 2012

Journal of Neurochemistry, Second reviewing, March 26. 14, 2012

Journal of Neurochemistry, April 16, 2012.

Peer-Reviewing of Grants:

Neurological Foundation of New Zealand

Y Zou:

Grant Review:

Department of Defense CDMRP-BCRP - Breast Cancer Scientific Review Panel

Department of Defense CDMRP-PCRP - Prostate Cancer Scientific Review Panel

Singapore National Medical Research Council (Ad hoc)

Manuscript Review:

Nucleic Acids Research

Journal of Proteome Research

Chemical Research of Toxicology
International Journal of Biochemistry and Molecular Biology
Editorial Boards:
Journal of Lung Cancer
International Journal of Biochemistry and Molecular Biology
World Journal of Clinical Oncology

Administrative:

J Ardell	Vice chairman for Research, Department of Pharmacology (July 2011 to April 2012) Director of the medical student summer research program
C Bond	Assistant Director Molecular Biology Core Facility Supervisor/Manager Laser Capture Microdissection Facility
S Campbell	Biochemistry Journal Club Coordinator
S Champney	Former interim chairman of the Department of Biochemistry and Molecular Biology for four years
M Duffourc	Director of Medical Pharmacology Director/Administrator of the Molecular Biology Core Facility (MBCF)
K Ferslew	Director of the Section of Toxicology, Department of Pharmacology and part of the William L. Jenkins Forensic Center
T Kwasigroch	Associate Dean for Student Affairs Director of the Anatomical Gift Program Course director for: Medical Human Gross Anatomy and Embryology; Gross Anatomy for Physical Therapy; Elective courses in Anatomy; Career Exploration 1, 2 and 3
W Joyner	Chair, Dept. of Physiology Chair of Department, to March 15, 2012 Course Director and Co-Course Director, Medical Physiology Course Director, COL
G Ordway	Chair, Department of Pharmacology (March 15, 2012) Interim Chair, Department of Biomedical Sciences; instituting merger of 5 departments (Effective March 15, 2012)
M Robinson	Associate Dean for Graduate Studies and Director of the Biomedical Sciences Graduate Program
P Monaco	Interim chair of Anatomy & Cell Biology prior to merger of basic science departments
R Schoborg	Provided assistance to Dr. Wyrick in various minor capacities including facilities/equipment care, faculty development, manuscript reviews, etc.

G Wright American Heart Association 2012 Medical student summer research experiential in Cardiovascular Biology, Co-director

Consulting Activities:

J Ardell Consultant for St. Jude Medical: Neuromodulation for treatment of cardiovascular disease.
Consultant for Cyberonics: Vagal nerve stimulation for treatment of heart disease.

S Campbell UTK Medical Center consultation on Prostate Cancer animal models.

C Bond Nature Reader Panel Member - 06/2010-Ongoing
National Science Advisory Board Member - 08/2011-ongoing
Science Advisory Board Focus Group Participant - 08/23/2011(\$100 honorarium)
Science Advisory Board Focus Group Participant – 04/24/2012 (\$100 honorarium)

T Ecay American Physiological Society - Broadening Participation in Undergraduate Research Experiences Advisory Board.

K Ferslew Toxicology Consultant to all the hospitals, clinics and drug abuse treatment programs served by Quillen ETSU Physicians as well as all programs of ETSU and the Division of Health Sciences. Forensic Toxicologist to the William L. Jenkins Forensic Center serving the courts, district attorneys, law enforcement and private attorneys of our state and region (VA, KY, WV and NC).

D Hoover Consultant on NIH and AHA grant applications submitted by Maureen Hahn, Vanderbilt University.

W Joyner GoTrybe, LLC, Co-Founder and Vice President
GoTrybe.com, Kid’s Fitness, Nutrition, Wellness and Motivation Program
GoWorkWell.com , Health risk assessment program
Foothills Studio, Programming and kiosk development
Creekstone Media, LLC, Vice President, Entertainment medium development

R Kostrzewa Merz Pharmaceutical Co

M Kruppa Consulting with the company Appridge International, LLC of which I am a member of the scientific advisory board. (no compensation).

U Schambra Answer requests for help to identify structures in their images of brain tissue that come in from researchers all over the world using my electronic prenatal brain atlas or the *Prenatal Mouse Brain Atlas* book.

G Wright Seahorse BioSciences: Method development

Academic Advisement:

A Agrawal:

Ph.D. Dissertation Committee Member:

Christopher McGoldrick, 2010-present, Graduate Student

Justin Beach, 2010-present, Graduate Student

Avinash Thirumalai, 2010-present, Graduate Student (Chair, Ph.D. Dissertation committee).

Toh Gang, 2010-present, Graduate Student (Chair, Ph.D. Dissertation committee)

Thesis Supervision:

Avinash Thirumalai, Ph.D., 2014

Toh B. Gang, Ph.D., 2014

J Ardell:

David Gibbons: granted Ph.D. 2012.

C Bond:

Mentored Students:

Hobart Zhu, 2011, Undergrad Summer WE Biology Major, Duke Univ

Jared Cranmore, 2011-12, Undergrad McNair Scholar

Matthew Henthorne, 2011-12, Undergrad APS

Irmine Milord, 2011-12, Undergrad Research Discovery

Honors Thesis Reader:

Bryan Gunter - "Localization of the neurturin receptor, GFRa2, in cholinergic neurons of the neonatal and adolescent mouse heart" (DB Hoover, mentor)

S Campbell:

Research for Undergraduate Honors Thesis Students:

Havya Dave, Undergraduate Honors Program, Thesis Advisor, Spring 2011

Brittney Rudder, Undergraduate Honors Program, Thesis Advisor, Spring 2011

Jeremy Ray, Undergraduate Honors Program, Thesis Advisor, Spring 2011

Jerod Bachman, Undergraduate Honors Program, Thesis Advisor, Spring and Fall 2011

Heramb Dave, Undergraduate Honors Program, Thesis Advisor, Spring & Fall 2011, Spring 2012

Ph.D. Advisory Committee Member:

Theresa Pickle, QCOM, PhD, Department of Biochemistry

Regenia Phillips Campbell, QCOM, PhD Department of Microbiology

Chris McGoldrick, QCOM, PhD Department of Pediatrics

Courtney Netherland, QCOM, PhD, Department of Biochemistry

Christina Bridges, QCOM, PhD, Department of Biochemistry

S Champney:

Justin Beach – graduate student

M Duffourc:

Dissertation committee:

Ph.D. candidate Moises Serrano, anticipated graduation May 2012

Ph.D. candidate Eliot Smith, anticipated graduation May 2012

Ph.D. candidate Sean Fox, anticipated graduation May 2014

T Ecay:

Thesis Committee Chair

Martin Tant, Masters - Graduated ETSU Dec., 2011 (Chair)

Ph.D. Dissertation Advisory Committee

David Gibbons, Doctoral Advisory Committee, Graduated ETSU, May, 2012.

Regenia Campbell

K Ferslew:

Martin Ray Tant, Ph.D., Awarded M.S. in Physiology, 2011.

Trista Haupt Wright, Ph.D., Awarded Ph.D. in Pharmacology, 2012.

Advisor to Trista Wright, B.S., Received an Educational Research Award from the Society of Forensic Toxicologists, San Francisco, CA, 2011 for her research entitled, "Comparison of Postmortem Vitreous Humor Ethyl Glucuronide Concentrations in Humans and Sprague Dawley Rats Following Ingestions of Ethanol".

Advisor to Trista Wright, B.S., Received an Educational Research Award from the Society of Forensic Toxicologists, Boston, MA, 2012 for her research entitled, "The Effects of Burn Injury on Blood Ethanol and Ethyl Glucuronide Concentrations."

R Hayman:

Graduate Student Committee

Cory Leonard
Eliot Smith
Ashley Frasier
Sean Fox
Regenia Campbell

D Hoover:

Member of Graduate Advisory Committee:

David Gibbons; Pharmacology, completed Ph.D. requirements May 2012.
Trista Haupt; Pharmacology, completed Ph.D. requirements May 2012.
Jessica Crawford; Pharmacology concentration, expected to complete Ph.D. requirements in 2013
Zhouxi (Joe) Wu; Pharmacology concentration, expected to complete Ph.D. requirements in 2013
Jaime Parman-Ryans; Biochemistry concentration, expected to complete Ph.D. requirements in 2013.

External Reviewer and Dissertation Defense Chair:

Timetria Bonds, Ph.D. candidate, Department of Molecular Pharmacology and Physiology, University of South Florida College of Medicine, Tampa, FL. September 23, 2011.

Medical Student:

Mohen Pourmorteza – AHA fellowship Summer 2011

Undergraduate supervision:

Anuj Patel (Fall 2009-April 2012)
Aaron Ashe (Summer 2010 –April 2012)
Bryan Russ Gunter (Summer 2010-May 2012)

D Johnson:

Dissertation Committee

Eliot Smith- Ph.D. (Chair)

Other graduate students committees:

Cory Leonar
Jamie ParmanRyans
Zhengke Li
Christopher McGoldrick.

Undergraduate Thesis Advisor

Evan Perry -Chemistry

W Joyner:

Post-Doctoral Fellows: Rebecca Steagall, Cerrone Foster
Graduate Students: Martin Tant, Chris Daniels, Laura Daniel
Research Scholar: Suman Dalal

R Kostrzewa

Graduate Committee:

Joseph Wu
Avinash Thirumalai

Toh Gang

M Kruppa:

Sean Fox, seeking Ph.D. anticipated defense Fall 2012/Spring 2013

P Musich:

Ph.D. advisory committee membership:

Moises Serrano, B&MB, December 2012 (anticipated)

ZhengKe Li, B&MB, May 2013 (anticipated)

Ben Hilton, B&MB, May 2014 (anticipated)

Yan (Annie) Wang, Pharmacology, May 2014 (anticipated)

Laura Daniels, Physiology, May 2014 (anticipated)

G Ordway:

Academic Advisement:

Tim DiPeri, Undergraduate Honors College

Brandon Waters, Summer research student

Jason Crawford, Undergraduate researcher

Thesis/Dissertation Supervision:

Ph.D. Thesis Committee member for Marla Perna (Anatomy); Ph.D. granted Spring 2012

Ph.D. Thesis Committee member for Trista Haupt (Pharmacology); Ph.D. granted Spring 2012

Ph.D. Thesis Committee member for David Gibbons (Pharmacology); Ph.D. granted Spring 2012

Ph.D. Thesis Committee Chair for Jessica Crawford (Pharmacology)

Ph.D. Thesis Committee member for Toh Gang (Biomedical Sciences)

Ph.D. Thesis Committee member for Avinash Thirumalai (Biomedical Sciences)

M Robinson:

PhD Advisory Committee - Ashley Frazier (degree awarded May 2012)

A Rusinol:

Thesis/Dissertation Supervision:

Christina Bridges-Norton, Received PhD degree.

Jaime- Lynn Parman, Seeking PhD degree. Expected graduation 2014

Jessica Keasler. Defended Honors Thesis.

Shahbaaz Sabri, in the Summer Research Program for medical students.

PhD Advisory Committee:

Theresa Pickle (Anticipated Graduation 2013)

Eliot Smith (Anticipated Graduation 2012)

Courtney Netherland (Graduated 2012)

Christina Norton (Graduated 2012)

Jaime Parman (Anticipated graduation 2014)

Moises Serrano (Anticipated Graduation 2012)

Sean Fox (Anticipated Graduation 2014)

Avinash Thirumalai (Anticipated Graduation 2015)

R. Schoborg:

Primary Research Advisor for:

Regenia Phillips-Campbell, Ph.D. in Biomedical Sciences-Microbiology, expected award date, Dec. 2012.

Graduate committees:

Christina Bridges, Ph.D. in Biochemistry and Molecular Biology, awarded May 2012.
Courtney Netherland, Ph.D. in Biochemistry and Molecular Biology, awarded Dec. 2011.
Sean Fox, Ph.D. in Biomedical Sciences-Microbiology, expected award date, Dec. 2012.
Cory Leonard, Ph.D. in Biomedical Sciences-Microbiology, expected award date, May 2012

Undergraduate research student director for:

Matthew Novak, Spring 2011-Jan. 2012.

Marissa Bambino. Spring/summer 2011.

Medical student research director for:

Courtney Childress (COM Class of 2014), Summer 2011

K. Szebeni

Jessica D. Crawford

Timothy DiPeri

Michelle Chandley

K Singh:

Rebecca Steagall (postdoctoral fellow – current)

Qinqin Zha (postdoctoral fellow – April 2011 – March 2012)

Cerrone Foster (Postdoctoral fellow; Until August 2011)

Chris Daniels (Current Graduate Student)

Laura Daniel (Current Graduate Student)

Suman Dalal (Current Research Scholar)

Sana Yakoob (undergraduate thesis student; graduated May 2012)

Committee member for other graduate Biomedical students:

Courtney Netherland, MS Biomedical Sciences (Dept of Biochemistry; graduated Fall 2011)

David Gibbons, Ph.D. Biomedical Sciences (Dept of Pharmacology; graduated Spring 2012)

Joe Wu, Ph.D. Biomedical Sciences (Dept of Pharmacology; current student)

Jessica Crawford, Ph.D. Biomedical Sciences (Dept of Pharmacology; current student)

Zhengke Li, Ph.D. Biomedical Sciences (Dept of Biochemistry; current student)

Graduate Student rotated:

Jessica Jordan (Nov-Dec 2011)

D Thewke:

Students supervised:

Theresa Pickle Ph.D. student—on medical leave

Courtney Netherland Ph.D. student

Kaitlyn Hinshaw – Undergraduate honors student

Graduate Student Thesis committees:

Theresa Pickle Ph.D. student—on medical leave

Courtney Netherland Ph.D. student

Christina Bridges Ph.D. student

Elliot Smith PhD. student

Ashley Frasier PhD. student

Natalie Burke PhD. student

Avanash Thirmalai PhD. student

Jamie Parman-Ryans PhD. student

Justin Beach PhD. student

G Wright:

Joe Wu, Ph.D Advisor

AHA Medical Student (Antonia Roberts) Summer Rotation 2012

W-Y Zhu:

Supervising Yan Wang, Ph.D. candidate working in my lab

Visiting Professors:

Name: Dr. Ronglih Liao
Title: Associate Professor of Medicine
Institution: Harvard Medical School
Date: February 24, 2012
Event: Department of Physiology Seminar Program
Topic: "Cardiac Regeneration: In it to WNT it."