PTX Newsletter – Fall 2014

Support for the Annual PTX Fall Symposium provided by

- **The David and Dana Loury Foundation**
- **Frederick Meyers, Vice Dean**
  School of Medicine
- **Isaac Pessah, Associate Dean of Research**
  School of Veterinary Medicine
- **NIGMS-funded Training Program in Pharmacology**
- **NIEHS-funded Training Program in Environmental Health Sciences**

PTX Executive Committee Members, 2014-2015 academic year

Pam Lein, Chair, PTX Graduate Group, Molecular Biosciences, SVM
Jim Angelastro, **Chair, Curriculum and Educational Policy Committee**, Molecular Biosciences, SVM
Xinbin Chen, **Chair, Membership Committee**, Surgical and Radiological Sciences, SVM
Kermit Carraway, Chair, Admissions Committee, Biochemistry and Molecular Medicine, SOM
Angie Gelli, Pharmacology, SOM
Birgit Puschner, Molecular Biosciences, SVM
Heike Wulff, Pharmacology, SOM

PTX Admissions Committee, 2013-2014 academic year

Chair:	**Kermit Carraway**, Biochemistry and Molecular Medicine, SOM, Cancer Center
Faculty:	**Jason Eiserich**, Pulmonary and Critical Care, SOM
	Nilesh Gaikwad, Environmental Toxicology, CAES
	Mary Horne, Pharmacology, SOM
	Anne Knowlton, Pharmacology, SOM
	Manuel Navedo, Pharmacology, SOM
	Robert Poppenga, Molecular Biosciences, SVM
	Scott Stanley, Molecular Biosciences, SVM
	Kevin Xiang, Pharmacology, SVM
	Aiming Yu, Biochemistry and Molecular Medicine, SOM
Students:	**Mona El-Badawi**, PhD candidate, lab of Oliver Fiehn
	Samantha Faber, PhD candidate, lab of Michael Denison
	Sean Kodani, PhD candidate, lab of Bruce Hammock
	Sucheta Mukherjee, PhD candidate, lab of Wolf-Dietrich Heyer
	Chuong Nguyen, PhD candidate, lab of Rivkah Isseroff

PTX Curriculum and Educational Policy (CEP) Committee, 2014-2015 academic year

Chair:	**Jim Angelastro**, Molecular Bioscience, SVM
Faculty:	**Rick Harper**, Pulmonary & Critical Care, SOM
	Birgit Puschner, Molecular Biosciences, SVM
	Aiming Yu, Biochemistry and Molecular Medicine, SOM
Students:	**Brandon Brown,** PhD candidate, lab of Heike Wulff
	Ray Zhang, PhD candidate, lab of Isaac Pessah

PTX Membership Committee, 2014-2015 academic year

Chair:	**Xinbin Chen,** Surgical and Radiological Sciences, SVM
Faculty:	

PTX Graduate Advisors, 2014-2015 academic year

Kermit Carraway, Biochemistry and Molecular Medicine, SOM
Angie Gelli, Pharmacology, SOM
Rick Harper, Pulmonary & Critical Care, SOM
Paul Henderson, Hematology and Oncology, SOM
Mary Horne, Pharmacology, SOM
Heather Knych, Molecular Biosciences, SVM
Jerry Last, Master Advisor, Pulmonary and Critical Care, SOM,
Pam Lein, Molecular Biosciences, SVM
Lisa Miller, Anatomy, Physiology and Cell Biology, SVM
Kent Pinkerton, Pediatrics, School of Medicine & Anatomy/Physiology and Cell Biology, SVM
Birgit Puschner, Molecular Biosciences, SVM
Heike Wulff, Pharmacology, SOM

Instructors of Record for PTX Core Courses

PTX 201: **Heather Knych**, Molecular Biosciences, SVM
Birgit Puschner, Molecular Biosciences, SVM
PTX 202: **James Angelastro**, Molecular Biosciences, SVM
Jason Eiserich, Pulmonary and Critical Care, SOM
PTX 203: **Robert Berman**, Neurosurgery, SOM
Angie Gelli, Pharmacology, SOM

New PTX faculty

John Gray, Neurology, SOM
John Newman, Nutrition, CAES
Jon Ramsey, Molecular Biosciences, SVM

PTX Website Team, 2013-2014 academic year

Brandon Brown, PhD candidate, lab of Heike Wulff
Brad Hobson, PhD candidate, lab of Pam Lein
Carly Moore, PhD candidate, lab of Birgit Puschner
Sucheta Mukherjee, PhD candidate, lab of Wolf-Dietrich Heyer
Chuong Nguyen, PhD candidate, lab of Roslyn Rivkah Isseroff
Marianna Stamou, PhD candidate, lab of Pam Lein
Steven Vito, MS candidate, lab of Bruce Hammock
Ray Zhang, PhD candidate, lab of Isaac Pessah

PTX Seminar Series, 2013-2014 academic year

Students: **Olivia Buonarati**, PhD candidate, lab of Johannes Hell
Zhijian (James) Duan, PhD candidate, lab of Hongwu Chen
Chen (Samantha) Feng, PhD candidate, lab of Kit Lam
Inderpreet Kaur, PhD candidate, lab of Elva Diaz
Carly Moore, PhD candidate, lab of Birgit Puschner
Esther Patchin, PhD candidate, lab of Kent Pinkerton
Frances Shaffo, PhD candidate, lab of Pam Lein
Denise Trans, PhD candidate, lab of Paul Henderson
Kyla Walter, PhD candidate, lab of Birgit Puschner

The 2014-2015 seminar series will be supported by the David and Dana Loury Foundation Seminar Series

PTX Graduates in 2013-2014

PhD Degree Program

David Krawiec [Major Professor: Alan Buckpitt, Molecular Biosciences, SVM]
Dissertation title: *Protein Covalent Binding Critical Targets: A Comparison of Cytotoxic Naphthalene with Non-Toxic Diethyl Maleate*

Diana Lac [Major Professor: Kit Lam, Biological Chemistry and Molecular Medicine, SOM]
Dissertation title: *One Bead One Compound Combinatorial Technology as Enabling Tool for Site-Specific Derivatization of Immunoglobulins and Discovery of Cell Penetrating Peptides*
Current position: Senior Scientist, Biopharmx, Inc., Menlo Park, CA

Leonardo Leon [Major Professor: Kermit Carraway, Biochemistry and Molecular Medicine, SOM]
Dissertation title: *The Use of Amiloride Derivatives Capable of Inducing A Novel Form of Cell Death for the Treatment of Breast Cancer*
Current position: Postdoc with Matthew Petrosk, Sanford-Burnham Medical Research Institute in La Jolla, CA

Yassaman Niknam [Major Professor: Isaac Pessah, Molecular Biosciences, SVM]
Dissertation title: *Diverse Environmental Contaminants DisruptCa2+ Homeostasis in Neuronal and Non-Neuronal Primary Cells: A Ryanodine Receptor Mediated Mechanism of Toxicity*
Current position: Associate Toxicologist, California EPA, Developmental and Reproduction Toxicology Group

Amber Roegner [Major Professor: Birgit Puschner, Molecular Biosciences, SVM]
Dissertation title: *Novel Screening Tools and Risk Assessment Approaches for the Freshwater Harmful Algal Bloom Toxins, Microcystins*
Current position: Postdoctoral fellow, Oregon State University, Environmental and Molecular Toxicology, NCRR Training Grant "*Veterinary Training on Aquatic Models in Biomedical Research*"

Sunil Sahdeo [Major Professor: Gino Cortopassi, Molecular Biosciences, SVM]
Dissertation title: *Dyclonine Rescues Frataxin Deficiency in Animal Models and Buccal Cells of Patients with Friedreich's Ataxia through Novel Response Element in the Frataxin Gene*.
Current position: Scientist, Emerging Science Group, Janssen Research and Development, Johnson & Johnson, San Diego, CA.

Yezi Zhu [Major Professor: Allen Gao
Dissertation title: *Molecular Mechanisms of Prostate Cancer Progression and Treatment Resistance*
Current position: Postdoctoral fellow in the Department of Urology, UC Davis.

MS Degree Program

Edward Hackett [mentor: Mari Golub]
Thesis title: *Sustained Attention in Juvenile Rhesus Macaques Treated Chronically with Fluoxetine*
Current position: Student Scientist at California EPA OEHHA

Steven Vito [mentor: Bruce Hammock, Entomology, CAES]
Thesis title: *Combinatorial Treatment of Diazepam and Inhibition of Soluble Epoxide Hydrolase Stops Seizures and Modulates Neuroinflammation in a Murine Model of Acute TETS Intoxication*
Current position: Teaching assistant at UC Davis

Incoming PTX students

PhD Program

Brian DeFelice, Brian received his BS in Biochemistry and Molecular Biology from UC Davis in 2011, and has been working in the metabolomics field for over three years. He is interested in clinical pharmacology.

Peter Deng, Peter received his BS in Neurobiology, Physiology and Behavior from UC Davis in 2013 and has been working in a genomics lab at UC Davis. He is interested in neuropharmacology and neurotoxicology.

Cameron Flayer, Cameron received his BS in Biology with a minor in Environmental Science from Wake Forest University in 2014. He is interested in environmental pollutants and pulmonary toxicology.

Samantha Francis Stuart, Samantha received her BS in Chemistry with a minor in Biology from Converse College in South Carolina in 2011, and received her MS in Toxicology from Texas A&M in 2014. She is interested in neuropharmacology and neurotoxicology.

Michelle Guignet, Michelle graduated from Penn State in 2012 with a bachelor's degree in Biochemistry and Molecular Biology and in Toxicology, and has been working in neuropharmacology at the US Army Medical Research Institute of Chemical Defense. She is interested in neuropharmacology and neurotoxicology.

Joseph Jilek, Joseph received his BS in Ecology and Evolutionary Biology in 2011, and his MS in Toxicology in 2014, both from University of Michigan. He is interested in the impact of pharmacological and toxicological agents on developmental and proliferative pathways.

Tamara Kadir, Tamara received her BS in Biochemistry and Molecular Biology from UCD in 2009, and received her MS from the PTX program in 2011. She has been working with the California Environmental Protection Agency, and will do her PhD studies with Dr. Kent Pinkerton.

Jacklyn Kelty, Jacklyn ('Skye') received her BS in Biochemistry and Cell Biology and in Environmental Science in 2014 from Rice University. She is interested in environmental toxicology and carcinogenesis, and in patient-based and translational studies.

Michelle Kossack, Michelle received her BS in Environmental Science from University of Massachusetts Amherst in 2013 and has been working at AnaBios Corporation in San Diego. She is interested in marine and aquatic toxicology.

Mark Lillya, Mark received his BS in Neuroscience from UC Santa Cruz in 2013, and has been working in a neurophysiology lab at UC Davis. He is interested in neuropharmacology.

Sonia Revello, Sonia received her BS from UC Davis in 2012, and is interested in clinical pharmacology.

Thomas Sears, Thomas received his BS in Environmental Toxicology from UC Davis 2014. He is interested in clinical pharmacology and toxicology.

Sunjay Sethi, Sunjay received his BS in Environmental Toxicology from UC Davis 2014. He is interested in toxicity mechanisms of environmental pollutants.

Incoming PTX Students

MS Program

Lara Anwar, Lara received her BS in Chemistry from UC Davis in 2013. She is interested in clinical pharmacology and the development of novel anti-cancer drugs and targeting agents.

Lauryn Brown, Lauryn received her BS in Environmental Toxicology from UC Davis in 2012, and has been working in a bacteriology lab at UC Davis. She is interested in molecular and developmental toxicology.

Abbas Mohamed, Abbas received his BS in Molecular, Cell and Developmental Biology from UC Santa Cruz in 2012, and has been working at Genentech. He is interested in clinical pharmacology and toxicology.

Number of students in the PTX Program (including incoming students)

PhD	65
MS	11
Total	76

Publications by PTX Graduate Students in 2013-2014

PhD students identified in **bold black font**; **PTX faculty** identified in **bold blue font**

Agrawal K, Ebel JG, Bischoff K (2014) A rapid screen for four corticosteroids in equine synovial fluid. *J Anal Toxicol* 38(5):272-279.

Anderson DS, **Silva RM**, Lee D, Edwards PC, Sharmah A, Guo T, **Pinkerton KE**, **Van Winkle LS** (2014) Persistence of Silver Nanoparticles in the Rat Lung: Influence of Dose, Size and Chemical Composition. *Nanotoxicology* (In press).

Abid A, **Anderson DS**, Das GK, **Van Winkle LS**, Kennedy I (2013) Novel lanthanide-labeled metal oxide nanoparticles improve the measurement of in vivo clearance and translocation. *Particle Fibre Toxicol* 10(1):1.

Brander SM, Connon RE, He G, Hobbs JA, Smalling KL, **Teh SJ**, White JW, Werner I, Denison MS, **Cherr GN** (2013) From 'omics to otoliths: Responses of an estuarine fish to endocrine disrupting compounds across biological scales. *PLoS ONE* 8(9).

Jenkins DP, Yu W, **Brown BM**, Løjkner LD, **Wulff H** (2013) Development of a QPatch automated electrophysiology assay for identifying KCa3.1 inhibitors and activators. *Assay and Drug Development Technologies* 11:551-560.

Coleman N,* **Brown BM**,* Oliván-Viguera A, Singh V, Olmstead MM, Valero MS, Köhler R, **Wulff H** (2014) New Positive KCa Channel Gating Modulators with Selectivity for KCa3.1. *Molecular Pharmacology* 86:342-357. *= joint first authors

Coleman N, Nguyen HM, Cao Z, **Brown BM**, Jenkins DP, Zolkowska D, Chen YJ, Tanaka BS, Goldin AL, **Rogawski MA**, **Pessah IN**, **Wulff H** (2014) The riluzole derivative 2-amino-6-trifluoromethylthio-benzothiazole (SKA-19), a mixed KCa2 activator and NaV blocker, is a potent novel anticonvulsant. *Neurotherapeutics* (In press).

Chan JKW, Kodani SD, Charrier J, Morin D, Edwards PC, **Anderson DS,** Anastasio C, **Van Winkle LS** (2013) Age-specific effects on rat lung glutathione and antioxidant enzymes after inhaling ultrafine soot. *Am J Resp Cell Molec Biol* 48(1):114-24.

Chan, JKW, Vogel C, Baek J, **Kodani SD**, Uppal R, Bein K, **Anderson D**, **Van Winkle LS** (2013) Combustion derived ultrafine particles induce cytochrome P450 expression in specific lung compartments in the developing neonatal and adult rat *Am J Physiol - Lung Cell Molec Physiol* 304(10):L665-77.

Chan JKW, Charrier JG, **Kodani SD**, Vogel CF, Kado SY, **Anderson DS**, Anastasio C, **Van Winkle LS** (2013) Combustion-derived ultrafine soot generates reactive oxygen species and activates Nrf2 antioxidants differently in neonatal and adult rat lungs. *Particle Fibre Toxicol* 10(1):34.

Lesiak A, Zhu M, **Chen H**, Appleyard SM, Impey S, **Lein PJ**, Wayman GA (2014) The environmental neurotoxicant PCB 95 promotes synaptogenesis via ryanodine receptor-dependent miR132 upregulation. *J Neurosci* 34(3):717-25.

Yang D, Kania-Korwel I, Ghogha A, **Chen H**, **Stamou M**, Bose DD, **Pessah IN**, Lehmler HJ, **Lein PJ** (2014) PCB 136 atropselectively alters morphometric and functional parameters of neuronal connectivity in cultured rat hippocampal neurons via ryanodine receptor-dependent mechanisms. *Toxicol Sci* 138(2):379-92.

Wu X, Kania-Korwel I, **Chen H**, **Stamou M**, Dammanahalli KJ, Duffel M, **Lein PJ**, Lehmler HJ (2014) Metabolism of 2,2',3,3',6,6'-hexachlorobiphenyl (PCB 136) atropisomers in tissue slices from phenobarbital or dexamethasone-induced rats is sex-dependent. *Xenobiotica* 43(11):933-47.

Zou JX, **Duan Z**, Wang J, Sokolov A, Xu J, Chen CZ, Li JJ, **Chen HW** (2014) Kinesin family deregulation coordinated by bromodomain protein ANCCA and histone methyltransferase MLL for breast cancer cell growth, survival, and tamoxifen resistance. *Mol Cancer Res* 12(4):539-49.

Niehaus TD, Richardson LGL, Gidda SK, **El Badawi-Sidhu M**, Meissen JK, Mullen RT, **Fiehn O**, Hanson AD (2014) Plants utilize a highly conserved system for repair of NADH and NADPH hydrates. *Plant physiology* 165(1): 52-61.

Niehaus TD, Nguyen TND, Gidda SK, **El Badawi-Sidhu M**, Lambrecht JA, McCarty DR, Downs DM, Cooper AJL, **Fiehn O**, Hanson AD (2014) *Arabidopsis* and maize RidA proteins preempt reactive enamine/imine damage to branched-chain amino acid biosynthesis in plastids. *The Plant Cell* 26(7):3010-3022.

Bradbury LMT, Ziemak MJ, **El Badawi-Sidhu M**, **Fiehn O**, Hanson AD (2014) Plant-driven repurposing of the ancient S-adenosylmethionine repair enzyme homocysteine S-methyltransferase. *Biochem J*. (In press).

Inceoglu B, Zolkowska D, Yoo HJ, Wagner KM, Yang J, **Hackett E**, Hwang SH, Lee KS, **Rogawski MA**, Morisseau C, **Hammock BD** (2013). Epoxy Fatty Acids and Inhibition of the Soluble Epoxide Hydrolase Selectively Modulate GABA Mediated Neurotransmission to Delay Onset of Seizures. *PloS ONE*, 8(12): e80922.

Jiang Y, Zhang M, Qian Y, Xu E, Zhang J, **Chen X** (2014) Rbm24, an RNA-binding protein and a target of p53, regulates p21 via mRNA stability. *J Biol Chem* 289:3164-3175.

Kitamura S, Harada T, Hiramatsu H, Shimizu R, Miyagawa H, Nakagawa Y (2014) Structural requirement and stereospecificity of tetrahydroquinolines as potent ecdysone agonists. *Bioorganic Med Chem Lett* 24(7): 1715-1718.

Zhang GD, **Kodani S**, **Hammock BD** (2013) Stabilized epoxygenated fatty acids regulate inflammation, pain, angiogenesis and cancer. *Prog Lipid Res* 53C:108-123.

Morisseau C, Wecksler AT, Deng C, Dong H, Yang J, Lee KSS, **Kodani SD**, **Hammock BD** (2014) Effect of soluble epoxide hydrolase polymorphism on substrate and inhibitor selectivity, and dimer formation. *J Lipid Res* 55:1131-38.

Jiang, M., He, J., **Kucera, H.**, **Gaikwad, N. W.,** Zhang, B., Xu, M., O'Doherty, R. M., Selcer, K. W., and Xie, W. (2014) Hepatic overexpression of steroid sulfatase ameliorates mouse models of obesity and type 2 diabetes through sex-specific mechanisms, *The Journal of biological chemistry 289*, 8086-8097.

Li Y, Lin TY, Luo Y, Liu Q, Xiao W, Guo W, **Lac D**, Zhang H, Feng C, Wachsmann-Hogiu S, Walton JH, Cherry SR, Rowland DJ, Kukis D, Pan C, **Lam KS**. (2014) A smart and versatile theranostic nanomedicine platform based on nanoporphyrin. *Nature Communication* (In press).

Ma L, **Lee BH**, Mao R, Cai A, Jia Y, Clifton H, Schaefer S, Xu L, **Zheng J** (2014) Nicotinic acid activates the capsaicin receptor TRPV1 - a potential mechanism for cutaneous flushing, *Arteriosclerosis, Thrombosis, and Vascular Biology* 34:1272-1280 *Editorial highlight by Dr. Stefan Offermanns (2014) ATVB 34:1122-1123*

Wecksler AT, Hwang SH, Wettersten HI, Gilda JE, Patton A, **Leon LJ**, **Carraway KL** 3rd, Gomes AV, Baar K, Weiss RH, **Hammock BD** (2014) Novel sorafenib-based structural analogues: in-vitro anticancer evaluation of t-MTUCB and t-AUCMB. *Anticancer Drugs* ;25(4):433-46.

Leon LJ, Pasupuleti N, **Gorin F**, **Carraway KL** 3rd (2013) A cell-permeant amiloride derivative induces caspase-independent, AIF-mediated programmed necrotic death of breast cancer cells. *PLoS ONE* 8(4):e63038.

Pasupuleti N, **Leon L**, **Carraway KL** 3rd, **Gorin F** (2013) 5-Benzylglycinyl-amiloride kills proliferating and nonproliferating malignant glioma cells through caspase-independent necroptosis mediated by apoptosis-inducing factor. *J Pharmacol Exp Therap* 344(3):600-15.
Moore CE, **Lein PJ**, **Puschner B** (2014) Microcystins alter chemotactic behavior in *Caenorhabditis elegans* by selectively targeting the AWA sensory neuron. *Toxins* 6(6):1813-1836.
Mukherjee S, Wright WD, Ehmsen KE, **Heyer W-D** (2014) The Mus81-Mms4 structure-selective endonuclease requires nicked DNA junctions to undergo conformational changes and bends its DNA substrates for cleavage. *Nucleic Acids Res* 42(10): 6511-22.
Murphy SR, Schelegle ES, **Miller LA**, Hyde DM, **Van Winkle LS** (2013) Ozone exposure alters serotonin and serotonin receptor expression in the developing lung *Toxicol Sci* 134(1):168-79.
Murphy SR, Oslund KT, Hyde DM, **Miller LA**, **Van Winkle LS**, Schelegle ES (2014) Ozone-induced airway epithelial cell death, the neurokinin-1 receptor pathway and the postnatal developing lung. *Am J Physiol - Lung Cell Molec Physiol (*In press) [Epub ahead of print].
Buckpitt AR, Morin DM, **Murphy SR**, Edwards PE, **Van Winkle LS** *(*2013) Kinetics of naphthalene metabolism in target and non-target tissues of rodents and in nasal and airway microsomes from the *Rhesus* monkey. *Toxicol Appl Pharmacol* 270(2):97-105.
Van Winkle LS, **Murphy SR**, Boetticher MV, Vandevoort CA (2013) Fetal exposure of *Rhesus* macaques to bisphenol A alters cellular development of the conducting airway by changing epithelial secretory product expression. *Environ Health Perspect* 121(8):912-8.
Dasu MR, Ramirez SR, La TD, Gorouhi F, **Nguyen C**, Lin BR, Mashburn C, Stewart H, Peavy TR, Nolta JA, **Isseroff RR** (2014) Cross talk between adrenergic and Toll-like receptors in human mesenchymal stem cells and keratinocytes: a recipe for impaired wound healing. *Stem Cells Trans Med* 3:745-759.
Niknam Y, Feng W, Cherednichenko G, Dong Y, Joshi SN, Vyas SM, Lehmler HJ, **Pessah IN** (2013) Structure-activity relationship of selected meta- and para-hydroxylated non-dioxin like polychlorinated biphenyls: from single RyR1 channels to muscle dysfunction. *Toxicol Sci* 136(2):500-13.
Hopkins LE, **Patchin ES**, Chiu PL, Brandenberger C, Smiley-Jewell S, **Pinkerton KE** (2014). Nose-to-brain transport of aerosolised quantum dots following acute exposure. *Nanotox* 8(8):885-893.
Roegner AF, **Puschner B** (2014) Aggregate culture: a more accurate predictor of microcystin toxicity for risk assessment. *Toxicon* 83:1-14.
Roegner AF, Schirmer M, **Puschner B**, Brena B, González-Sapienza G (2014) Rapid quantitative analysis of microcystins in raw surface waters with MALDI MS utilizing easily synthesized internal standards. *Toxicon* 78:94-102.
Roegner AF, Brena B, González-Sapienza G, **Puschner B** (2014). Microcystins in potable surface waters: toxic effects and removal strategies. *J Appl Toxicol* 34(5): 441-457.
Roegner AF, Giannitti F, Woods LW, Mete A, **Puschner B** (2013) Public health implications of lead poisoning in backyard chickens and cattle. *Veterinary Medicine: Research and Reports* 4:11-20.
Hwang H-M, Carr RS, **Cherr GN**, Green PG, Grosholz ED, Judah L, Morgan SG, Ogle S, Rashbrook VK, **Rose WL**, **Teh SJ**, Vines CA, Anderson SL (2013) Sediment quality assessment in tidal salt marshes in northern California, USA: An evaluation of multiple lines of evidence approach. *Science of the Total Environment*, 454-455:189-198.
Sahdeo S, Tomilov A, Komachi K, Iwahashi C, Datta S, Hughes O, Hagerman P, **Cortopassi G** (2014) High-throughput screening of FDA-approved drugs using oxygen biosensor plates reveals secondary mitofunctional effects. *Mitochondrion* 17C:116-125.
Sahdeo S, Scott BD, McMackin M, Jasoliya M, **Brown B**, **Wulff H**, Perlman SL, Pook MA, **Cortopassi GA** (2014) Dyclonine rescues frataxin deficiency in animal models and buccal cells of patients with Friedreich's ataxia. *Human Molecular Genetics* (In press).
Sahdeo S, Wallace T, Hirakawa R, Knoflach F, Bertrand D, Maag H, Misner D, Tombaugh G, Santarelli L, Brameld K, Milla M, and Button D (2014) Characterization of RO5126946, a Novel α7 Nicotinic Acetylcholine Receptor–Positive Allosteric Modulator. J Pharm Exp Therap 350 (2): 455-468.
Fash DM, Khdour OM, **Sahdeo SJ**, Goldschmidt R, Jaruvangsanti J, Dey S, Arce PM, Collin VC, **Cortopassi GA**, Hecht SM (2013) Effects of alkyl side chain modification of coenzyme Q10 on mitochondrial respiratory chain function and cytoprotection**.** *Bioorg Med Chem* 21(8):2346-54.
Morisseau C, **Sahdeo S**, **Cortopassi G**, **Hammock BD** (2013) Development of an HTS assay for EPHX2 phosphatase activity and screening of non-targeted libraries. *Anal Biochem* 434(1):105-11.

Sahdeo S, Prigione A, **Cortopassi G** (2014) Genomics of Brain Aging: Nuclear and Mitochondrial Genomes. In: *Encyclopedia of Neuroscience, Reference Module in Biomedical Sciences*.

Silva R, Doudrick K, Franzi L, **TeeSy C, Anderson D,** Wu Z, Mitra S, Vu V, Dutrow G, Evans J, Westerhoff P, **Van Winkle L**, Raabe O, **Pinkerton K** (2014) Instillation versus inhalation of multi-walled carbon nanotubes: Exposure-related health effects, clearance, and the role of particle characteristics. *ACS Nano* (In press).

Stamou M, Wu X, Kania-Korwel I, Lehmler HJ, **Lein PJ** (2014) Cytochrome p450 mRNA expression in the rodent brain: species-, sex-, and region-dependent differences. *Drug Metab Dispos* 42(2):239-44.

Stamou M, Streifel KM, Goines PE, **Lein PJ** (2013) Neuronal connectivity as a convergent target of gene × environment interactions that confer risk for Autism Spectrum Disorders. *Neurotoxicol Teratol* 36:3-16.

Walter KM, **Moore CE**, Bozorgmanesh R, Magdesian KG, Woods LW, **Puschner B** (2014) Oxidant-induced damage to equine erythrocytes from exposure to *Pistacia atlantica*, *Pistacia terebinthus*, and *Pistacia chinensis. J Vet Diagn Invest* (In press).

Williams KM*, Franzi LM, **Last JA** (2013) Cell-specific oxidative stress and cytotoxicity after wildfire coarse particulate matter instillation into mouse lung. *Toxicology and Applied Pharmacology* 266:48-55.

PTX graduate student honors in 2013-2014

Karan Agrawal [John Newman]
- Travel award, American Association of Veterinary Laboratory Diagnosticians Annual meeting, Oct 2014

Donald Anderson [Laura Van Winkle]
- Superfund Basic Sciences Research Fellowship, 2013-2014

Christopher Barnhart [Pam Lein]
- ARCS (Achievement Rewards for Scientists) Scholar, 2011-2014
- Superfund Basic Sciences Research Fellowship, 2010-2014
- 2014 Northern California SOT Graduate Student Achievement Award

Brandon Brown [Heike Wulff]
- NIGMS Pharmacology T32 Fellowship, 2013-2014
- NHLBI Cardiovascular Science T32 Fellowship, 2014-2015

Olivia Buonarati [Johannes Hell]
- NINDS NRSA F31 Predoctoral Fellowship, 2013 – 2016

Sarah Carratt [Laura Van Winkle]
- Delta Zeta Foundation Charline Chilson Scholarship, 2014
- Superfund Basic Sciences Research Fellowship, 2014

Hao Chen [Pam Lein]
- Superfund Basic Sciences Research Fellowship, 2011-2014
- NIEHS T32 Fellowship, 2012-2014
- 2014 Neurotoxicology Specialty Section of the Society of Toxicology Graduate Student Poster Award, 3rd place
- CETI Trainee, 2014

Jocelyn Claude [Kent Pinkerton]
- NIAMID T32 Predoctoral Fellowship in Animal Models of Infectious Diseases

Samantha Faber [Michael Denison]
- NIEHS T32 Fellowship, 2014-2015
- Superfund Basic Sciences Research Fellowship, 2014-2015

Peter Henderson [Johannes Hell]
- NIGMS Pharmacology T32 Fellowship, 2012-2014
- American Heart Association Predoctoral Fellowship, 2014-2016

Brad Hobson [Pam Lein]
- ARCS (Achievement Rewards for Scientists) Scholar, 2014-2015
- NIGMS Pharmacology T32 Fellowship, 2013-2014
- 2014 Neurotox Specialty Section of the Society of Toxicology Graduate Student Poster Award, 1st place

Seiya Kitamura [Bruce Hammock]
- Superfund Basic Sciences Research Fellowship, 2013-2014
- IUPAC 2014 Conference Student Education Award by the American Chemical Society (ACS)

Sean Kodani [Bruce Hammock]
- Superfund Basic Sciences Research Fellowship, 2013-2014

Caroline (Carly) Moore [Birgit Puschner]
- EPA STAR Predoctoral Fellowship, 2011-2014
- Freedland Fellowship, 2012-2014
- American College of Toxicology North American Graduate Fellowship, 2014-2016

Sucheta Rinti Mukherjee [Wolf-Dietrich Heyer]
- NIGMS Pharmacology T32 Fellowship, 2013-2015
- ASBMB Invited Speaker for Experimental Biology 2014

Chuong Nguyen [Rivkah Isseroff]
- NIGMS Pharmacology T32 Fellowship, 2013-2014

Esther Patchin [Kent Pinkerton]
- NHLBI Cardiovascular Science T32 Fellowship, 2013-2015

Maria Paz Prada [Manuel Navedo]
- NIGMS Pharmacology T32 Fellowship, 2014-2015

Amber Roegner [Birgit Puschner]
- EPA STAR Predoctoral Fellowship, 2010-2013
- UC Davis School of Veterinary Medicine Osburn Graduate Fellowship, 2013-2014

Sunil Sahdeo [Gino Cortopassi]
- NIGMS Pharmacology T32 Fellowship, 2013-2014
- Freedland Fellowship, 2014-2015

Frances Shaffo [Pam Lein]
- CCRBM NHBLI Lung Biology T32 Fellowship, 2013-2015

Chelsea Snyder [Marty Privalsky]
- Student Travel Award, American College of Toxicology Annual Meeting, Nov 2014

Marianna Stamou [Pam Lein]
- Freedland Fellowship, 2012-2014
- Superfund Basic Sciences Research Fellowship, 2013-2015
- 2014 Neurotoxicology Specialty Section of the Society of Toxicology Graduate Student Poster Award, 2nd place

Kyla Walter [Birgit Puschner]
- T-32 Predoctoral Clinical Research Training Program, 2013-2014
- Freedland Fellowship, 2014-2015
- NIEHS T32 Fellowship, 2014-2015

Ray Zhang [Isaac Pessah]
- NIEHS T32 Fellowship, 2013-2015

PTX Student Involvement in Service Activities in 2013-2014

Brandon Brown [Heike Wulff]
- PTX website committee
- Chancellor's Graduate and Professional Student Advisory Board

Olivia Buonarati [Johannes Hell]
- PTX seminar series

Zhijian (James) Duan [Hongwu Chen]
- PTX seminar series

Chen (Samantha) Feng [Kit Lam]
- PTX seminar series

Brad Hobson [Pam Lein]
- PTX website committee

Inderpreet Kaur [Elva Diaz]
- PTX seminar series

Caroline (Carly) Moore [Birgit Puschner]
- PTX Admissions Committee
- PTX seminar series
- PTX website committee
- Graduate Student Representative, Society of Toxicology, Neurotoxicology Specialty Section
- Peer Mentor, Society of Toxicology, Undergraduate Education Program

Sucheta (Rinti) Mukherjee [Wolf-Dietrich Heyer]
- PTX Admissions committee
- PTX Website commitee

Chuong Ngyuen [Rosyln Rivkah Isseroff]
- PTX Admission Committee, 2013-2014
- PTX website committee
- PTX representative to the Graduate Student Association (2013-present)
- Member, Vice Provost of Global Affairs Recruitment Advisory Committee

Esther Patchin [Kent Pinkerton]
- PTX seminar series

Frances Shaffo [Pam Lein]
- PTX seminar series

Marianna Stamou [Pam Lein]
- PTX website committee
- Chair, Professional Development Subcommittee, Society of Toxicology Graduate Student Leadership Committee Executive Board
- UC Davis student representative, Student/Post-Doc/Alumni Network (SPAN) committee, NIEHS Superfund Research Program

Denise Trans [Paul Henderson]
- PTX seminar series

Steve Vito [Bruce Hammock]
- PTX website committee

Kyla Walter [Birgit Puschner]
- PTX seminar series

Ray Zhang [Isaac Pessah]
- PTX website committee
- Graduate Student Representative, Society of Toxicology, Northern California (NorCal) Regional Chapter

Announcements

NEW FELLOWSHIP FOR PTX PhD CANDIDATES
David and Dana Loury Foundation Fellowship

PTX Faculty Awards

Oliver Fiehn, Molecular & Cellular Proteomics Lectureship Award (at Experimental Biology conference, San Diego, April 2014); and Metabolomics Society, Lifetime Honorary Fellow award (at Metabolomics Society conference, Tsuruoka/JP, June 2014)

Jerry Last, 2013, awarded the title of Honorary Professor (Profesor Ad-Honorem) in the College of Chemistry at the University of the Republic in Montevideo, Uruguay.

News from PTX Alumni

Katie Sutherland-Ashley: As of 2014, Katie took a position as an associate toxicologist in the Pesticide and Food Toxicology section of OEHHA in the Oakland office. She focuses on peer review of Department of Pesticide Regulation risk assessments documents and updating public health goals for contaminants in California drinking water.

Keisha Williams: As of July 2014, Keisha took a position as lead scientist in the State of Michigan's equivalent of the California Air Resources Board. She will be studying risks of toxic air contaminants in Michigan and recommending policy for resolving air quality issues.

Pavel I. Zimin: Pasha recently took a position as a postdoctoral researcher with Dr. Philip Morgan at the Children's Hospital in Seattle, WA.