Investigator(s):
Robert Cornell, Assistant Professor, Department of Anatomy and Cell Biology

Project Title:
Modeling genetic sensitivity to environmental toxins implicated in Parkinson's Disease

Year Funded:
2007

Amount Received:
$27,000

Publications:
Cornell RA, Aarts M, Bautista D, García-Añoveros J, Kiselyov K, Liman ER. A double TRPtych: six views of transient receptor potential channels in disease and health. J Neurosci 28(46):11778-84, 2008, PMID: 19005039, PMCID: PMC2775540.

Investigator(s):
Frederick E. Domann, Professor, Free Radical and Radiation Biology; Susan Schultz, Professor, Psychiatry; Margaret Voelker, Assistant Research Scientist, Epidemiology

Project Title:
Analysis of single nucleotide polymorphisms (SNPs) in eosinophil peroxidase as risk factors for asthma and emphysema

Year Funded:
2007

Amount Received:
$50,000

Investigator(s):
Jonathan A. Doorn, Assistant Professor, Pharmacy

Project Title:
Maneb-mediated formation of oxidized Dopamine

Year Funded:
2007

Amount Received:
$29,980

Publications:
Roede JR, Carbone DL, Doorn, JA, Kirichenko OV, Reigan P, Petersen DR. In Vitro and in Silico Characterization of Peroxiredoxin 6 Modified by 4-Hydroxynonenal and 4-Oxononenal. Chemical Research in Toxicology 21(12):2289-2299, 2008, PMID: 19548352, Journal in Progress.

Allen, E. M. G.; Anderson, D. G. R.; Florang, V. R.; Khanna, M.; Hurley, T. D.; Doorn, J. A.; Relative Inhibitory Potency of Molinate and Metabolites with Aldehyde Dehydrogenase 2: Implications for the Mechanism of Enzyme Inhibition. Chem. Res. Toxicol. 2010, 23, 1843-1850. PMID: 20954713, PMCID: PMC2989800.

Rees, J. N.; Florang, V. R.; Eckert, L. L.; Doorn, J. A.; Protein Reactivity of 3,4-Dihydroxyphenylacetaldehyde, a Toxic Dopamine Metabolite, Is Dependent on Both the Aldehyde and the Catechol. Chem. Res. Toxicol. 2009, 22, 1256-1263. PMID: 19537779, PMCID: PMC2717024.

Jinsmaa, Y.; Florang, V. R.; Rees, J. N.; Anderson, D. G.; Strack, S.; Doorn, J. A.; Products of Oxidative Stress Inhibit Aldehyde Oxidation and Reduction Pathways in Dopamine Catabolism Yielding Elevated Levels of a Reactive Intermediate. Chem. Res. Toxicol. 2009, 22, 835-841. PMID: 19388687, PMCID: PMC2696154.

Grant Awards:
NIH R01 ES15507. 01/01/08- 12/30/12. $ 1,087,902. Organochlorine-Mediated Generation of a Dopamine-Derived Neurotoxin

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Investigator(s):
Izabela Kania-Korwel and Hans-Joachim Lehmler, Occupational & Environmental Health

Project Title:
Are individual PCB congeners substrates for the multidrug resistance transporter mdr1a/b in mice?

Year Funded:
2007

Amount Received:
$30,000

Publications:
B. Milanowski, J. Lulek, H.-J. Lehmler, I. Kania-Korwel, Assessment of the disposition of chiral polychlorinated biphenyls in female mdr 1a/b knockout versus wild-type mice using multivariate analyses. Environ Int. 36(8), 884-92, 2010. PMID: 19923000, PMCID: PMC2891895.

Kania-Korwel, I.; Vyas, S. M.; Song, Y.; Lehmler, H.-J.; Gas chromatographic separation of methoxylated polychlorinated biphenyl atropisomers. J. Chromatogr. A 2008, 1207, 146-154. PMID: 18760792, PMCID: PMC2579784.

Kania-Korwel, I.; Zhao, H.; Norstrom, K.; Li, X.; Hornbuckle, K. C.; Lehmler, H.-J.; Simultaneous extraction and clean-up of PCBs and their metabolites from small tissue samples using pressurized liquid extraction. J. Chromatogr. A 2008, 1214, 37-46. PMID: 19019378, PMCID: PMC2648864.

Grant Awards:
NIEHS MPI R01 ES017526. 01/10 – 12/14, $2,199,500. Enantioselective Metabolism Influences PCB Developmental Neurotoxicity (Lead PI: H.-J. Lehmler).

NIEHS R01 ES017425-01A1S1. 05/10 – 08/10. $9,405. (Recovery Act Administrative Supplement Providing Summer Research Experiences for Students and Science Educators): Enantioselective Metabolism Influences PCB Developmental Neurotoxicity

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Investigator(s):
Joel N. Kline, Professor, Internal Medicine; Kim Baker, Pulmonary Fellow, Internal Medicine; Jerrold P. Weiss, Professor, Internal Medicine; Peter S. Thorne, Professor, Occupational & Environmental Health; Paul B. McCray, Professor, Pediatrics

Project Title:
Role of MD-2 in regulation of endotoxin sensing in the lung

Year Funded:
2007

Amount Received:
$50,000