

## **JAMES G. MITROKA**

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**PhD-trained college educator with a wide range of experience in online and in-class teaching in the sciences including chemistry, pharmacology, and pharmacogenomics and industry experience in drug research and development.**

### **EDUCATION**

**Ph.D. in Pharmacology and Toxicology** - Rutgers University, New Brunswick, NJ (1989)

**B.S. in Chemistry** - Michigan State University, East Lansing, MI

### **EMPLOYMENT**

**Associate Professor, Palm Beach Atlantic University, Gregory School of Pharmacy  
(August 2008 to present)**

- Developed and taught two online courses entitled The Pharmaceutical R&D Process and Healthy Lifestyles.
- Served as Course Coordinator and instructor (drug metabolism) in Principles of Drug Action course.
- Taught Pharmacogenomics section of integrated Immunology, Biopharmaceutics, and Pharmacogenomics course.
- Taught selected pharmacology and medicinal chemistry sections of integrated courses in Cardiovascular, Neurology/Psychiatry, and Endocrinology pharmacotherapeutics.
- Mentored and supervised pharmacy students during their participation in the School of Pharmacy 8-week Summer Research Experience elective.
- Served on the ACPE self-study team and GSOP Curriculum, Assessment, and Technology Committees.

**Adjunct Faculty (1989-2005)**

- Taught Introduction to Chemistry, General Chemistry for science majors, and General Biology for science majors at Brookdale Community College, Lincroft, New Jersey.
- Taught survey class in biology to a large class (about 200) of students in addition to a section of a computer-based lab at The King's College, New York, New York.

**Principle Scientist/Group Leader, Bristol-Myers Squibb Pharmaceutical Research Institute, Princeton, NJ (1989 to 2008)**

- Evaluated the absorption, distribution, metabolism and excretion of drug candidates.
- Supervised the activities of three PhD-level scientists.
- Hired and mentored undergraduate college students to conduct Summer research.
- Scientific techniques included HPLC, MS/MS, radioisotopes, *in vitro* (liver microsomes, hepatocytes) and *in vivo* (rats, dogs, human) testing.

### **PROFESSIONAL ACTIVITIES, AWARDS AND DISTINCTIONS**

- Invited speaker for podium presentation at the South Florida American Chemical Society Chemical Sciences Symposium at Larkin University. Relative Bioavailability of caffeine from patches compared to tablets based on salivary caffeine levels. April 12-13, 2019.
- Invited Guest to 23andMe First Annual Educators Summit, 2017, San Jose, CA.
- Invited presenter, Palm Beach County Clerk's Office, 2017, Personal Genetics Testing.
- Invited Workshop Presenter, Forensic Applications of Pharmacogenomics, 2014 Society of Toxicology Annual Meeting, Grand Rapids, Michigan.
- Winner of 2013 Gregory School of Pharmacy "Teacher of the Year".
- Recipient of two Palm Beach Atlantic University "Quality Initiative" grants for research involving the effect of stress on hair cortisol levels in students as determined by LC/MS/MS (2012) and the relationship between CYP1A2 genotype and phenotype in students (2013).
- Completed COURSERA online courses "Epigenetic Control of Gene expression" and "Nutrition and Physical Activity for health" (2013)
- Completed week-long hands-on workshop "Introduction to Genomic and Molecular Genetic Methodologies Workshop", at the University of New England (2012).
- Invited presenter, 2010 Alzheimer's Educational Conference in West Palm Beach, FL. Current Therapies and Future Prospects for Treatment of Alzheimer's Disease.
- Member of American Chemical Society, American Association of Colleges of Pharmacy, and American Scientific Affiliation

### **POSTER PRESENTATIONS WITH STUDENTS**

Relative bioavailability of transdermal versus oral melatonin based on salivary melatonin levels. Caroline Scronce and Jim Mitroka. American Society of Health System Pharmacists 2019 Midyear meeting poster presentation.

Evaluation of the use of a commercial genotyping service (23andMe) to enhance understanding of pharmacogenomics in a cohort of pharmacy students. Sadaf Chaudry and Jim Mitroka. American Society of Health System Pharmacists 2017 Midyear meeting.

The educational value of genotyping PharmD students in a Pharmacogenomics course. Adam Remick, Kristin DeAlmeida, Marcus Silva, and Jim Mitroka. American Society of Health System Pharmacists 2015 Midyear meeting.

Stress in nursing and pharmacy students before and during an academic term as determined by hair cortisol levels and perceived self-score. Umi Biag, Paul Jackson, Andrea Mezentsef and Jim Mitroka. American Society of Health System Pharmacists 2014 Midyear meeting.

A pilot NAT2 genotype-phenotype Study. Kristen DeAlmeida and Jim Mitroka, PhD. Rhode Island University School of Pharmacy Pharmacogenomics Symposium, August, 2014.

CYP1A2 phenotype and genotype analysis in a cohort of Pharmacy students as a model for teaching pharmacogenomics. R. Ortiz [student], J. Mitroka, J. Fairclough, S. Harris, W. Tran. American Society of Hospital Pharmacy 2013 Annual Midyear Meeting.

CYP1A2 genotype analysis in Pharmacy students as an aid in teaching pharmacogenetics. Lunawata Bennett, Ville Titto, and Jim Mitroka. American Association of Colleges of Pharmacy 2011 Annual Meeting. Designated school poster.

## **PUBLICATIONS**

A multiyear comparison of flipped- vs. lecture-based teaching on student success in a pharmaceutical science class. Mitroka JG, Harrington C, DellaVecchia MJ. *Currents in Pharmacy Teaching and Learning*. 2020 Jan; 12(1): 84-87.

Hair Cortisol and Perceived Stress in Health-studies Students during Summer Break and Fall Term. Mezentsef A, Jackson P, Baig U, Fairclough JL, Brooks C and Mitroka J. *Journal of Steroids and Hormonal Sciences*. Published online 2017 8(1). DOI: 10.4172/2157-7536.1000183.

Ethical Issues in Pharmacogenomics. Silva M, Jackson J, and Mitroka J. *Pharmacy Times*. April 9, 2015.

Pharmacogenomics in the pharmacy curriculum. Reeg S and Mitroka J. *Pharmacist.com* online publication of the APhA, Jan 22, 2015.

Defining reality: the potential role of pharmacists in assessing the impact of progesterone receptor modulators and misoprostol in reproductive health. Harrison DJ, Mitroka JG, *Ann Pharmacother*. 2011 Jan;45(1):115-9.

Comparative metabolism of <sup>14</sup>C-labeled apixaban in mice, rats, rabbits, dogs, and humans. Zhang D, He K, Raghavan N, Wang L, Mitroka J, Maxwell BD, Knabb RM, Frost C, Schuster A, Hao F, Gu Z, Humphreys WG, Grossman SJ. *Drug Metabolism and Disposition* 2009 Aug; 37(8):1738-48.

Utility of imaging mass spectrometry (IMS) by matrix-assisted laser desorption ionization (MALDI) on an ion trap mass spectrometer in the analysis of drugs and metabolites in biological tissues. Drexler DM, Garrett TJ, Cantone JL, Diters RW, Mitroka JG, Prieto Conaway MC, Adams SP, Yost RA, Sanders M. *Journal of Pharmacological and Toxicological Methods*. 2007 May-Jun; 55(3):279-88.

*In vitro* and *in vivo* metabolism of a gamma-secretase inhibitor BMS-299897 and generation of active metabolites in milligram quantities with a microbial bioreactor. Zhang D, Hanson R, Roongta V, Dischino DD, Gao Q, Sloan CP, Polson C, Keavy D, Zheng M, Mitroka J, Yeola S. *Current Drug Metabolism*, 2006 Dec; 7(8):883-96.

Comparative metabolism of radiolabeled muraglitazar in animals and humans by quantitative and qualitative metabolite profiling. Zhang D, Wang L, Raghavan N, Zhang H, Li W, Cheng PT, Yao M, Zhang L, Zhu M, Bonacorsi S, Yeola S, Mitroka J, Hariharan N, Hosagrahara V, Chandrasena G, Shyu WC, Humphreys WG. *Drug Metabolism and Disposition*, 2007 Jan; 35(1):150-67.

Metabolism of [<sup>14</sup>C]gemopatrilat after oral administration to rats, dogs, and humans. Wait JC, Vaccharajani N, Mitroka J, Jemal M, Khan S, Bonacorsi SJ, Rinehart JK, Iyer RA. *Drug Metabolism and Disposition*, 2006 Jun; 34(6):961-70.

Analysis of low level radioactive metabolites in biological fluids using high-performance liquid chromatography with microplate scintillation counting: method validation and application. Zhu M, Zhao W, Vazquez N, Mitroka JG. *J Pharm Biomed Anal*. 2005 Sep 1;39(1-2):233-45.

Cytochrome P450 3A-mediated metabolism of buspirone in human liver microsomes. Zhu M, Zhao W, Jimenez H, Zhang D, Yeola S, Dai R, Vachharajani N, Mitroka J. *Drug Metab Dispos*. 2005 Apr;33(4):500-7.

P450 3A-mediated Metabolism of Buspirone in Human Liver Microsomes. Zhu M, Zhao W, Jimenez H, Zhang D, Yeola S, Dai R, Vachharajani N, Mitroka J. *Drug Metabolism and Disposition*, 33(4), pp 500-7, 2005.

Metabolism, Pharmacokinetics, and Protein Covalent Binding of Radiolabeled MaxiPost (BMS-204352) in Humans. Zhang D, Krishna R, Wang L, Zeng J, Mitroka J, Dai R, Narasimhan N, Reeves RA, Srinivas NR, Klunk LJ. *Drug Metabolism and Disposition*, 33(1), pp 83-93, 2005.

Amide N-Glucuronidation of Maxipost Catalyzed by UDP-Glucuronosyltransferase 2B7 in Humans. Zhang D, Zhao W, Roongta VA, Mitroka JG, Klunk LJ, Zhu M. *Drug Metabolism and Disposition*, 32(5), pp 545-51, 2004.

Protein Covalent Binding of Maxipost Through a Cytochrome P450-Mediated Ortho-Quinone Methide Intermediate in Rats. Zhang D, Ogan M, Gedamke R, Roongta V, Dai R, Zhu M, Rinehart JK, Klunk L, Mitroka J. *Drug Metabolism and Disposition*, 31(7), pp 837-45, 2003.

Comparative Biotransformation of Radiolabeled [<sup>14</sup>C]Omapatrilat and Stable-Labeled [<sup>13</sup>C<sub>2</sub>] Omapatrilat After Oral Administration to Rats, Dogs, and Humans. Iyer, R.I., Malhotra, B., Khan,

S., Mitroka, J.G., Bonacorsi, S., Waller, S.C., Rinehart, J.K., Kripalani, K.J. Drug Metabolism and Disposition, 31(1), pp 67-75, 2003.

Oral Bioavailability and Disposition of [<sup>14</sup>C]Omapatrilat in Healthy Subjects. Malhotra, B., Iyer, R.I., Soucek, K.M., Behr, D., Liao, W.C., Mitroka, J.G., Kaul, S., Cohen, M.B., Knupp, C.A. J. Clin. Pharmacol., 41(8), pp 833-41, 2001.

Metabolism of [<sup>14</sup>C]Omapatrilat, a Sulfhydryl-containing Vasopeptide Inhibitor in Humans. Iyer, R.I., Mitroka, J.G., Malhotra, B., Bonacorsi, S., Waller, S.C., Rinehart, J.K., Roongta, V.V., Kripalani, K.J. Drug Metabolism and Disposition, 29(1), pp 60-9, 2001.

Disposition of Radiolabeled Ifetroban in Rats, Dogs, Monkeys, and Humans. Dockens, R.C., Santone, K.S., Mitroka, J.G., Morrison, R.A., Jemal, M., Greene, D.G., and Barbhaiya, R.H. Drug Metabolism and Disposition, 28(8), pp 973-80, 2000.

BMS-180448, a Novel Glyburide-Reversible Cardioprotective Agent, Enhanced Postischemic recovery of Contractile Function in Dogs. Grover, G.J., Parham, C.S., Whigan, D.B., and Mitroka, J.G., Journal of Pharmacology and Experimental Therapeutics, 276(2), pp. 380-387, 1996.

Cerebrospinal Fluid Retrieval in the Conscious Dog: A Methods Development Study, Rockar, R., Sadanaga, K.K., Burkett, D.E., Mitroka, J.G., Bonner, R.A., and Weinstein, M.J., Journal of Investigative Surgery, 8, pp. 85-94, 1995.

Oral Bioavailability and Anti-Simian Varicella Virus Efficacy of BV-araU in Monkeys, Soike, K., Huang, J.L., Tu, J.I., Stouffer, B., Mitroka, J.G., Swerdel, M., Olsen, S., Bonner, D.P., Tuomari, A.V., and Field, A.K., Journal of Infectious Diseases. 165, pp. 732-736, 1995.

Monochloroacetic Acid Lethality in the Rat in Relation to Lactic Acid Accumulation in the Cerebrospinal Fluid, Mitroka, J.G., Dissertation Abstracts International, p. 500-B, May 1990.

Phenobarbital Protection Against the Lethal Effect of Monochloroacetic Acid in Rats, Mitroka, J.G., Cooper, K.R., and Snyder, R., Toxicologist 8, p. 9, 1988.

Local and Systemic Metabolism of Tipredane: Effects on Toxicity, Kripalani, K.J., and Mitroka, J.G., from Topical Therapy with Corticosteroids (Eds. Christophers and Mailback), pp. 94-101, 1988.

Rapid Metabolic Inactivation of Tipredane, A structurally novel steroid, Lan, S.J., Scanlan, L.M., Mitroka, J.G., Weinstein, S.H., Lutsky, B.N., Free, C.A., Wojnar, R.J., Millonig, R.C., and Migdalof, N.H., J. Steroid Biochem. 31 (5), pp. 825-835, 1988.