

CURRICULUM VITAE

NAME Margaret O. James
ADDRESS Department of Medicinal Chemistry, P.O. Box 100485,
College of Pharmacy, University of Florida, Gainesville, FL 32610-0485
Phone: (352) 273 7707 Fax: (352) 846 1972
e-mail: MOJames@ufl.edu

EDUCATION

1966-1969 B.Sc. Honours Chemistry. University College London, University of London, England, UK
1969-1972 Ph.D. Organic Chemistry. Biochemistry Department, St. Mary's Hospital Medical School, University of London, England, UK. Supervisor: R.T. Williams, F.R.S. Thesis: The metabolism of arylacetic acids in various species of animals.

PROFESSIONAL APPOINTMENTS

1972 - 1975 Visiting Fellow (postdoctoral), National Institute of Environmental Health Sciences, Research Triangle Park, North Carolina, U.S.A.
1975 - 1980 Visiting Associate, then Senior Staff Fellow NIEHS/NIH.
Place of work: Whitney Laboratory, St. Augustine, Florida, U.S.A.
1980 - date Assistant Professor (80-85), Associate Professor (85-90), and Professor (90-date), Department of Medicinal Chemistry, College of Pharmacy, University of Florida, Gainesville, Florida.
1993 - date Chairman, Department of Medicinal Chemistry
2006 – date Jack C. Massey Professor of Pharmacy

OTHER PROFESSIONAL AFFILIATIONS

1978 - present Adjunct (78-80), then (80-date) joint faculty appointment, Department of Pharmacology and Therapeutics, College of Medicine, University of Florida
1975 - 2006 Member of the Whitney Marine Research Lab., University of Florida

BROAD RESEARCH INTERESTS

Factors affecting the bioavailability, metabolism and toxicity of drugs, carcinogens and other xenobiotics in humans and animal species. Study of the mechanisms of metabolism and toxicity of foreign chemicals, in particular their interaction with enzymes of steroid biotransformation. Importance of metabolism and its modulation in drug design.

SOCIETIES

Biochemical Society, London (since 1970)
American Association for the Advancement of Science (since 1973)
American Society of Pharmacology and Experimental Therapeutics (since 1977)
International Society for the Study of Xenobiotics (Charter member, 1981).
American Chemical Society (since 1982)
Society of Toxicology (since 1983)
American Association of Pharmaceutical Sciences (since 1986)

HONORS

Awarded Markey Fellowships at Mount Desert Island Biological Laboratory, 1987 and 1988.
Appointed to serve on the National Environmental Health Sciences' grant review committee for NIEHS/NIH (1991-1995)
Appointed to serve on National Oceanic and Atmospheric Administration, National Marine Fisheries, Toxics Advisory committee (1991-1993).
Elected councilor of the International Society for the Study of Xenobiotics (1990-93).
Appointed to Editorial Board of Aquatic Toxicology (1991).
Appointed to Editorial Board of Chemico-Biological Interactions (1992)
Awarded D.Sc. for research in xenobiotic biotransformation, University of London, UK. June 1993
Appointed to Editorial Board of Drug Metabolism and Disposition (1993)
Selected as a University of Florida Research Foundation Professor (1997-2000)
Selected for a Professorial Excellence Program award at the University of Florida (1998)
Elected Secretary of the International Society for the Study of Xenobiotics (2000-2003)
Selected as Guest Editor for a special edition of Marine Environmental Research, 2003-4.
Scientific Advisory Board, EcoArray 2003-2007
Elected to Nominating Committee, section on Pharmaceutical Sciences, AAAS, 2004-7, 2012-14.
Elected Chair of the section on Pharmaceutical Sciences, AAAS, 2007-2009
Appointed Jack C. Massey Professor of Pharmacy, 2006
Elected as a Fellow of the American Association for the Advancement of Science, 2011

ADMINISTRATIVE RESPONSIBILITIES

Graduate Coordinator : Dept. Medicinal Chemistry 1986 - 1991

Recruited new graduate students and advised incoming graduate students for their first semester. Additional responsibilities were developing recruitment materials, updating the department graduate policies and procedures manual and serving on the graduate studies committee.

Department Chair (1993-present)

Administrator for department of around 60 employees (including 12-18 graduate students). Responsibilities include mentoring and evaluating faculty and staff, supporting faculty research, overseeing department budget, supervising staff, serving as liaison with Deans.

Principal investigator, program project grant (1995-2007)

Selected by colleagues to head the Superfund Basic Research Program project grant, which was successfully competitively renewed. Oversaw the administration of this multi-investigator, multi-disciplinary research program project. This included liaison with NIH.

BIBLIOGRAPHY

Refereed Journal Articles and Refereed Conference Proceedings

1. Reidenburg, M.M., James, M.O., and Dring, L.G.: The rate of procaine hydrolysis in serum of normal subjects and diseased patients. *Clin. Pharmacol. Ther.* 13: 279 - 284, 1972.
2. James, M.O., Smith, R.L., Williams, R.T., and Reidenburg, M.: The conjugation of phenylacetic acid in man, subhuman primates and some nonprimate species. *Proc. R. Soc. Lond. B.* 182: 25 - 35, 1972.
3. James, M.O., Smith, R.L., and Williams, R.T.: The conjugation of 4-chloro- and 4-nitro-phenylacetic acid in man, monkey, and rat. *Xenobiotica* 2: 499 - 506, 1972.
4. James, M.O. and Smith, R.L.: The conjugation of phenylacetic acid in phenylketonurics. *Europ. J. Clin. Pharmacol.* 5: 243 - 246, 1973.
5. James, M.O., Bend, J.R., and Fouts, J.R.: Studies on the fate of phenylacetic acid in some fish species. *Bull. Mt. Desert Island Biol. Lab.* 13: 59 - 62, 1973.
6. James, M. O., Fouts, J.R. and Bend, J.R.: In vitro epoxide metabolism in some marine species. *Bull. Mt. Desert Island Biol. Lab.* 14: 41 - 46, 1974.
7. James, M.O., Fouts, J.R., and Bend, J.R.: Hepatic and extrahepatic in vitro metabolism of an epoxide (8-¹⁴C-styrene oxide) in the rabbit. *Biochem. Pharmacol.* 25: 187 - 193, 1976.
8. James, M. O., Pohl, R.J., Peret, D.G., Fouts, J.R., and Bend, J.R.: Further studies on epoxide metabolism in vitro by marine species. *Bull. Mt. Desert Island Biol. Lab.* 15: 46 - 48, 1975.
9. Bend, J.R., James, M.O., Devereux, T.R., and Fouts, J.R.: Toxication-detoxication systems in hepatic and extrahepatic tissues in the perinatal period. In Morselli, P.L., Garattini, S. and Sereni, F. (eds). *Basic and Therapeutic Aspects of Perinatal Pharmacology*. New York, Raven Press pp 229 - 243, 1975
10. James, M.O. and Bend, J.R.: Taurine conjugation of 2,4-dichlorophenoxyacetic acid and phenylacetic acid as a major metabolic pathway in two marine species. *Xenobiotica* 6: 393 - 398, 1976.
11. Ryan, A.J., James M.O., Ben-Zvi, A., Law, F.C.P., and Bend, J.R.: Hepatic and extrahepatic metabolism of ¹⁴C-styrene oxide. *Environ. Hlth. Persp.* 17: 136 - 144, 1976.
12. Harper, C., James, M.O., Devereux, T.R., Patel, J.M., Bend, J.R. and Fouts, J.R.: Characteristics and development of drug metabolism by pulmonary microsomes. *Agents and Actions* 6: 527 - 530, 1976.
13. James, M.O., Fouts, J.R., and Bend, J.R.: Hepatic and extrahepatic in vitro metabolism of an epoxide (8-¹⁴C-styrene oxide) in the rabbit. *Biochem. Pharmacol.* 25: 187 - 193, 1976.
14. Philpot, R.M., James, M.O. and Bend, J.R.: Metabolism of benzo(a)pyrene and other xenobiotics by microsomal mixed-function oxidases in marine species. Institute of Biological Sciences Symposium. In *Sources, Effects and Sinks of Petroleum in the Aquatic Environment*. Washington D.C. pp 184 - 199, 1976.

15. James, M.O., Foureman, G.L., Law, F.C.P., and Bend, J.R.: Perinatal development of epoxide hydrase and glutathione S-epoxide transferase in hepatic and extrahepatic tissues of the rabbit and guinea pig. *Drug Metab. Dispos.* 5: 19 - 28, 1977.
16. Bend, J.R., James, M.O. and Dansette, P.M.: In vitro metabolism of xenobiotics in some marine animals. *Ann. N. Y. Acad. Sc.* 298: 505 - 521, 1977
17. Guarino, A.M., James, M.O. and Bend, J.R.: Fate and distribution of the herbicides 2,4-dichlorophenoxyacetic acid (2,4-D) and 2,4,5-trichlorophenoxyacetic acid (2,4,5-T) in the dogfish shark. *Xenobiotica* 7: 623 - 631, 1977.
18. James, M.O. and Bend, J.R.: Xenobiotic metabolism in marine species exposed to hydrocarbons. EPA Decision Series: Energy/Environment II Environmental Protection Agency US Gov't Press 600/9/77-01 1977, pp 495 - 501
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20. James, M.O. and Bend, J.R.: A radiochemical assay for glycine N-acyltransferase activity: some properties of the enzyme in rat and rabbit. *Biochem. J.* 172: 285 - 291, 1978.
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23. Pritchard, J.B. and James, M.O.: Determinants of the renal handling of 2,4-dichlorophenoxyacetic acid (2,4-D) by winter flounder. *J. Pharmacol. Exp. Ther.* 208: 280 - 286, 1979.
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26. James, M.O.: Taurine conjugation of carboxylic acids in some marine species. In Aitio, A. (ed). *Conjugation reactions in drug biotransformations*. Elsevier/North Holland, Amsterdam. pp 121 - 318, 1979
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- fish. In Khan, M.A.Q., Lech, J.J. and Menn, J.J. (eds) American Chemical Society Symposium Series 99. Pesticide and Xenobiotic Metabolism in Aquatic Organisms. pp 297 - 318, 1979.
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 36. James, M.O., Sherman, B., Fisher, S.A. and Bend, J.R.: Benzo(a)pyrene metabolism in reconstituted monooxygenase systems containing cytochrome P-450 from lobster (*Homarus americanus*) hepatopancreas fractions and NADPH cytochrome P-450 reductase from pig liver. *Bull. Mt. Desert Isl. Biol. Lab* 22: 37 - 39, 1982.
 37. James, M.O. and Little, P.J.: Modification of benzo(a)pyrene metabolism in hepatic microsomes from untreated and induced rats by imidazole derivatives which inhibit monooxygenase activity and enhance epoxide hydrolase activity. *Drug Metab. Disp.* 11: 350 - 354, 1983.
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- oxygenase activities, epoxide hydrolase and glutathione S-transferase activities in small estuarine and freshwater fish. *Aquatic Toxicol.* 12: 1 - 15, 1988.
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 59. James, M.O., Barron, M. G. and Schell, J.D. Conjugation and excretion of phenolic compounds by the lobster, *Homarus americanus*, *Bull. MDIBL.* 27: 9 - 11, 1987 - 1988.
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 61. James, M.O.: Conjugation and excretion of xenobiotics by fish and aquatic invertebrates. In, R. Kato, R.W. Estabrook and M.N. Cayen eds. Xenobiotic metabolism and disposition. Taylor and Francis, U.K., USA, 1989. pp 283 - 290.
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 66. James, M.O. Isolation of cytochrome P450 from hepatopancreas microsomes of the spiny lobster, *Panulirus argus*, and determination of catalytic activity with NADPH cytochrome P450 reductase from vertebrate liver. *Arch. Biochem. Biophys.* 282: 8 - 17, 1990.
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100. Gadagbui, B.K.M. and James, M.O. Activities of affinity-isolated glutathione S-transferase from channel catfish whole intestine. *Aquatic Toxicology*, 49: 27-37, 2000.
101. Gadagbui, B.K.M. and James, M.O. The influence of diet on the regional distribution of glutathione S-transferase activity in channel catfish. *Journal of Biochemical Toxicology*, 14:148-154, 2000
102. Tong, Z. and James, M.O. Purification and characterization of hepatic and intestinal phenol sulfotransferase with high affinity for benzo(a)pyrene phenols from channel catfish. *Arch. Biochem. Biophys.* 376: 409-419, 2000
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129. James, M.O., Sacco, J.C. and Faux, L.R. Effects of food natural products on the biotransformation of PCBs. *Environmental Toxicology and Pharmacology*. 25: 211-217, 2008
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137. James, M.O., Li, W, Summerlot, D, Rowland-Faux, L. and Wood C.E. Triclosan is a potent inhibitor of estradiol and estrone sulfonation in sheep placenta. *Environment International*, 36:942-949, 2010. PMID 19299018
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139. Li, W., James, M.O., MacKenzie, S., Liu, C., Calcutt, N.S. and Stacpoole, P.W. Mitochondria as a novel site of dichloroacetate biotransformation. *J. Pharmacol. Exp. Therap.* 336: 1-8, 2011. PMID 20884751
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141. Li, W., Gu, Y., James, M.O., Hines, R.N., Simpson, P. Langae, T. and Stacpoole, P.W. Prenatal and postnatal expression of glutathione transferase zeta 1 in human liver and the roles of haplotype and subject age in determining activity with dichloroacetate. *Drug Metabolism and Disposition*, 40, 232-239, 2012 PMID 22028317
142. James, M.O., Marth, C.J. and Rowland-Faux, L. Slow O-demethylation of methyl triclosan to triclosan, which is rapidly glucuronidated and sulfonated in channel catfish liver and intestine. *Aquatic Toxicology* 124-125: 72-82, 2012 PMID: 22926334
143. James, M.O., Kleinow, K.M. Seasonal influences on PCB retention and biotransformation in fish. *Environmental Science and Pollution Research* March 2013 e-pub ahead of print. PMID 23494683
144. Lauby-Secretan B, Loomis D, Grosse Y, El Ghissassi F, Bouvard V, Benbrahim-Tallaa L, Guha N, Baan R, Mattock H, Straif K; International Agency for Research on Cancer Monograph Working Group IARC, Lyon, France. Carcinogenicity of polychlorinated biphenyls and polybrominated biphenyls. *Lancet Oncol.* 2013 Apr;14(4):287-8. doi: 10.1016/S1470-2045(13)70104-9. Epub 2013 Mar 15. PubMed PMID: 23499544
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146. James, M.O. and Ambadapadi, S. Interactions of cytosolic sulfotransferases with xenobiotics. *Drug Metabolism Reviews* in press.

Book Chapters

1. Bend, J.R. and James, M.O.: Xenobiotic metabolism by marine and freshwater species. In: D.C. Malins and J.R. Sargent, eds. Biochemical and Biophysical perspectives in Marine Biology. Vol. IV. pp 126 - 180, 1978.
2. Bend, J.R., James, M.O. and Pritchard, J.B.: Aquatic Toxicology. Chapter 13 in F.E. Guthrie and T.J. Perry, eds. Environmental Toxicology. Elsevier Press, New York, pp 172 - 180, 1980.
3. Pritchard, J.B. and James, M.O.: Metabolism and urinary excretion. In W.B. Jakoby, J.R. Bend and J. Caldwell, eds. Metabolic Basis of Detoxication. Academic Press, London, New York, 1982, pp 339 - 357.
4. James, M.O.: Biotransformation and disposition of PAH in Aquatic Invertebrates. In: U. Varanasi, ed. Metabolism of Polycyclic aromatic hydrocarbons in the Aquatic Environment. CRC Press. Boca Raton, 1989, pp 69 - 92.
5. James, M.O. and Kleinow, K.M. Trophic transfer of chemicals in the aquatic environment. In G. K. Ostrander and D. Malins, eds. Aquatic Toxicology: Molecular, Biochemical and Cellular Perspectives. Lewis Publishers, CRC Press, Boca Raton, 1994, pp 1-35.
6. James, M.O. Pesticide metabolism in aquatic organisms. In H. Börner, ed. Pesticides in Ground and Surface Water. Chemistry of Plant Protection Series. Springer-Verlag, Berlin. 1994, pp 153 - 189.
7. Kleinow, K.M. and James, M.O. Response of the teleost gastrointestinal tract to xenobiotics. In "Target Organ Toxicity in Marine and Freshwater Teleosts.", W. H. Benson and D.R. Schlenk, eds. Taylor and Francis, London, New York, 2001, pp 269-362
8. Schlenk, D., James, M.O., George, S., Gallagher, E., Willett, K., van den Hurk, P. and Kullman, S. Biotransformation in fishes. In "Toxicology of Fishes", RT DiGuilio and DR Hinton, eds. CRC Press, Boca Raton, FL, 2008 Chapter 4.
9. James, M.O. Enzyme Kinetics of Sulfotransferases (Book Chapter) in Enzyme Kinetics In Drug Metabolism: Fundamentals And Applications. S. Nagar, D. Tweedie, Upendra Argikar eds. Springer, In press

Abstracts presented at meetings (last 3 years) Full list available on request

177. Li, W., McKenzie, S., James, M.O. and Stacpoole, P.W. Mitochondrion is a novel site of biotransformation of dichloroacetate by glutathione transferase zeta. Experimental Biology 2010, Anaheim, CA, April 24-28 *FASEB J.* 2010 24:967.17
178. Pali, S.P., James, M.O., Ambadapadi, S. and Rowland-Faux, L. LC-ESI-MS/MS analysis of conjugated steroid estrogens for understanding the drug-induced modulation of sulfotransferase activity. Poster 426, American Society of Mass Spectrometry, 58th conference, May 23-27, 2010

179. James, M.O., Hines, R.N., Gu, Y., Li, W., Langaee, T. and Stacpoole, P.W. Ontogeny of glutathione transferase Z1 (GSTZ1) expression and activity in human liver cytosol. ISSX meeting, September 2010. *Drug Metab Rev.* 42(S1):91, 2010
180. Ambadapadi, S., Pali, S.P. and James, M.O. Celecoxib modulation of SULT2A1 enzyme activity and its effect on estradiol sulfonation in vitro. American Association of Pharmaceutical Scientists annual meeting, November 2010.
181. Li, W., Gu, Y., Langaee, T., Hines, R.N., Stacpoole, P.W. and James, M.O. Chloride modulates GSTZ1 haplotype-dependent inactivation by dichloroacetate. Experimental Biology annual meeting, Spring 2011, Washington, DC.
182. James, M.O. and Rowland-Faux, L. Slower O-demethylation of methyl triclosan by channel catfish than rat hepatic microsomes. 16th International Symposium on "Pollutant Responses in Marine Organisms" PRIMO16, Long Beach CA, May 2011
183. Pali, S.P., James, M.O. Ambadapadi, S. LC-ESI-MS/MS Study of sulfate-conjugated steroid estrogens: focusing on identification and simultaneous analysis of isomers. American Society of Mass Spectrometry, 59th conference 2011
184. Ambadapadi, S., Pali, S.P. and James, M.O. Celecoxib modulation of estrogen sulfonation by SULT2A1 enzyme in vitro. AAPS annual meeting 2011
185. James, M.O., Li, W., Gu, Y., Langaee, T. and Stacpoole, P.W. Dichloroacetate-dependent inactivation of GSTZ1 in human liver cytosol is slowed by physiologically important anions in a GSTZ1 haplotype-dependent manner. ISSX North American meeting, Atlanta, GA, October 2011
186. James, M.O. Ontogeny of hepatic glutathione transferase enzymes in humans. ISSX North American meeting, Atlanta, GA, October 2011
187. James, M.O. and Ambadapai, S. Sulfonation of triclosan by expressed human sulfotransferases. ISSX North American Meeting, Dallas, TX, October 2012
188. James, M.O., Kane, A.S., Faux, L.R., Zhong, G., Mievre, Q., Beers, A. and Patterson, W. Biomarker enzyme activities in livers of Gulf of Mexico fishes. Gulf of Mexico Research Consortium symposium, New Orleans, LA, January 2013.
189. A.S. Kane, S.M. Roberts, J. Munson, M.O. James, M. Kozuch, L. Stuchal, R. Weil, T. Irani, J.G. Morris, JK Wickliffe, S. Ansari and E.B. Overton. Assessing safety of inshore-harvested seafood from the Gulf of Mexico: Addressing public health and community concerns after the Deepwater Horizon oil spill. Gulf of Mexico Research Consortium symposium, New Orleans, LA, January 2013.
190. Kane, A.S., Roberts, S.M., Munson, J. James, M.O., Stuchal, L., Irani, T., Morris, J.G., Wickliffe, J.K., Ansari, S. and Overton, E.B. Assessing safety of inshore-harvested seafood from the Gulf of Mexico: SETAC meeting Long Beach, CA November 2012.

191. Maisenbacher HW, Shroads AL, Guo Z, Daigle AD, Abdelmalak MM, Sosa Samper I, Mincey BD, James MO, Stacpoole PW. Pharmacokinetics of dichloroacetate in a canine model. Society of Toxicology annual meeting, San Antonio, TX, March 2013.
192. Jackson, E.N., Schneider, J., Rowland-Faux, L. and James, M.O. Isoform-selective glucuronidation of triclosan. Experimental Biology annual meeting, April 2013, Boston, MA.
193. Wood, C.E., Rabaglino, M.B., Richards, E.M., Denslow, N.D. and James, M.O. The Genomics of Fetal Hypothalamic Responses to Triclosan: Minimal Overlap with Estrogen-Responsive Genes. The Endocrine Society, San Francisco, June 2013.
194. James, M.O., Kane, A.S., Faux, L.R., Zhong, G. and Patterson, W. Activities of biomarker enzymes in Gulf of Mexico fishes. Presented at 17th biennial meeting of “Pollutant Responses in Marine Organisms” (PRIMO17), Faro, Portugal, May 2013.
195. Langae, T., McDonnough, C., Shroads, A.L., Stacpoole, P.W. and James, M.O. Haplotype variations influence human GSTZ1 gene expression and the kinetics of the anti-tumor drug dichloroacetate (DCA). International meeting of ISSX, Toronto, Canada, September 29-October 3, 2013

Editorials, meeting reports and short articles.

James, M.O. Meeting report, PRIMO 12. In ISSX newsletter, 23: 14, 2003

James, M.O. Editorial, Marine Environmental Research, 58 (2-5): iii-iv, 2004.

James, M.O. Inflammation and infection reduce drug metabolism, Nascent transcripts. In Molecular Interventions 5 (5): 273, 2005

OTHER PROFESSIONAL ACTIVITIES, FROM 2007

Invited Lectures

September 2007 Invited presentation on “Inhibition of sulfotransferases”, 5th International Congress of Pharmaceutical Science, Istanbul, Turkey.

May 2008 Invited presentation on “PCB metabolism in aquatic species”, 5th PCB Workshop *New knowledge gained from old pollutants*, Iowa City, Iowa, May 18-22, 2008

October 2011 Invited to present work on development of glutathione transferase zeta 1 at the annual meeting of the International Society for the Study of Xenobiotics, Atlanta, GA

Professional Service

February 2007 Organizing committee, section on pharmaceutical sciences, AAAS meeting, Seattle, WA.

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|----------------|--|
| February 2007 | Xenobiotic and Nutrient Disposition and Action study section ad hoc member, NIH, Washington, DC. |
| May 2007 | Scientific advisory committee, PRIMO 14, Florianopolis, Brazil. |
| October 2007 | Review of grants for Texas Advanced Research Program consortium |
| November 2007 | Review of program for US Army Research and Materiel Command Center for Environmental Health |
| February 2008 | Organized symposium for the AAAS national meeting, Boston, MA on "Systems Biology: Hype or Hope in Drug Design". |
| March 2008 | Review committee member for Texas ARP consortium, Austin, March 28-29. |
| December 2008 | Grant review for Canada Foundation for Innovation |
| December 2008 | Grant review for Wisconsin Sea Grant |
| February 2009 | Organized symposium for the AAAS national meeting, Chicago, IL on "Species and Individual Differences in Response to Drugs" |
| May 2009 | Grant review for "Unity through Knowledge" foundation, Croatia |
| May 2009 | Scientific advisory committee, PRIMO15, Bordeaux, France |
| June 2009 | Reviewer for NIH Challenge grants |
| July 2009 | Reviewer on special study section, NIH |
| September 2009 | External Advisory Board member, Oregon State Superfund Research Program |
| October 2009 | Reviewer for NSF grant |
| November 2009 | Grant Review for State of Texas Advanced Research Program |
| January 2010 | Grant review for Natural Science and Engineering Research Council (NSERC) of Canada. |
| March 2010 | Grant review for Texas Advanced Research Program, meeting Austin TX |
| June 2010 | Study section member (ad hoc), Xenobiotic and Nutrient Disposition, Chicago, IL |
| June 2010 | Review abstracts for 9 th International meeting of ISSX |
| July 2010 | Grant review for NIH, special study section |
| August 2010 | Grant review committee for NIEHS, reviewing center grants |
| August 2010 | Review late abstracts for 9 th International meeting of ISSX |
| August 2010 | Scientific Advisory Council and Review abstracts for International Society for Aquatic Animal Health |
| August 2010 | Review candidates for the Sloan Scholar application at the University of Florida |
| October 2010 | Grant review for NSF |
| January 2011 | Reviewed grant for Wisconsin Ground Water Coordinating Council |
| March 2011 | Review STAR grants for the Environmental Protection Agency |
| Spring 2011 | Scientific Advisory Board for the 16 th international symposium on Pollutant Responses in Marine Organisms (PRIMO16), Long Beach CA |
| September 2011 | Review candidate at Duke University for tenure and promotion |
| October 2011 | Grant review for NIH, special study section |
| February 2012 | Grant review for ICER study section, NIH |
| April 2012 | Grant review for NIEHS special study section, Oceans and Human Health |
| June 2012 | Review NIEHS intramural faculty |
| August 2012 | Review candidates for tenure, Virginia Commonwealth University, |

University of Mississippi
 June 2012-Feb 2013 Member of International Agency for Research on Cancer working group to review the carcinogenicity of PCBs (meeting February 2013, Lyon, France)
 November 2012 Grant review for NIEHS.
 April 2013 Grant review for NIEHS
 May 2013 Review two candidates for tenure (University of Amman, Jordan and Qatar University, Qatar)

Reviewer for the following journals:

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| Aquatic Toxicology | Archives Biochem. Biophys. |
| Biochem. Biophys. Acta | Biological Bulletin |
| Biomed Central Ecology | Biochemical Pharmacology |
| Bioorganic Chemistry | |
| Canadian Journal of Fisheries and Aquatic Sciences | |
| Canadian Journal of Physiology and Pharmacology | |
| Central European Journal of Chemistry | Chemical Research in Toxicology |
| Chemico-Biological Interactions | Chemosphere |
| Comparative Biochemistry and Physiology | Comparative Hepatology |
| Critical Reviews in Toxicology | Drug Metabolism and Disposition |
| Ecotoxicology and Environmental Safety | Endocrinology |
| Environmental Toxicology and Chemistry | Environmental Pollution |
| General and Comparative Endocrinology | Gene |
| Journal of Biochemical and Molecular Toxicology | |
| Journal of Biomedical and Pharmaceutical Analysis | |
| J. Experimental Zoology | J. Pesticide Physiology and Biochemistry |
| J. Pharmaceutical Science | J. Pharmacy and Pharmacology |
| Life Sciences | Marine Environmental Research |
| Metabolism | Placenta |
| Regulatory Pharmacology and Toxicology | Science |
| Science of the Total Environment | Steroids |
| Toxicology and Applied Pharmacology | |
| Toxicological Sciences | Xenobiotica |

Editorial Advisory Board

Aquatic Toxicology (1990 – present)
 Chemico-Biological Interactions (1991-98) and (2004-present)
 Drug Metabolism and Disposition (1992-present)

TEACHING

Graduate courses

Drug Metabolism and Molecular Mechanisms of Toxicity PHA 6425. In this course, students learn in detail the enzymology and regulation of the pathways of xenobiotic biotransformation. Examples are given that demonstrate how biotransformation to chemically reactive metabolites can lead to toxicity. Factors that modulate toxicity are presented.

Drug Design PHA 6447 (Team-taught course). This course is team-taught every other year by all members of the department of Medicinal Chemistry. The course presents aspects of the design of pharmaceutical agents.

Principles of Drug Action GMS 6009/GMS 7593 (team-taught course). This course is an introduction to pharmacology for graduate students and is taught every year in the department of pharmacology.

Advanced Toxicology VMS 6003 This course covers mechanistic toxicology and is taught every other year.

Fundamentals of Cancer Biology, GMS6065 Team-taught course on all aspects of cancer biology.

Supervised Research PHA 6905, 6910, 7979, 7980 - varying contact hours - laboratory-based courses for graduate students.

Seminar in toxicology

Organized interdisciplinary seminar in toxicology from Fall 1995 to 2007, funded in part by the Superfund Basic Research Program.

Interdisciplinary Toxicology Program

Member of the executive committee of the University-wide program, begun 1990, which promotes toxicology research and graduate training.

Committee chairman, Ph.D. student:

Pamela Riley - Ph.D. program, 1984-5 (transferred to Dr. R. Hanzlik at Kansas), currently at Proctor and Gamble, Norwich, New York.

Jason Li - Ph.D. 1988 - 93, Research Topic: The fate of phenolic compounds in the lobster. After graduation worked for two years as a post-doctoral fellow with Dr. M. Corbett at the Eppley Cancer Research Institute.

Sean M. Boyle - Ph.D. 1991-1997. Research Topic. Cytochrome P4502L isozymes in the spiny lobster, *Panulirus argus*. Mr. Boyle won the College of Pharmacy poster prize, April, 1996. Took up a postdoctoral fellow with Dr. C. Omiecinski in the Toxicology Department, University of Washington School of Public Health, May 1997. Now a patent attorney, Palo Alto, CA.

Zeen Tong - Ph.D. 1992 - 1996. Research Topic: Xenobiotic-metabolizing enzymes and the intestinal bioavailability and biotransformation of benzo(a)pyrene phenols and conjugates in the channel catfish, *Ictalurus punctatus*. Finalist in the College of Pharmacy research day, 1996. After three years as a post-doctoral fellow with M.W. Anders at the University of

- Rochester, he moved to Wyeth-Ayerst Drug Metabolism Division as a senior drug metabolism scientist. Now at Celgene corporation
- Rachel Cornett, Ph.D. 1995-1999. Research Topic: Metabolism of dichloroacetic acid. After graduating, Dr. Cornett took up a position in the Forensic Toxicology laboratory, Gainesville, as a research chemist. She later returned to practice pharmacy
- Zhen Lou, Ph.D. 1997 - 2001. Research Topic: Intestinal metabolism of xenobiotics. She won a drug metabolism division prize for her poster presentation at the ASPET meeting, 2001. After graduation she was recruited to the drug metabolism division of Pfizer Pharmaceutical company, Ann Arbor, MI, and in 2007 moved to Bristol-Myers Squibb, where she is a senior scientist.
- Vaishali Dixit, Ph.D. 2000-2005. Research Topic: Inactivation of glutathione S transferase zeta by dichloroacetic acid. After post-doctoral fellowship with J. Unadkat at the University of Washington, Seattle, she moved to Vertex Pharmaceuticals.
- Leah Stuchal, Ph.D. 2000-2005. Research Topic: Phase I and Phase II biotransformation of methoxychlor and its demethylated metabolites in the channel catfish (*Ictalurus punctatus*). Currently a research assistant professor in risk assessment, University of Florida.
- James Sacco, Ph.D. 2001 -2006. Research Topic: Phase II biotransformation of xenobiotics in polar bear, *Ursus Maritimus* and channel catfish *Ictalurus punctatus*. Won first place for his presentation at the College of Pharmacy research day, 2005. Currently an assistant professor at Drake University, Iowa.
- Betty Nyagode, Ph.D. 2002-2007. Research Topic: Biotransformation of methoxychlor and selected xenobiotics by channel catfish, *Ictalurus punctatus* and largemouth bass, *Micropterus salmoides*. Finalist in the College of Pharmacy research day, 2007. Currently a scientist at Proctor and Gamble.
- John Benedet, entered Ph.D. program Fall 2006 transferred to Arizona State, May, 2007
- Wenjun Li, Ph.D. 2006-2011. Research Topic: Glutathione transferase Z1-catalyzed biotransformation of dichloroacetate – roles of mitochondrion, subject age, GSTZ1 haplotype and chloride interaction. Finalist in the College of Pharmacy research day, 2009. Travel award recipient, NIEHS, 2007, Society of Toxicology, 2009, FASEB 2010. Awarded prize in Drug Metabolism Division poster competition 2010. Now a postdoctoral fellow at the University of Lausanne, Switzerland
- Sriram Ambadapadi, M.S., entered Ph.D. program Fall 2007 Research Topic: Modulation of steroid sulonation by small molecules that interact with sulfotransferases and sulfatases. Travel award AAPS 2011. Graduated December 2012
- Erin Jackson, B.S. entered Ph.D. program Fall 2010
- Guo Zhong, M.S. entered Ph.D. program Fall 2011
- Marci Smeltz, B.S. entered Ph.D. program Fall 2012

Committee chairman, M.S. student:

- K.V. Murali M. Jayanti, 1992-95; Post-graduate position: Drug Metabolism Division, Abbott Labs., Chicago, IL.
- Donald Sikaswe, 1993-1996. He later completed the Ph.D. program at Florida A&M university. Present position: Research Scientist, the Roskamp Institute.

Committee member

Member of graduate student committees for many students in College of Pharmacy, College of

Medicine, Department of Chemistry and in the Institute of Food and Agricultural Sciences. Served on the doctoral supervisory committee of student at Florida Agricultural and Mechanical University, and as the opponent of a Ph.D. thesis defense in Goteborg University, Sweden.

Postdoctoral fellows.

- Dr. Robert Weatherby, 1976-78. Now Senior Lecturer, Department of Pharmacology, University of Sydney, Australia
- Dr. Peter J. Little, 1978-80. Now Senior Scientist and Program Director at the Baker Medical Research Institute. Melbourne, Australia.
- Dr. Suniti Dharwhadkhar, 1986-87. Now Senior Lecturer, Department of Biochemistry, University of Aurangabad, India.
- Dr. Purushotham Karnam, 1988-89.
- Dr. Mace Barron, 1985-87. Now Scientific Director, United States Environmental Protection Agency, Gulf Breeze Laboratory, Gulf Breeze, FL.
- Dr. John Schell, 1987-90 Now Toxicologist, ATRA Corp., Dallas, TX
- Dr. Armin Herbert 1988-89 Now Faculty member, University of Mainz, Germany.
- Dr. Chung-Li. Jason Li, 1995-2001. Now pharmacist, St. Augustine, FL.
- Dr. Zimeng Yan 1995 - 97 Now Analytical Chemist at American Cyanamid , Princeton, NJ
- Dr. Bernard K-M. Gadagbui, 1996-2001. Now senior scientist, Toxicology Excellence for Risk Assessment, Cincinnati, OH
- Dr. Peter Van den Hurk, 1998 – 2001. Now Assistant Professor, Clemson University, SC
- Dr. Jing Cheung, 1999 – 2000. Now pharmacist, Gainesville, FL.
- Dr. Xu Guo, 2003-2005. Now scientist, contract research organization.
- Dr. Liqun Wang, 2001- 2005. Now Scientist Xenobiotic laboratories, Princeton, NJ.
- Dr. Stephan Jahn, 2013 - present

Visiting faculty

- 1999-2000 Dr. Narumi Sugihara, Associate Professor, Fukuoku University, Hiroshima, Japan
- 2006-2007 Dr. Hae-Soon Shin, Associate Professor, Duksung Women's University, Seoul, Korea

Visiting students

- 2007-8 Abidemi J. Akindele, Fulbright Scholar, University of Lagos, Nigeria
- 2009-10 Yuan Gu, Chinese Scholarship Council, Tianjin University, China
- 2009 Svetlana Gabel, Pharmazeutisches Institut der Universität Kiel, Germany
- 2011 Peter Ghaly, German University, Cairo, Egypt
- 2011 Jennifer Schneider, Pharmazeutisches Institut der Universität Kiel, Germany
- 2012 Quentin Mièvre, Ecole Nationale Supérieure Chimie de Rennes, Rennes, France

Pharmacy professional student and undergraduate courses

Fundamentals of Medicinal Chemistry PHA 5433. This 1-credit course, required in the pharmacy curriculum, covers basic principles, including prediction of biotransformation and elimination pathways from structural considerations.

Structure and Function of Nucleotides PAH 5536. Required 2-credit course in

pharmacy curriculum. My lectures explain regulation of biotransformation and transporter pathways and pharmacogenetics.

Supervised Research PHA 4906 and PHA 5906

Various credit hours to undergraduates and professional students interested in research.

FUNDED RESEARCH

A. Current support

Federal Agencies

Principal investigator

“Fetal endocrine disruption by Triclosan” 1R21ES020545-01 M.O. James and C.E. Wood, co-PIs, 8/1/2011 to 1/30/2014, \$275,000 direct costs, \$402,875 total costs.

“Developmental Pharmacology of cytosolic and mitochondrial GSTZ1/MAAP” RO1GM099871 M.O. James, contact P.I., P.W. Stacpoole, co-PI 09/01/2012 to 05/31/2016 \$845,759 direct costs, \$1,264,313 total costs.

Co-investigator

“Health Impact of Deepwater Horizon Spill in Eastern Gulf Coast Communities” 1 U19 ES020683-01. PI J.G.Morris, M.O. James co-I project 3, 5% effort. 6/30/2011 to 5/31/2016 Total funds awarded \$7,001,175.

“Effects of Deepwater Horizon Oil Spill on Fish Communities” Florida Fish and Wildlife Conservation Commission, 2500-1470-00-A, UF PI A.S. Kane, M.O. James, co-I, 3% effort 9/12/2011 to 3/31/2013, Total funds awarded for UF portion, \$86,132

Other sources

Principal Investigator

“Modulation of steroid sulfation by celecoxib-like drugs” GCRC protocol #673, M.O. James, PI. \$2,553 ancillary support awarded April 18, 2006

B. Pending

“The University of Florida Center for Environmental Health”, J.G. Morris, PI, M.O. James, investigator. Submitted February 2013

C. Prior support, Federal Agencies

“Pharmacotoxicology of trichloroethylene metabolites” 1R01 ES014617 P.W. Stacpoole, PI, M.O. James, co-investigator 3% effort 4/1/06 to 3/30/12. Awarded direct costs \$1,187,500 for 5 years, total costs \$1,727,815

“Modulation of steroid sulfation by celecoxib-like drugs” 1 R03 CA123575-01 M.O. James P.I. 9/1/2008 – 8/31/2011 Direct \$100,000, total costs \$145,500

“Dichloroacetate kinetics, metabolism and human toxicology” 1R01 ES07355 P.W. Stacpoole, PI, M.O. James, co-investigator 3% effort. 4/1/04 to 3/30/09 (no-cost extension to 2010). Awarded direct costs \$2,127,147 for 5 years, total costs \$2,969,379

- “Health Effects of Chlorinated Compounds”. 2 P42 ES 07375. M.O. James, Program Director (25% time) P.I., project 6, (15% time), and co-investigator project 4, (10% time). 4/1/00-3/31/05, funded extension to 5/17/07. Direct costs, \$6,892,544, total costs \$9,523,519.
- “Dichloroacetate kinetics, metabolism and human toxicology” 1RO1 ES07355 P.W. Stacpoole, PI., M.O. James, co-investigator 5-10% effort. 7/1/99 to 6/30/03 with 1 year no-cost extension. direct costs \$1,022,516; total costs \$1,468,587
- "Bioavailability & metabolism of dietary carcinogens" NIH 1RO1 ES 05781-10 to 14 M.O. James, P.I. 25% time. Dec 1996-Nov 2000, with no-cost extension to Nov 2001. Total costs \$934,555, direct costs \$761,587 for four years (includes subcontract with K.M. Kleinow, co-investigator at LSU). Minority supplement to support Dr. Bernard Gadagbui \$133,335 total costs.
- “Health Effects of Chlorinated Compounds”. 1 P42 ES 07375. M.O. James, Program Director (25% time) P.I., project 1, (5% time), and co-investigator project 4, (5% time). 5/1/95-3/31/00. Direct costs, \$2,573,742, total costs \$3,571,676 for 5 years.
- “Dichloroacetate kinetics, metabolism and human toxicology” 1RO1 ES07355, P.W. Stacpoole, P.I., M.O. James co-investigator, 10%. July 1 1995-June 30 1999. Direct costs \$205,148; total costs \$297,357
- "Bioavailability & Biotransformation of Dietary Carcinogens". NIH ES 05781-05-09. M.O. James, P.I. 20% time, 1991-1996. Total costs \$1,045,354, direct costs \$862,352 for 5 years (with two coinvestigators).
- "Carcinogen biotransformation in marine invertebrates". NIH CA 44297, M.O. James, Principal Investigator, 20% time, 1986 -1990. Direct costs, \$231,010. No cost extension to 1991. Continued as ES05781.
- "Pharmacological and tumorigenic studies on a composite of drinking water carcinogens utilizing aquatic animals as a bioassay system", M.O. James was consultant for drug metabolism studies in test animals (fish). 1983 - 1988. \$5,000.
- "Interaction of imidazole derivatives and epoxide hydrolase", NIH GM 32547, M.O. James, Principal Investigator, 25% time, 1984 - 1988. Direct costs \$193,115.
- L.B. Markey Fellowship, NIH SCOR grant participant in toxicology at Mt. Desert Island Biol. Lab., Maine 1987: \$2,000; 1988: \$4,000
- "Drug metabolism in marine invertebrates", FDA U 000149, M.O. James, Principal Investigator, 15% time, 1985 - 1989. Direct costs, \$132,618.
- Consultant to Gulf Research Lab. on US Army project "Use of small fish as models for carcinogenesis". 1988 - 92. Direct costs, \$9,000.