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The University of Mississippi

Interoffice Memorandum
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TO: All School of Pharmacy and USDA Personnel

FROM: Charles D. Hufford, Associate Dean for Research and Graduate Programs

DATE: July 26, 2010

SUBJECT: Research News

The following **GRANTS/CONTRACTS** have recently been awarded:

1. **Dr. Benjamin Banahan** (P.I.-CPMM), **Dr. Yi Yang** (Co-P.I.-Pharmacy Administration), **Dr. John Bentley** (Co-P.I.-Pharmacy Administration), and **Dr. Patrick Pace** (Co-P.I.-CPMM). Using Medicare/Medicaid Claims Data to Support Medication Outcomes and Pharmacovigilance Research (Department of Health and Human Services [DHHS]/Centers for Medicare & Medicaid Services), \$500,000, June 1, 2010-May 31, 2011.
2. **Dr. Alice Clark** (P.I.-Pharmacognosy), and **Dr. Ameeta Agarwal** (Co-P.I.-NCNPR). New Drugs for Opportunistic Infections-FY10-11 (National Institute of Allergy and Infectious Diseases [NIAID]), \$388,221, July 1, 2010-June 30, 2011.
3. **Dr. Alice Clark** (P.I.-Pharmacognosy), and **Dr. Xing-Cong Li** (Co-P.I.-NCNPR). New Drugs for Opportunistic Infections-Diversity Supplement-FY10-11 (NIAID), \$46,910, July 1, 2010-June 30, 2011.
4. **Dr. John Cleary** (P.I.-Pharmacy Practice), and **Dr. Kayla Stover** (Co-P.I.-Pharmacy Practice). Cardiac Toxicity of Echinocandin Antifungals, \$73,397, May 23, 2010-May 22, 2012.
5. **Dr. Robert Doerksen** (P.I.-Medicinal Chemistry). Rational Design of Novel Natural Product-Derived Cannabinoid Ligands (Center of Research Excellence in Natural Products Neuroscience [CORE-NPN]), \$158,594, September 1, 2009-June 30, 2010.
6. Dr. Gregory Easson (P.I.-Geology and Geological Engineering), and **Dr. Marc Slattery** (Co-P.I.-Pharmacognosy). Seagrass Health Modeling and Prediction with National Aeronautics and Space Administration Science Data (NASA), \$295,608, December 1, 2009-November 30, 2010.
7. **Dr. Abir El-Alfy** (P.I.-Pharmacology). Mechanism of Antidepressant Action of Cannabinoids (CORE-NPN), \$161,360, September 1, 2009-June 30, 2010.
8. **Dr. Mahmoud ElSohly** (P.I.-NCNPR), and **Dr. Ikhlas Khan** (Co-P.I.-NCNPR). Production, Analysis and Distribution of Cannabis, Marijuana Cigarettes and Related Materials-FY10-11 (National Institute on Drug Abuse/National Institutes of Health [NIDA/NIH]), \$500,000, March 16, 2010-March 15, 2011.
9. **Dr. Daneel Ferreira** (P.I. - Pharmacognosy). Oligomeric/Polymeric Procyanidins: Development of Synthetic and Analytical Protocols (Ocean Spray Cranberries, Inc.), \$175,000, December 1, 2009-February 28, 2012.

10. **Dr. Deborah Gochfeld** (P.I.-NCNPR). Collaborative Research: Host-Environment-Pathogen Interactions in a Model Coral Disease System (National Science Foundation [NSF]), \$198,455, June 1, 2010-May 31, 2013.
11. **Dr. Mark Hamann** (P.I.-Pharmacognosy). The Isolation and Characterization of Antimalarial Agents with Marine Micro-Organisms-Year 5 (Medicines for Malaria Venture), \$15,000, January 1, 2006-December 31, 2011.
12. **Dr. Mark Hamann** (P.I.-Pharmacognosy). Vibrio Biotechnology: Anticancer Marine Natural Products from GOM Bacteria (National Oceanic and Atmospheric Administration [NOAA]/ National Institute for Undersea Science and Technology [NIUST]), \$96,172, October 1, 2009-September 30, 2010.
13. **Dr. Mark Hamann** (P.I.-Pharmacognosy). Food Additives from Marine Bacteria (Kraft Foods, Inc.), \$100,000, September 1, 2009-August 30, 2010.
14. Dr. Raymond Highsmith (P.I.-NIUST), **Dr. Marc Slattery** (Co-P.I.-Pharmacognosy), and Dr. Carol Lutken (Co-P.I.-MS Mineral Resources Institute). NIUST Integrated Research and Technology Development: OAR Charter Fund Request (U.S. Dept. of Commerce/NOAA), \$173,200, October 1, 2010-September 30, 2011.
15. **Dr. Melissa Jacob** (P.I.-NCNPR), and **Dr. Khalid Ashfaq** (Co-P.I.-NCNPR). Development of New Agents Against Cryptococcal Infections-Year 2 (Florida Agricultural and Mechanical University/NIH) \$12,875, June 1, 2009-May 31, 2010.
16. **Dr. Ikhlas Khan** (P.I.-NCNPR), **Dr. Mahmoud ElSohly** (Co-P.I.-NCNPR), **Dr. Troy Smillie** (Co-P.I.-NCNPR), and **Dr. Aruna Weerasooriya** (Co-P.I.-NCNPR). Advancing Drug Development in Medicinal Plants Using Transcriptomics and Metabolics (University of Kentucky/NIH), \$385,095, September 30, 2009-August 31, 2010.
17. **Dr. Ikhlas Khan** (P.I.-NCNPR), and **Dr. Troy Smillie** (Co-P.I.-NCNPR). Quality Assessment of Botanicals-FY09-10 (Herbalife International, Inc.), \$100,000, December 21, 2009-December 20, 2010.
18. **Dr. Xing-Cong Li** (P.I.-NCNPR), and **Dr. Shabana Khan** (Co-P.I.-NCNPR). Chemical Evaluation of *Capsicum annum* (Novus Nutrition Brands, LLC), \$75,000, January 1, 2010-March 31, 2011.
19. **Dr. Soumyajit Majumdar** (P.I.-Pharmaceutics). CORE-NPN Small Grant (National Center for Research Resources [NCRRR]), \$34,104, September 1, 2009-June 30, 2010.
20. **Dr. Susan Manly** (P.I.-NCNPR), and **Dr. Khalid Ashfaq** (Co.-P.I.-NCNPR). Production of Tolerance and Desensitization to Poison Ivy Urushiols (ElSohly Laboratories, Inc./NIH/ National Institute of Arthritis and Muculoskeletal and Skin Disease), \$172,329, September 7, 2009-August 31, 2010.
21. **Dr. Katie McClendon** (P.I.-Pharmacy Practice). Assessment of Outcomes Following Bariatric Surgery for Mississippi State Employees (Allergan), \$66,972, December 1, 2009-June 1, 2013.
22. **Dr. Christopher McCurdy** (P.I.-Medicinal Chemistry). Novel Pharmacologic Interventions for Drugs of Abuse-Year 4 (NIH/NIDA), \$345,584, April 1, 2010-March 31, 2011.
23. **Dr. Christophe Mesangeau** (P.I.-Medicinal Chemistry), and **Dr. Christopher McCurdy** (Co-P.I.-Medicinal Chemistry). Non-Peptidic Neuropeptide FF Receptor Probes (NIH), \$176,555, July 1, 2010-June 30, 2011.
24. **Dr. Narasimha Murthy** (P.I.-Pharmaceutics). Transdermal Delivery of Iron (NIH), \$69,305, May 1, 2010-April 30, 2011.

25. **Dr. Narasimha Murthy** (P.I.-Pharmaceutics). Vehicles to Enhance Nose to Brain Bioavailability of Drugs (CORE-NPN), \$149,771 September 1, 2009-June 30, 2010.
26. **Dr. Dale Nagle** (P.I.-Pharmacognosy), and **Dr. Yu-Dong Zhou** (Co-P.I.-Pharmacognosy). Anticancer Drug Discovery that Targets Tumor Hypoxia-Year 6 (NIH/National Cancer Institute), \$270,237, June 1, 2010-May 31, 2011.
27. **Dr. Nirmal Pugh** (P.I.-NCNPR). Biological Standardization Assay Development (Scandinavian Clinical Nutrition), \$7,756, July 1, 2010-August 31, 2010.
28. **Dr. Michael Repka** (P.I.-Pharmaceutics). Bioadhesive Properties of a Generic Nail Lacquer in Comparison to a Branded Product (Chanelle Medical), \$4,950, February 1, 2010 - February 28, 2010.
29. **Dr. Michael Repka** (P.I.-Pharmaceutics), and **Dr. Soumyajit Majumdar** (Co-P.I.-Pharmaceutics). Fundamental Studies in the Application of Low MW Klucel and Hot-Melt Extrusion for the Oral Delivery of Insoluble Drugs from Tablets, Capsules and Oral Film Dosage Forms-Year 1 (Hercules, Inc.), \$47,440, January 1, 2010-December 31, 2010.
30. **Dr. Michael Repka** (P.I.-Pharmaceutics), and **Dr. Soumyajit Majumdar** (Co-P.I.-Pharmaceutics). Center for Thermal Pharmaceutical Processing (Department of Health and Human Services/Health Resources and Services Administration), \$611,820, September 1, 2009-August 31, 2011.
31. **Dr. Michael Repka** (P.I.-Pharmaceutics), and **Dr. Soumyajit Majumdar** (Co-P.I.-Pharmaceutics). Properties of HME Extruded Films Containing Kollidon VA-64 and New Polymer (BASF SE), \$38,679, January 1, 2010-December 31, 2010.
32. **Dr. John Rimoldi** (P.I.-Medicinal Chemistry). Synthesis of Carbon Monoxide Donors and Heme Oxygenase Inhibitors (University of Mississippi Medical Center/NIH/National Heart, Lung and Blood Institute), \$26,870, September 1, 2008-July 31, 2010.
33. **Dr. Leigh Ann Ross** (P.I.-Pharmacy Practice). Mississippi State Hospital and University of Mississippi, School of Pharmacy, Pharmacy Practice Agreement-FY10-11 (Mississippi State Hospital), \$28,000, May 1, 2010-June 30, 2011.
34. **Dr. Ziaeddin Shariat-Madar** (P.I.-Pharmacology). CORE-NPN Small Grant (NCRR), \$35,750, September 1, 2009-June 30, 2010.
35. **Dr. Marc Slattery** (P.I.-Pharmacognosy). Rapid Phase Shift to Algal Dominated Mesophotic Reef Communities in Response to Lionfish Invasion (University of New Hampshire/NSF) \$28,980, December 1, 2009-November 30, 2010.
36. **Dr. Troy Smillie** (P.I.-NCNPR). Analysis of Plant Samples or Dietary Supplements for the Presence of *Hoodia gordonii*-Modification 4 (Federal Trade Commission), \$4,000, January 8, 2009-June 30, 2010.
37. **Dr. Larry Walker** (P.I.-NCNPR). Development of Natural Products from Plants and Microbes for Replacement of Synthetic Pesticides-Amendment 6 (USDA/Agricultural Research Service), \$2,380,393, September 6, 2006-July 31, 2011.
38. **Dr. Larry Walker** (P.I.-NCNPR). Bioassay Support (NIUST), \$184,727, October 1, 2006-September 30, 2011.
39. **Dr. Larry Walker** (P.I.-NCNPR), and **Dr. Charles Hufford** (Co-P.I.-Dean's Office). Phase II Construction of NCNPR Research Wing (NIH/NCRR), \$13,915,445, April 1, 2010-March 31, 2015.
40. **Dr. Larry Walker** (P.I.-NCNPR), and **Dr. Ikhlas Khan** (Co-P.I.-NCNPR). Discovery and Development of Natural Product-Based Insect Management Compounds for Medical,

Veterinary and Urban Concern-Amendment 3 (USDA), \$507,319, September 24, 2007-September 23, 2012.

41. **Dr. Kristine Willett** (P.I.-Pharmacology), and **Dr. John Rimoldi** (Co-P.I.-Medicinal Chemistry). Seagrass Proteomics: Profiling and Surveillance in the Gulf of Mexico (NOAA/NIUST), \$100,000, October 1, 2009-September 30, 2010.
42. **Dr. Kristine Willett** (P.I.-Pharmacology). BaP-mediated Reproductive and Developmental Toxicity (NIH/National Institute of Environmental Health Sciences), \$69,305, April 13, 2010-March 31, 2011.
43. **Dr. Kristine Willett** (P.I.-Pharmacology). Distribution, Bioaccumulation and Toxicity of Nanosilver Particles in Medaka (*Oryzias latipes*)-Year 2 (U.S. Army Engineering Research and Development Center), \$140,805, February 27, 2010-February 26, 2011.
44. **Dr. John Williamson** (P.I.-Medicinal Chemistry). Fungal Endophytes as a Source for Anti-Malarial Drug Leads (U.S. Army Medical Research Acquisition Activity), \$310,055, April 12, 2010-May 11, 2011.
45. **Dr. Yu-Dong Zhou** (P.I.-Pharmacognosy), and **Dr. Dale Nagle** (Co-P.I.-Pharmacognosy). Methods to Examine Mitochondria-Targeted Marine Natural Products (NOAA/NIUST), \$109,290, October 1, 2009-September 30, 2010.
46. **Dr. Jordan Zjawiony** (P.I.-Pharmacognosy). Diterpenes as Selective Kappa Opioid Receptor Agents (The University of North Carolina at Chapel Hill/NIDA), \$68,129, February 15, 2010-January 31, 2011.
47. **Dr. Jordan Zjawiony** (P.I.-Pharmacognosy), and **Dr. Charles Burandt** (Co-P.I.-NCNPR). Chemistry and Pharmacology of Newly Emerging Psychoactive Plants-Year 2 (NIH), \$71,500, May 1, 2009-April 30, 2011.

The following **PUBLICATIONS** have appeared:

1. H. Aichaoui, F. Guenadil, C.R. McCurdy, N. Coco, D.M. Lambert, and J.H. Poupaert, "Synthesis and pharmacological evaluation of antioxidant chalcone derivatives of 2(3H)-benzoxazolones", *Medicinal Chemistry Research*, (2009) 467-476.
2. Ibrahim S. Alsaadawi, and Franck E. Dayan, "Potentials and prospects of sorghum allelopathy in agroecosystems", *Allelopathy Journal*, 24 (2009) 255-270.
3. John Baynes and David B. Murray, "Cardiac and renal function are progressively impaired with aging in Zucker Diabetic Fatty type II diabetic rats", *Landes Bioscience Journals*, 2010.
4. D. Bialonska, S. Kasimsetty, K. Schrader, and D. Ferreira, "The Effect of Pomegranate (*Punica granatum* L.) By-products and Ellagitannins on the Growth of Human Gut Bacteria", *Journal of Agricultural and Food Chemistry*, 57 (2009) 8344-8349.
5. D. Bialonska, S.G. Kasimsetty, S.I. Khan, and D. Ferreira, "Urolithins, Intestinal Microbial Metabolites of Pomegranate Ellagitannins, Exhibit Potent Antioxidant Activity in a Cell Based Assay", *Journal of Agricultural and Food Chemistry*, 57 (2009) 10181-10186.
6. Alicia S. Bouldin, Erin Renee Holmes, Dewey D. Garner, and Ann Hein Devoe, "Purchasing and Managing Inventory", *Pharmacy Management, Leadership, Marketing, and Finance*, Chapter 8, Jones and Bartlett Publishers, Copyright 2011.
7. P. Carvalho, E.B. Furr, and C.R. McCurdy, "(E)-methyl 2-((2S,3S,12bR)-3-ethyl-8-methoxy-1,2,3,4,6,7,12,12b-octahydroindolo [2,3-a]quinolizin-2-yl)-3-methoxyacrylate", *Acta Crystallographica Section E: Structure Reports Online*, (2009) 1441-1442.
8. Naseem A. Charoo, Ziyaur Rahman, Michael A. Repka, and S.N. Murthy, "Electroporation: An Avenue for Transdermal Drug Delivery", *Current Drug Delivery*, 7 (2010) 125-136.

9. Eva Csongradi, Trinity Vera, John M. Rimoldi, Rama S.V. Gadepalli, and David E. Stec, "In vivo inhibition of renal heme oxygenase with an imidazole-dioxolane inhibitor", *Pharmacological Research*, 61 (2010) 525-530.
10. P.R. Daga, J. Duan, and R.J. Doerksen, "Computational model of hepatitis B virus DNA polymerase: Molecular dynamics and docking to understand resistant mutations", *Protein Science*, 19 (2010) 796-807.
11. Pankaj R. Daga, Ronak Y. Patel, and Robert J. Doerksen, "Template-based Protein Modeling: Recent Methodological Advances", *Current Topics in Medicinal Chemistry*, 10 (2010) 84-94.
12. Franck E. Dayan, J'Lynn Howell, and Jeffrey D. Weidenhamer, "Dynamic root exudation of sorgoleone and its *in planta* mechanism of action", *Journal of Experimental Botany*, 60 (2009) 2107-2117.
13. Franck E. Dayan, Maria L.B. Trindade, and Edivaldo D. Velini, "Amicarbazone, a New Photosystem II Inhibitor", *Weed Science*, 57 (2009) 579-583.
14. F. Dayan, N. Singh, C.R. McCurdy, C. Godfrey, L. Larsen, R. Weavers, J. Van Kink, and N. Perry, "b-Triketone Inhibitors of Plant *p*-Hydroxyphenylpyruvate Dioxygenase: Modeling and Comparative Molecular Field Analysis of Their Interactions", *Journal of Agricultural and Food Chemistry*, 57 (2009) 5194-5200.
15. F.E. Dayan, P.R. Daga, S.O. Duke, R.M. Lee, P.J. Tranel, and R.J. Doerksen, "Biochemical and structural consequences of a glycine deletion in the α -8 helix of protoporphyrinogen oxidase", *BBA - Proteins and Proteomics*, 1804 (2010).
16. Franck E. Dayan, Agnes M. Rimando, Zhiqiang Pan, Scott R. Baerson, Anne Louise Gimsing, and Stephen O. Duke, "Molecules of Interest – Sorgoleone", *Phytochemistry*, 71 (2010) 1032-1039.
17. L. Dhooghe, S. Maregesi, I. Mincheva, D. Ferreira, J.P.J. Marais, F. Lemièrre, P. Cos, L. Maes, A. Vlietinck, S. Apers, and L. Pieters. "Antiplasmodial Activity of (I-3, II-3)-Biflavonoids and Other Constituents from *Ormocarpum kirkii*" *Phytochemistry*, 71 (2010) 785-791.
18. Jessica A. DiGirolamo, Xing-Cong Li, Melissa R. Jacob, Alice M. Clark, and Daneel Ferreira, "Reversal of Fluconazole Resistance by Sulfated Sterols from the Marine Sponge *Topsentia* sp.", *Journal of Natural Products*, 72 (2009) 1524-1528.
19. Yuanqing Ding, Xing-Cong Li, and Daneel Ferreira, "4-Arylflavan-3-ols as Proanthocyanidin Models: Absolute Configuration via Density Functional Calculation of Electronic Circular Dichroism", *Journal of Natural Products*, 73 (2010) 435-440.
20. Stephen Duke, "Parasitic weeds, a scientific challenge", *Chemistry and Industry*, (2009).
21. Stephen O. Duke, Franck E. Dayan, Joanna Bajsa, Kumudini M. Meepagala, Ruth A. Hufbauer, and Amy C. Blair, "The case against (-)-catechin involvement in allelopathy of *Centaurea stoebe* (spotted knapweed)", *Plant Signaling & Behavior*, 4 (2009) 422-424.
22. Abir T. El-Alfy, Kelly Ivey, Keisha Robinson, Safwat Ahmed, Mohamed Radwan, Desmond Slade, Ikhlas Khan, Mahmoud ElSohly, and Samir Ross, "Antidepressant-like effect of Δ^9 -tetrahydrocannabinol and other cannabinoids isolated from *Cannabis sativa* L.", *Pharmacology, Biochemistry and Behavior*, 95 (2010) 434-442.
23. Abir T. El-Alfy, Lisa Wilson, Mahmoud A. ElSohly, and Ehab A. Abourashed, "Towards a better understanding of the psychopharmacology of nutmeg: Activities in the mouse tetrad assay", *Journal of Ethnopharmacology*, 126 (2009) 280-286.

24. Xiefan Fang, Wu Dong, Cammi Thornton, and Kristine L. Willett, "Benzo[a]pyrene effects on glycine N-methyltransferase mRNA expression and enzyme activity in *Fundulus heteroclitus* embryos", *Aquatic Toxicology*, 98 (2010) 130-138.
25. D. Ferreira, J.P.J. Marais, C. Coleman, and D. Slade, "Proanthocyanidins: Chemistry and Biology", *Comprehensive Natural Products Chemistry II*, Chapter 6.18 (2010) 606-662.
26. Schwanda K. Flowers, Ross E. Vanderbush, Jan K. Hastings, and Donna West, "Web-based Multimedia Vignettes in Advanced Community Pharmacy Practice Experiences", *American Journal of Pharmaceutical Education*, 74 (2010).
27. Xiang Fu, Xing-Cong Li, Yan-Hong Wang, Bharathi Avula, Troy J. Smillie, Wilfred Mabusela, James Syce, Quinton Johnson, William Folk, and Ikhlas A. Khan, "Flavanol Glycosides from the South African Medicinal Plant *Sutherlandia frutescens*", *Planta Med*, 76 (2010) 178-181.
28. A.M. Galal, D. Slade, W. Gul, A.T. El-Alfy, D. Ferreira, and M.A. ElSohly, "Naturally Occurring and Synthetic Cannabinoids and their Potential Therapeutic Applications", *Recent Patents Reviews on CNS Drug Discovery*, 4 (2009) 112-136.
29. J.D. Gardner, D.B. Murray, T.G. Voloshenyuk, G.L. Brower, J.M. Bradley, and J.S. Janicki, "Estrogen attenuates chronic volume overload induced structural and functional remodeling in male rat hearts", *Am J. Physiol Heart Circ Physiol*, 298 (2009) 497-504.
30. Archana J. Gawde, Charles L. Cantrell, and Valtcho D. Zheljaskov, "Dual extraction of essential oil and podophyllotoxin from *Juniperus virginiana*", *Industrial Crops and Products*, 30 (2009) 276-280.
31. J.J.C. Grove, P.S. van Heerden, D. Ferreira, and B.C.B. Bezuidenhout, "Conversion of Pravastatin Into an Advanced Intermediate for the Synthesis of the HMG-CoA Reductase Inhibitor BB-476", *Tetrahedron Letters*, 51 (2010) 57-59.
32. N.N. Henyan, D.M. Riche, J.J. Pitcock, and D.C. Strickland, "Marked Transaminase Elevations and Worsening A1C Resulting from Polyherbal Use in a Patient with Diabetes", *Journal of Pharmacy Practice*, 22 (2009) 600-605.
33. Erin Renee Holmes, "Pharmacists' interventions: So many factors, so little time", *Research in Social and Administrative Pharmacy*, 6 (2010) 3-5.
34. Amany K. Ibrahim, Mohamed M. Radwan, Safwat A. Ahmed, Desmond Slade, Samir A. Ross, Mahmoud A. ElSohly, and Ikhlas A. Khan, "Microbial metabolism of cannfalavin A and B isolated from *Cannabis sativa*", *Phytochemistry*, 71 (2010) 1014-1019.
35. Mohamed A. Ibrahim, Arsala A. Mansoor, Amanda Gross, M. Khalid Ashfaq, Melissa Jacob, Shabana I. Khan, and Mark T. Hamann, "Methicillin-Resistant *Staphylococcus aureus* (MRSA)-Active Metabolites from *Platanus occidentalis* (American Sycamore)", *Journal of Natural Products*, 72 (2009) 2141-2144.
36. H. Kamel, X-C. Li, D. Ferreira, Y. Ding, M. Slattery, and F. Fronczek, "Beyond Polymaxenolide: Cembrane-Africanane Terpenoids from the Hybrid Soft Coral *Sinularia maxima X S polydactyla*", *Journal of Natural Products*, 72 (2009) 900-905.
37. S. G. Kasimsetty, D. Bialonska, K.R. Muntha, C. Thornton, K.L. Willet, and D. Ferreira, "Effects of Pomegranate Chemical Constituents/Intestinal Microbial Metabolites on CYP1B1 in 22Rv1 Prostate Cancer Cells", *Journal of Agricultural and Food Chemistry*, 57 (2009) 10636-10644.
38. S. Kasimsetty, D. Bialonska, G. Ma, S.I. Khan, and D. Ferreira, "Colon Cancer Chemopreventive Effects of Pomegranate Juice Ellagitannins and their Colonic Microfloral Metabolites", *Journal of Agricultural and Food Chemistry*, 58 (2010) 2180-2187.

39. S. Kudrimoti, S.A. Ahmed, P.R. Daga, A.E. Wahba, S.I. Khalifa, R.J. Doerksen, and M.T. Hamann, "Semisynthetic latrunculin B analogs: Studies of actin docking support a proposed mechanism for latrunculin bioactivity", *Bioorganic & Medicinal Chemistry*, 17 (2009) 7517-7522.
40. Swapnil J. Kulkarni, Yakambram Pedduri, Amar G. Chittiboyina, and Mitchell A. Avery, "Asymmetric Total Synthesis of the Caspase-1 Inhibitor (-)-Berkeleyamide A", *Journal of Organic Chemistry*, 75 (2010) 3113-3116.
41. L. Kutrzeba, D. Ferreira, and J.K. Zjawiony, "Intramolecular Transacetylation in Salvinorins D and E", *Journal of Natural Products*, 73 (2010) 707-708.
42. S.P. Levick, D.B. Murray, J.S. Janicki, and G.L. Brower, "Sympathetic nervous system modulation of inflammation and remodeling in the hypertensive heart", *Hypertension*, 55 (2010) 270-276.
43. J. Li, Y. Ding, X-C. Li, D. Ferreira, S.I. Khan, T. Smillie, and I. A. Khan, "Scuteflorins A and B, Dihydropyranocoumarins from *Scutellaria lateriflora*", *Journal of Natural Products*, 72 (2009) 983-987.
44. H. Liu, C.R. McCurdy, and R.J. Doerksen, "Computational study on the conformations of mitragynine and mitragynaline", *Journal of Molecular Structure: THEOCHEM*, 945 (2010) 57-63.
45. Qing Liu, Ping Zhao, Xing-Cong Li, Melissa R. Jacob, Chong-Ren Yang, and Ying-Jun Zhang, "New *a*-Tetralone Galloylglucosides from the Fresh Pericarps of *Juglans sigillata*", *Helvetica Chimica Acta*, 93 (2010) 265-271.
46. Francis Machumi, Voldymyr Samoylenko, Abiy Yenesew, Solomon Derese, Jacob O. Midiwo, Frank T. Wiggers, Melissa R. Jacob, Babu L. Tekwani, Shabana I. Khan, Larry A. Walker, and Ilias Muhammad, "Antimicrobial and Antiparasitic Abietane Diterpenoids from the Roots of *Clerodendrum eriophyllum*", *Natural Product Communications*, 5 (2010) 853-858.
47. Soumyajit Majumdar, Tushar Hingorani, and Ramesh Srirangam, "Evaluation of Active and Passive Transport Processes in Corneas Extracted from Preserved Rabbit Eyes", *Journal of Pharmaceutical Sciences*, 99 (2010) 1921-1930.
48. Shui-Chun Mao, Yang Liu, J. Brian Morgan, Mika B. Jekabsons, Yu-Dong Zhou, and Dale G. Nagle, "Lipophilic 2,5-Disubstituted Pyrroles from the Marine Sponge *Mycale* sp. Inhibit Mitochondrial Respiration and HIF-1 Activation", *Journal of Natural Products*, 72 (2009) 1927-1936.
49. K.S. McClendon, D.M. Riche, and G.I. Uwaifo, "Orlistat: current status in clinical therapeutics", *Expert Opinion on Drug Safety*, 8 (2009) 727-744.
50. Zlatko Mehmedic, Suman Chandra, Desmond Slade, Heather Denham, Susan Foster, Amit S. Patel, Samir A. Ross, Ikhlas A. Khan, and Mahmoud A. ElSohly, "Potency Trends of Δ^9 -THC and Other Cannabinoids in Confiscated Cannabis Preparations from 1993 to 2008", *Journal of Forensic Sciences*, (2010).
51. Damaris A.F. Meujo, Dion A. Kevin, Jiangnan Peng, John J. Bowling, Jianping Liu, and Mark T. Hamann, "Reducing oyster-associated bacteria levels using supercritical fluid CO₂ as an agent of warm pasteurization", *International Journal of Food Microbiology*, 138 (2010) 63-70.
52. Cassia S. Mizuno, Amar G. Chittiboyina, Falgun H. Shah, Akshay Patny, Theodore W. Kurtz, Harrihar A. Pershadsingh, Robert C. Speth, Vardan T. Karamyan, Paulo B. Carvalho, and Mitchell A. Avery, "Design, Synthesis, and Docking Studies of Novel Benzimidazoles

- for the Treatment of Metabolic Syndrome”, *Journal of Medicinal Chemistry*, 53 (2010) 1076-1085.
53. A. Moawad, M. Hetta, J. K. Zjawiony, M. R. Jacob, M. Hifnawy, and D. Ferreira, “Phytochemical Investigation of *Cycas circinalis* and *Cycas revoluta* Leaflets: Moderately Active Antibacterial Biflavonoids”, *Planta Medica*, 76 (2010) 1-7.
 54. R. Mohammed, J. Peng, M. Kelly, M. Yousaf, E. Winn, S. Odde, Z. Bie, A. Xie, R.J. Doerksen, and M.T. Hamann, “Polyketide-peroxides from a Jamaican Plakortis sponge”, *Australian Journal of Chemistry*, 63 (2010) 1-9.
 55. N.V. de Moraes, R.A.C. Moretti, E.B. Furr, C.R. McCurdy, and V.L. Lanchote, “Determination of mitragynine in rat plasma by LC-MS-MS: Application to pharmacokinetics”, *Journal of Chromatography, B*, 877 (2009) 2593-2597.
 56. E.M.F. Muri, B.A. Abraham, T.G. Barros, J.S. Williamson, and O.A.C. Antunes, “Isomannide and Derivatives, Chemical and Pharmaceutical Applications”, *Mini-Reviews in Organic Chemistry*, 7 (2010) 75-83.
 57. D.B. Murray, S.P. Levick, G.L. Brower, and J.S. Janicki, “Inhibition of matrix metalloproteinase activity prevents increases in myocardial tumor necrosis factor-alpha”, *J Mol Cell Cardiol*, (2010).
 58. MinKyun Na, Yuanqing Ding, Bin Wang, Babu L. Tekwani, Raymond F. Schinazi, Scott Franzblau, Michelle Kelly, Robert Stone, Xing-Cong Li, Daneel Ferreira, and Mark T. Hamann, “Anti-infective Discorhabdins from a Deep-Water Alaskan Sponge of the Genus *Latrunculia*”, *Journal of Natural Products*, 73 (2010) 383-387.
 59. D.G. Nagle, and Y.D. Zhou, “Natural Products as Probes of Selected Targets in Tumor Cell Biology and Hypoxic Signaling”, *Comprehensive Natural Products Chemistry II*, (2010) 651-683.
 60. Anroop B. Nair, Srinivasa M. Sammeta, Hyun D. Kim, Bireswar Chakraborty, Phillip M. Friden, and S. Narasimha Murthy, “Alteration of the diffusional barrier property of the nail leads to greater terbinafine drug loading and permeation”, *International Journal of Pharmaceutics*, 375 (2009) 22-27.
 61. Anroop B. Nair, Hyun D. Kim, Shawn P. Davis, Robert Etheredge, Michael Barsness, Phillip M. Friden, and S. Narasimha Murthy, “An *Ex Vivo* Toe Model Used to Assess Applicators for the Iontophoretic Ungual Delivery of Terbinafine”, *Pharmaceutical Research*, 26 (2009) 2194-2201.
 62. T.L. Nolan, N. Singh, and C.R. McCurdy, “Ligand Macromolecule Interactions: Theoretical Principles of Molecular Recognition”, Ligand-Macromolecule Interactions in Drug Discovery. Methods in Molecular Biology Series, Humana Press (2009).
 63. Prathamesh Pathak, Donna West, Bradley C. Martin, Mark E. Helm, and Crystal Henderson, “Evidence-Based Use of Second-Generation Antipsychotics in a State Medicaid Pediatric Population, 2001-2005”, *Psychiatric Services*, 61 (2010) 123-129.
 64. Jiangnan Peng, Allen R. Place, Wesley Yoshida, Clemens Anklin, and Mark T. Hamann, “Structure and Absolute Configuration of Karlotoxin-2, an Ichthyotoxin from the Marine Dinoflagellate *Karlodinium veneficum*”, *Journal of American Chemical Society*, (2010).
 65. Jiangnan Peng, Sucheta Kudrimoti, Sivaprakasam Prasanna, Srinivas Odde, Robert J. Doerksen, Hari K. Pennaka, Yeun-Mun Choo, Karumanchi V. Rao, Babu L. Tekwani, Vamsi Madgula, Shabana I. Khan, Bin Wang, Alejandro M.S. Mayer, Melissa R. Jacob, Lan Chun Tu, Jurg Gertsch, and Mark T. Hamann, “Structure–Activity Relationship and Mechanism of

- Action Studies of Manzamine Analogues for the Control of Neuroinflammation and Cerebral Infections”, *Journal of Medicinal Chemistry*, 53 (2010) 61-76.
66. D.M. Riche, and H.E. East, “Xanthomas associated with homozygous familial hypercholesterolemia”, *Pharmacotherapy*, 29 (2009).
 67. D.M. Riche, J.D. Cleary, and S.T. King, “Medication-Induced Averse Effects: Important Concepts for the Hand Therapist”, *Journal of Hand Therapy*, (2010).
 68. D.M. Riche, “Chronic Gout Therapy”, *Clinical Drug Data* (K.M. Smith, D.M. Riche, and N.N. Henyan, editors), McGraw-Hill (2010).
 69. D.M. Riche, and J. Wooten, “Hypolipidemic Drugs”, *Clinical Drug Data* (K.M. Smith, D.M. Riche, and N.N. Henyan, editors), McGraw-Hill (2010).
 70. Srinivasa M. Sammeta, and S. Narasimha Murthy, “ ‘ChilDrive’: A Technique of Combining Regional Cutaneous Hypothermia with Iontophoresis for the Delivery of Drugs to Synovial Fluid”, *Pharmaceutical Research*, 26 (2009) 2535-2540.
 71. Srinivasa M. Sammeta, Siva Ram K. Vaka, and S. Narasimha Murthy, “Transcutaneous electroporation mediated delivery of doxepin-HPCD complex: A sustained release approach for treatment of postherpetic neuralgia”, *Journal of Controlled Release*, 142 (2010) 361-367.
 72. Volodymyr Samoylenko, Md. Mostafizur Rahman, Babu L. Tekwani, Lalit M. Tripathi, Yan-Hong Wang, Shabana I. Khan, Ikhlas A. Khan, Loren S. Miller, Vaishali C. Joshi, and Ilias Muhammad, “*Banisteriopsis caapi*, a unique combination of MAO inhibitory and antioxidative constituents for the activities relevant to neurodegenerative disorders and Parkinson’s disease”, *Journal of Ethnopharmacology*, 127 (2010) 357-367.
 73. Kevin K. Schrader, “Plant Natural Compounds with Antibacterial Activity towards Common Pathogens of Pond-Cultured Channel Catfish (*Ictalurus punctatus*)”, *Toxins*, 2 (2010) 1676-1689.
 74. Kevin K. Schrader, and Steven T. Summerfelt, “Distribution of Off-Flavor Compounds and Isolation of Geosmin-Producing Bacteria in a Series of Water Recirculating Systems for Rainbow Trout Culture”, *North American Journal of Aquaculture*, 72 (2010) 1-9.
 75. Falgun Shah, Shuang-Qing Zhang, Shilpa Prakash Kandhari, Prasenjit Mukherjee, Amar Chittiboyina, Mitchell A. Avery, and Bonnie A. Avery, “*In vitro* erythrocytic uptake studies of artemisinin and selected derivatives using LC-MS and 2D-QSAR analysis of uptake in parasitized erythrocytes”, *Bioorganic & Medicinal Chemistry*, 17 (2009) 5325-5331.
 76. H.N. Shivakumar, Siva Ram Kiran Vaka, and S. Narasimha Murthy, “Albumin microspheres for oral delivery of iron”, *Journal of Drug Targeting*, 18 (2010) 36-44.
 77. Y.J. Shukla, R.S. Pawar, Y. Ding, X-C. Li, D. Ferreira, and I.A. Khan, “Pregnane Glycosides from *Hoodia gordonii*”, *Phytochemistry*, 70 (2009) 674-682.
 78. Simrat P. Singh, Arlette Azua, Amit Chaudhary, Shabana Khan, Kristine L. Willett, and Piero R. Gardinali, “Occurrence and distribution of steroids, hormones and selected pharmaceuticals in South Florida coastal environments”, *Ecotoxicology*, 19 (2010) 338-350.
 79. P. Sivaprakasam, P.N. Tosso, and R.J. Doerksen, “Structure-activity relationship and comparative docking studies for cycloguanil analogs as PfDHFR-TS inhibitors”, *Journal of Chemical Information & Modeling*, 49 (2009) 1787-1796.
 80. Desmond Slade, Ahmed M. Galal, Waseem Gul, Mohamed M. Radwan, Safwat A. Ahmed, Shabana I. Khan, Babu L. Tekwani, Melissa R. Jacob, Samir A. Ross, and Mahmoud A. ElSohly, “Antiprotozoal, anticancer and antimicrobial activities of dihydroartemisinin acetal dimers and monomers”, *Bioorganic & Medicinal Chemistry*, 17 (2009) 7949-7957.

81. Marc Slattery, Kristine L. Willett, George P. Cobb, and William H. Benson, “ Impacts of Hurricane Katrina – Multiple Facets of Environmental Impacts from Hurricane Katrina”, *Environmental Toxicology and Chemistry*, 29 (2010) 1401-1402.
82. P.W. Snyman, E. Joubert, D. Ferreira, Y. Ding, X-C. Li, W.C.A. Gelderblom, and I.R. Green, “Antioxidant Activity of the Dihydrochalcones, Aspalathin and Nothofagin, and their Corresponding Flavones in Relation to Other Rooibos (*Aspalathus linearis*) Flavonoids, EGCG, and Trolox”, *Journal of Agricultural and Food Chemistry*, 57 (2009) 6678-6684.
83. Ramesh Srirangam, and Soumyajit Majumdar, “Passive asymmetric transport of hesperetin across isolated rabbit cornea”, *International Journal of Pharmaceutics*, (2010).
84. C.K. Veena, Y. Liu, S.C. Mayo, J.B. Morgan, F. Mahdi, M. Jekabsons, D.G. Nagle, and Y.D. Zhou, “The alternative medicine pawpaw and its acetogenin constituents inhibit hypoxic activation of hypoxia-inducible factor-1”, *Journal of Natural Products*, 73 (2010) 956-961.
85. Yan-Hong Wang, Volodymyr Samoylenko, Babu L. Tekwani, Ikhlas A. Khan, Loren S. Miller, Narayan D. Chaurasiya, Md. Mostafizur Rahman, Lalit M. Tripathi, Shabana I. Khan, Vaishali C. Joshi, Frank T. Wiggers, and Ilias Muhammad, “Composition, standardization and chemical profiling of *Banisteriopsis caapi*, a plant for the treatment of neurodegenerative disorders relevant to Parkinson’s disease”, *Journal of Ethnopharmacology*, 128 (2010) 662-671.
86. Aruna D. Weerasooriya, and Richard M.K. Saunders, “Systematic Botany Monographs – Monograph of *Mitrephora* (Annonaceae)” Volume 90, The American Society of Plant Taxonomists, February 22, 2010.
87. James Weston, Crystal Warren, Amit Chaudhary, Beth Emerson, Kate Argote, Shabana Khan, and Kristine L. Willett, “Impacts of Hurricane Katrina – Use of Bioassays and Sediment Polycyclic Aromatic Hydrocarbon Concentrations to Assess Toxicity at Coastal Sites Impacted by Hurricane Katrina”, *Environmental Toxicology and Chemistry*, 29 (2010) 1409-1418.
88. Donna West-Strum, “Health Care Organizations Involved in Quality Improvement”, Quality & Safety in Pharmacy Practice, McGraw Hill Medical, Chapter 4, 37-51.
89. Donna S. West-Strum, and Jan K. Hastings, “Communicating Effectively With Others”, Pharmacy Management, Leadership, Marketing, and Finance, Chapter 21, Jones and Bartlett Publishers, Copyright 2011.
90. Donna West-Strum, Leanne Lefler, and Amy Franks, “Examining Medication Adherence in Older Women with Coronary Heart Disease”, *Journal of Women & Aging*, 22 (2010) 157-170.
91. Aihua Xie, Shawna R. Clark, Sivaprakasam Prasanna, and Robert J. Doerksen, “3D quantitative structure-farnesyltransferase inhibition analysis for some diamminobenzophenones”, *Journal of Enzyme Inhibition & Medicinal Chemistry*, 24 (2009) 1220-1228.
92. Wen-Hui Xu, Melissa R. Jacob, Ameeta K. Agarwal, Alice M. Clark, Zong-Suo Liang, and Xing-Cong Li, “Flavonol Glycosides from the Native American Plant *Gaura Longiflora*”, *Heterocycles*, 78 (2009) 2541-2548.
93. Wen-Hui Xu, Melissa Ruth Jacob, Ameeta Kishore Agarwal, Alice Mae Clark, Zong-Suo Liang, and Xing-Cong Li, “*ent*-Kaurane Glycosides from *Tricalysia okelensis*”, *Chem. Pharm. Bulletin*, 58 (2010) 261-264.
94. Wen-Hui Xu, Yuanqing Ding, Melissa R. Jacob, Ameeta K. Agarwal, Alice M. Clark, Daneel Ferreira, Zong-Suo Liang, Xing-Cong Li, “Puupehanol, a Sesquiterpene-

- Dihydroquinone Derivative from the Marine Sponge *Hyrtios* sp.”, *Bioorganic & Medicinal Chemistry Letters*, 19 (2009) 6140-6143.
95. Y.T. Xu, N. Kaushal, J. Shaikh, L.L. Wilson, C. Mesangeau, C.R. McCurdy, and R.R. Matsumoto, “A novel substituted piperazine, 3-(4-(4-cyclohexylpiperazine-1-yl)butyl)benzo[d]thiazole-2(3*H*)-thione (CM156), attenuates the stimulant and toxic effects of psychostimulants in mice: Effects on cocaine”, *Journal of Pharmacology and Experimental Therapeutics* (2010).
 96. Xian-Wen Yang, Yuanqing Ding, Xing-Cong Li, Daneel Ferreira, Yun-Heng Shen, Su-Mei Li, Ning Wang, and Wei-Dong Zhang, “Cycloabienesquene A, a unique sesquiterpenoid from *Abies delavayi*”, *Chemistry Communication*, (2009) 3771-3773.
 97. Yi Yang, Vennela Thumula, Patrick F. Pace, Benjamin F. Banahan, III, Noel E. Wilkin, and William B. Lobb, “Medication Nonadherence and the Risks of Hospitalization, Emergency Department Visits, and Death Among Medicare Part D Enrollees With Diabetes”, *Drug Benefit Trends*, (2009) 330-338.
 98. Yi Yang, Vennela Thumula, Patrick F. Pace, Benjamin F. Banahan, III, Noel E. Wilkin, and William B. Lobb, “Predictors of Medication Nonadherence Among Patients With Diabetes in Medicare Part D Programs: A Retrospective Cohort Study”, *Clinical Therapeutics*, 31 (2009) 2178-2188.
 99. Yi Yang, Dick R. Gourley, Greta A. Gourley, Richard J. Faris, Robin J. Womeodu, Jun Yang, and Carol C. Likens, “African American Patients’ Attitudes Toward Proactive Health Behaviors After Exposure to Direct-to-Consumer Advertising”, *Journal of the National Medical Association*, 102 (2010) 408-415.
 100. Yi Yang, Vennela Thumula, Patrick F. Pace, Benjamin F. Banahan, III, Noel E. Wilkin, and William B. Lobb, “High-risk Diabetic Patients in Medicare Part D Programs: Are They Getting the Recommended ACEI/ARB Therapy?”, *Journal of General Internal Medicine*, 25 (2010) 298-304.
 101. Mukund Yelvigi, and Walter Chambliss, “The Role of a Target Product Profile in Pharmaceutical Product Development”, *Pharma Times*, 42 (2010) 27-29.
 102. Valtcho D. Zhelijazkov, Charles L. Cantrell, Tess Astatkie, and M. Wayne Ebelhar, “Peppermint Productivity and Oil Composition as a Function of Nitrogen, Growth Stage, and Harvest Time”, *Agronomy Journal*, 102 (2010) 124-128.
 103. Jordan K. Zjawiony, Daneel Ferreira, and Dale G. Nagle - Book Review - “Medicinal Natural Products: A Biosynthetic Approach” by Paul M. Dewick, *Journal of Medicinal Chemistry*, 52 (2009) 5768.

TECHNOLOGY TRANSFER transactions:

(In the interest of protecting confidential information, the names and titles associated with School of Pharmacy invention disclosures and patent applications will no longer be published until after a patent has issued.)

Research Disclosures Filed from September 2009 to Present: 3

US Patents Pending: 25

Recent US Patents Granted:

Agents with Selective K-Opioid Receptor Activity

7,687,538

Issued: March 30, 2010

Inventors: Jordan Zjawiony, Hesham Fahmy, Jeremy Stewart, Brian Roth

The following **SPECIAL ANNOUNCEMENTS** are also listed:

- **Mr. Sunil Battu** (Pharmaceutics) and **Mr. Swapnil Kulkarni** (Medicinal Chemistry) were honored with *Graduate Achievement Awards* during Commencement activities in May.
- **Ms. Sarah Chajkowski** was presented with the *Robert A. Magarian Outstanding Podium Presentation Award*, and **Mr. Swapnil Kulkarni** was presented with the *Thomas L. Lemke Outstanding Poster Presentation Award*, during the 2010 MALTO meeting held in May. Both are Medicinal Chemistry graduate students. MALTO is an annual meeting of the Medicinal Chemistry and Pharmacognosy departments from Schools of Pharmacy in Mississippi, Arkansas, Louisiana, Texas and Oklahoma.
- **Dr. Ikhlas Khan** was selected as the recipient of the 2010 American Herbal Products Association (AHPA) *Herbal Insight Award*. This award is given to individuals or non-commercial organizations that have a significant impact on furthering knowledge and understanding of botanicals and their uses. **Dr. Khan** was also named as the recipient of the *2011 Tyler Prize* during the annual meeting of the American Society of Pharmacognosy. The Tyler Prize is awarded to recognize an individual who has made outstanding scientific contributions to the broad field of dietary supplements, with special emphasis on botanicals.
- **Dr. Leigh Ann Ross** was named by the American Association of Colleges of Pharmacy as one of three finalists for the *Transformational Community Service Award*. This award recognizes the project that her very capable and committed team is doing in the Mississippi Delta to meet the needs of under served citizens. This complex and innovative project is truly making a difference in the lives of families and simultaneously creating learning opportunities for our students and pharmacy residents.
- **Mr. Philip Schwab** (Pharmacy Administration) received the *APhA-APRS ESAS Postgraduate Best Paper Award Honorable Mention* during the annual meeting of the American Pharmaceutical Association in March,

Please continue to send me important research and graduate information so that I might share it with your faculty colleagues.

cc: Dean Barbara G. Wells
Ms. Dabney Weems
Dr. Robin Buchannon, Office of Research