

The University of Mississippi
Interoffice Memorandum
SCHOOL OF PHARMACY
OFFICE OF THE DEAN
University, MS 38677

Phone: (662) 915-7828 FAX: (662) 915-5704

TO: All School of Pharmacy and USDA Personnel

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

DATE: December 10, 2010

SUBJECT: Research News #2

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

1. **Dr. Benjamin Banahan** (P.I.-CPMM/RIPS), **Dr. Yi Yang** (Co-P.I.-Pharmacy Administration), **Dr. John Bentley** (Co-P.I.-Pharmacy Administration), and **Dr. Patrick Pace** (Co-P.I.-CPMM/RIPS). Database Study to Evaluate the Impact of Multiple Sclerosis in a Medicare Patient Population (EMD Serono, Inc.), \$115,100, July 23, 2010-July 22, 2012.
2. **Dr. Alicia Bouldin** (P.I.-Pharmacy Administration), **Dr. David McCaffrey** (Co-P.I.-Pharmacy Administration), and **Dr. Donna West-Strum** (Co-P.I.-Pharmacy Administration). NCPA Survey: A Description of Consumers' Experiences with Retail and Mail Order Pharmacy (National Community Pharmacists Association), \$28,112, July 1, 2010-June 30, 2011.
3. **Dr. Stephen Cutler** (P.I.-Medicinal Chemistry). Center for Research Excellence in Natural Products Neuroscience (CORE-NPN) – Year 5 (National Center for Research Resources), \$1,970,471, July 1, 2010-June 30, 2011.
4. **Dr. Mahmoud ElSohly** (P.I.- NNCNPR), and **Dr. Ikhlas Khan** (Co-P.I.- NNCNPR). Production, Analysis and Distribution of Cannabis, Marijuana Cigarettes and Related Materials FY10-11 – Modification No. 1 (National Institute on Drug Abuse), \$520,612, March 16, 2010-March 15, 2011.
5. **Dr. Deborah Gochfeld** (P.I.-NNCNPR). Using Proteomics to Understand Coral and Sponge Immunity to Stress – Continuation (National Oceanic and Atmospheric Administration [NOAA]/National Institute for Undersea Science and Technology [NIUST]), \$22,249, October 1, 2010-September 30, 2011.
6. **Dr. Mark Hamann** (P.I.-Pharmacognosy). Food Additives from Marine Bacteria, Algae and Invertebrates – Amendment 1 (Kraft Foods, Inc.), \$50,000, September 1, 2009-March 31, 2011.
7. Dr. Raymond Highsmith (P.I.-NIUST), **Dr. Marc Slattery** (Co-P.I.-Pharmacognosy), and Dr. Carol Lutken (Co-P.I.-Mississippi Mineral Resources Institute). NIUST Integrated Research and Technology Development: Year Four Science Plan and Budget FY 2010 (U.S. Department of Commerce, NOAA), \$4,873,000, October 1, 2010-September 30, 2011.

8. **Dr. Melissa Jacob** (P.I.- NCNPR). Development of New Agents Against Cryptococcal Infections (Florida Agricultural and Mechanical University/NIH), \$12,875, June 1, 2010-May 31, 2011.
9. **Dr. Seongbong Jo** (P.I.-Pharmaceutics). Hypoxia-Sensitive Multifunctional Nanoparticles for Targeted Drug Delivery to Breast Cancer (U.S. Army Medical Research Acquisition Activity), \$107,131, September 1, 2010-August 31, 2011.
10. **Dr. Ikhlas Khan** (P.I.- NCNPR). Science Based Authentication of Dietary Supplements FY10-11 (Food and Drug Administration), \$500,000, July 1, 2010-June 30, 2011.
11. **Dr. Susan Manley** (P.I.- NCNPR), and **Dr. M. Khalid Ashfaq** (Co-P.I.- NCNPR). Production of Tolerance and Desensitization to Poison Ivy Urushiols – Year 2 (EISohly Laboratories, Inc./NIH/National Institute of Arthritis and Muculoskeletal and Skin Disease), \$158,217, September 1, 2010-August 31, 2011.
12. **Dr. David Murray** (P.I.-Pharmacology). Small Grant (CORE-NPN), \$104,913, September 1, 2010-June 30, 2011.
13. **Dr. Joel Pittman** (P.I.-Pharmacy Practice). 2010 Mississippi Society of Health-System Pharmacists Annual Meeting (Ortho-McNeil Janssen Scientific Affairs, LLC/Johnson & Johnson), \$3,105, July 29, 2010-July 31, 2010.
14. **Dr. Michael Repka** (P.I.-Pharmaceutics), and **Dr. Soumyajit Majumdar** (Co-P.I.-Pharmaceutics). Center for Thermal Pharmaceutical Processing FY10-11 (Department of Health and Human Services, Health Resources and Services Administration [HRSA]), \$594,000, September 1, 2010-August 31, 2012.
15. **Dr. Michael Repka** (P.I.-Pharmaceutics), and **Dr. Soumyajit Majumdar** (Co-P.I.-Pharmaceutics). Hot-Melt Extrusion Feasibility Studies for AR-12: Preformulation and Accelerated Stability (Arno Therapeutics, Inc.), \$40,316, September 20, 2010-March 19, 2011.
16. **Dr. Michael Repka** (P.I.-Pharmaceutics), and **Dr. Soumyajit Majumdar** (Co-P.I.-Pharmaceutics). Transmucosal Intra-Oral Drug Delivery Systems for THC – Supplement (EISohly Laboratories, Inc./NIH), \$51,354, June 1, 2010-May 31, 2011.
17. **Dr. Daniel Riche** (P.I.-Pharmacy Practice). Effect of Pterostilbene on Cholesterol, Blood Pressure, and Oxidative Stress (ChromaDex, Inc.), \$76,473, August 1, 2010-March 31, 2012.
18. **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), \$26,342, September 1, 2008-July 31, 2011.
19. **Dr. Leigh Ann Ross** (P.I.-Pharmacy Practice). University of Mississippi, School of Pharmacy and Baptist Memorial Hospital/North Mississippi Agreement FY10-11 (Baptist Memorial Hospital/North Mississippi), \$73,530, August 3, 2010-August 2, 2011.
20. **Dr. Leigh Ann Ross** (P.I.-Pharmacy Practice), **Dr. Barbara Wells** (Co-P.I.-Dean's Office), and **Dr. Lauren Bloodworth** (Co-P.I.-Pharmacy Practice). Delta Pharmacy Patient Care Management Project (Delta Health Alliance/HRSA), \$1,500,000, July 1, 2010-June 30, 2011.
21. **Dr. Leigh Ann Ross** (P.I.-Pharmacy Practice). Community Pharmacy Residency Practice Site Agreement (Walgreens), \$25,000, July 1, 2010-June 30, 2011.
22. **Dr. Leigh Ann Ross** (P.I.-Pharmacy Practice), and **Dr. Lauren Bloodworth** (Co-P.I.-Pharmacy Practice). Better Living Utilizing Electronic Systems (BLUES) in the Mississippi Delta (Delta Health Alliance/U.S. Department of Health and Human Services), \$500,000, April 1, 2010-March 31, 2013.

23. **Dr. James Sims** (P.I.-Pharmacognosy). Biosynthetic Routes to Drug Development for AIDS OI Mtb – Year 2 (NIH/National Institute of Allergy and Infectious Diseases), \$47,606, September 11, 2010-September 1, 2011.
24. Dr. Gregory Tschumper (P.I.-Chemistry), Dr. Amal Dass, Dr. Nathan Hammer, Dr. Keith Hollis, Dr. Randy Wadkins (Co-P.I.'s.-Chemistry); Dr. Yixin Chen (Co-P.I.-Computer and Information Science); **Dr. Robert Doerksen** (Co-P.I.-Medicinal Chemistry); and Dr. Maxine Harper (Co-P.I.-Center for Educational Research and Evaluation). Modeling and Simulation of Complex Systems (Mississippi State University/National Science Foundation), \$375,125, September 1, 2009-August 31, 2011.
25. **Dr. Larry Walker** (P.I.-NCNPR), **Dr. Babu Tekwani** (Co-P.I.-NCNPR), **Dr. Dhammika Nanayakkara** (Co-P.I.-NCNPR). Development of Safer Drugs for Malaria & Leishmaniasis in U.S. Troops, Civilian Personnel and Travelers (U.S. Army Medical Research and Materiel Command), \$3,703,320, September 1, 2010-August 31, 2012.
26. **Dr. Larry Walker** (P.I.-NCNPR). OCBR Bioassay Support (U.S. Department of Commerce/NOAA), \$184,470, October 1, 2010-September 30, 2011.
27. **Dean Barbara Wells** (P.I.-Pharmacy). Walgreens Diversity Scholarship 2010-2012 (Walgreens), \$10,000, November 18, 2010-November 17, 2012.
28. **Dr. Kristine Willett** (P.I.-Pharmacology). PAH Analysis in Sediments and Oysters from DISL (Dauphin Island Sea Lab/Northern Gulf Institute/BP Exploration & Production, Inc.), \$10,000, July 12, 2010-December 31, 2010.

The following **PUBLICATIONS** have appeared:

1. Mohamed Sadek Abdel-Bakky, Mohamed A. Hammad, Larry A. Walker and Mohammad K. Ashfaq, “Developing and Characterizing a Mouse Model of Hepatotoxicity Using Oral Prylizidine Alkaloid (Monocrotaline) Administration, with Potentiation of the Liver Injury by Co-administration of LPS”, *Natural Product Communications*, 5 (2010) 1457-1462.
2. Sridevi Ankisetty, Deborah J. Gochfeld, M. Cristina Diaz, Shabana I. Khan, and Marc Slattery, “Chemical Constituents of the Deep Reef Caribbean Sponges *Plakortis angulospiculatus* and *Plakortis halichondrioides* and Their Anti-inflammatory Activities”, *Journal of Natural Products*, 73 (2010) 1494-1498.
3. Scott R. Baerson, Joachim Schroder, Daniel Cook, Agnes M. Rimando, Zhiqiang Pan, Franck E. Dayan, Brice P. Noonan, and Stephen O. Duke, “Alkylresorcinol biosynthesis in plants”, *Plant Signaling & Behavior*, 5 (2010).
4. John P. Bentley, Folkert W. Asselbergs, Christopher S. Coffey, Patricia R. Hebert, Jason H. Moore, Hans L. Hillege, and Wiek H. van Gilst, “Cardiovascular Risk Associated with Interactions among Polymorphisms in Genes from the Renin-Angiotensin, Bradykinin, and Fibrinolytic Systems”, *PLoS ONE*, 5 (2010).
5. John P. Bentley, “Statistical analysis”, Research Methods for Pharmaceutical Practice and Policy, Edited by Rajender R. Aparasu, (2011) 205-224.
6. Dobrosława Bialonska, Sashi G. Kasimsetty, Shabana I. Khan, and Daneel 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.

7. D. Bialonska, P. Ramnani, S.G. Kasimsetty, K.R. Muntha, G.R. Gibson, and D. Ferreira, "The Influence of Pomegranate By-product and Punicalagins on Selected Groups of Human Intestinal Microbiota", *Int. J. Food Microbiol.*, 140 (2010) 175-182.
8. R. Call, M. Grimsley, L. Cadwallader, L. Cialone, M. Hill, V. Hreish, S.T. King, and D. M. Riche, "Insulin--carcinogen or mitogen? Preclinical and clinical evidence from prostate, breast, pancreatic, and colorectal cancer research", *Postgrad Med*, 122 (2010) 158-165.
9. Suman Chandra, Hemant Lata, Ikhlas A. Khan and Mahmoud A. ElSohly, "Propagation of Elite *Cannabis sativa* for the Production of Δ^9 -Tetrahydrocannabinol (THC) using Biotechnological Tools", *Medicinal Plant Biotechnology*, Chapter 7 (2010).
10. Suman Chandra, Hemant Lata, Zlatko Mehmedic, Ikhlas A. Khan and Mahmoud A. ElSohly, "Assessment of Cannabinoids Content in Micropropagated Plants of *Cannabis sativa* L. and Their Comparison with Conventionally Propagated Plants and Mother Plant During Developmental Stages of Growth", *Planta Medica*, 76 (2010) 743-750.
11. M. Chisholm, T.L. Schwinghammer, Barbara G. Wells, P. Malone, J. Kolesar, and J. DiPiro (eds), *Pharmacotherapy Principles and Practice*, 2nd edition, McGraw-Hill, (2010).
12. Y. Ding, X-C. Li, and D. Ferreira, "4-Arylflavan-3-ols as Proanthocyanidin Models: Absolute Configuration via Density Functional Calculations of Electronic Circular Dichroism", *J. Nat. Prod.*, 73 (2010) 435-440.
13. L. Du, F. Mahdi, M.B. Jekabsons, D.G. Nagle, and Y.-D. Zhou, "Mammea E/BB, An isoprenylated dihydroxycoumarin protonophore that potently uncouples mitochondrial electron transport disrupts hypoxic signaling in tumor cells", *J. Nat. Prod.*, 73 (2010) 1868-1872.
14. Xin-Gang Du, Wei Wang, Shi-Ping Zhang, Xiao-Ping Pu, Qing-Ying Zhang, Min Ye, Yu-Ying Zhao, Bao-Rong Wang, Ikhlas A. Khan, and De-An Guo, "Neuroprotective Xanthone Glycosides from *Swertia punicea*", *Journal of Natural Products*, 73 (2010) 1422-1426.
15. Stephen O. Duke, Charles L. Cantrell, Kumudini M. Meepagala, David E. Wedge, Nurhayat Tabanca and Kevin K. Schrader, "Natural Toxins for Use in Pest Management", *Toxins*, 2 (2010) 1943-1962.
16. K.L. Edwards, D.M. Riche, J.S. Stroup, J.D. Goldman-Levine, R.S. Padiyara, L.B. Cross, and M.P. Kane, "Insulin Glargine and Cancer Risk: An Opinion Statement of the Endocrine and Metabolism Practice and Research Network of the American College of Clinical Pharmacy", *Pharmacotherapy*, 30 (2010) 955-965.
17. Andrew N. Evans, John M. Rimoldi, Rama S.V. Gadepalli, and B. Scott Nunez, "Adaptation of a corticosterone ELISA to demonstrate sequence-specific effects of angiotensin II peptides and C-type natriuretic peptide on 1 α -hydroxycorticosterone synthesis and steroidogenic mRNAs in the elasmobranch interrenal gland", *Journal of Steroid Biochemistry and Molecular Biology*, 120 (2010) 149-154.
18. Xiefan Fang, Wu Dong, Cammi Thornton, Brian Scheffler, and Kristine L. Willett, "Benzo[a]pyrene induced glycine N-methyltransferase messenger RNA expression in *Fundulus heteroclitus* embryos", *Marine Environmental Research*, 69 (2010) S74-S76.
19. Wimal Herath, and Ikhlas Khan, "Microbial Metabolism. Part 11. Metabolites of Flutamide", *Chem. Pharm. Bull.*, 58 (2010) 562-564.
20. Ikhlas A. Khan, and Ehab A. Abourashed, Leung's Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, Third Edition, John Wiley & Sons, Inc.

21. Jin-Ki Kim, Vivek Kumar Garripelli, Ui-Hyeon Jeong, Jeong-Sook Park, Michael A. Repka, and Seongbong Jo, "Novel pH-sensitive polyacetal-based block copolymers for controlled drug delivery", *International Journal of Pharmaceutics*, (2010).
22. Ye-Tae Kim, Baek-Ki Shin, Vivek Kumar Garripelli, Jin-Ki Kim, Enkhzaya Davaa, Seongbong Jo, and Jeong-Sook Park, "A thermosensitive vaginal gel formulation with HP γ CD for the pH-dependent release and solubilization of amphotericin B", *European Journal of Pharmaceutical Sciences*, 41 (2010) 399-406.
23. Suvarna G. Kini, Anilchandra Bhat, Zhiqiang Pan, and Franck E. Dayan, "Synthesis and antitubercular activity of heterocycle substituted diphenyl ether derivatives", *Journal of Enzyme Inhibition and Medicinal Chemistry*, 25 (2010) 730-736.
24. Zhanar A. Kozhamkulova, Mohamed M. Radwan, Galiya E. Zhusupova, Zharilkasin Zh. Abilov, Saniya N. Rahadilova, and Samir A. Ross, "Gmelinoside I, a New Flavonol Glycoside from *Limonium gmelinii*", *Natural Product Communications*, 5 (2010) 1061-1062.
25. M. Kumarihamy, F.R. Fronczek, D. Ferreira, M. Jacob, S.I. Khan, and N.P.D. Nanayakkara, "Bioactive 1,4-Dihydroxy-5-phenyl-2-pyridinone Alkaloids from *Septoria pistaciarum*", *J. Nat. Prod.*, 73 (2010) 1250-1253.
26. L. Kutrzeba, D. Ferreira, and J.K. Zjawiony, "Intramolecular Transacetylation in Salvinorins D and E", *J. Nat. Prod.*, 73 (2010) 707-708.
27. Hemant Lata, and Suman Chandra, "Biotechnological Characterization of Different Populations of an Endangered Medicinal Herb - *Podophyllum hexandrum* Royle", *Medicinal Plant Biotechnology*, (2010).
28. Hemant Lata, Suman Chandra, Natascha Techen, Ikhlas A. Khan and Mahmoud A. ElSohly, "Assessment of the Genetic Stability of Micropropagated Plants of *Cannabis sativa* by ISSR Markers", *Planta Medica*, 76 (2010) 97-100.
29. Hemant Lata, Suman Chandra, Ikhlas A. Khan and Mahmoud A. ElSohly, "High Frequency Plant Regeneration from Leaf Derived Callus of High Δ^9 -Tetrahydrocannabinol Yielding *Cannabis sativa* L." *Planta Medica*, 76 (2010) 1629–1633.
30. Chenghui Li and Donna West-Strum, "Patient Panel of Underserved Populations and Adoption of Electronic Medical Record Systems by Office-Based Physicians", *Health Services Research*, (2010) 963-984.
31. X-C. Li, D. Ferreira, and Y. Ding, "Determination of Absolute Configuration of Natural Products: Theoretical Calculation of Electronic Circular Dichroism as a Tool", *Current Organic Chemistry*, 14 (2010) 1678-1697.
32. Yong-hong Liang, Wei Wang, Si-wang Yu, Min Ye, Xiang-hui He, Ning-bo Gong, Yang Lu, Ikhlas A. Khan and De-an Guo, "A new chiratanane type triterpenoid from the rhizomes of *Drynaria fortunei*", *Fitoterapia*, (2010).
33. Guoyi Ma, Li Chong, Xing-Cong Li, Ikhlas A. Khan, Larry A. Walker and Shabana I. Khan, "Selective inhibition of human leukemia cell growth and induction of cell cycle arrest and apoptosis by pseudolaric acid B", *J Cancer Res Clin Oncol* (2010) 1333-1340.
34. Guoyi Ma, Supriya A. Bavadekar, Brian T. Schaneberg, Ikhlas A. Khan, and Dennis R. Feller, "Effects of Synephrine and β -Phenethylamine on Human α -Adrenoceptor Subtypes", *Planta Med*, 76 (2010) 981-986.
35. Vamsi L.M. Madgula, Mohammad K. Ashfaq, Yan-Hong Wang, Bharathi Avula, Ikhlas A. Khan, Larry A. Walker, and Shabana I. Khan, "Bioavailability, Pharmacokinetics, and Tissue

- Distribution of the Oxypregnane Steroidal Glycoside P57AS3 (P57) from *Hoodia gordonii* in Mouse Model”, *Planta Med*, 76 (2010) 1582-1586.
36. Vamsi L.M. Madgula, Bharathi Avula, Young-Beob Yu, Yan-Hong Wang, Flauabert Tchanchou, Scott Fisher, Yuan Luo, Ikhlas A. Khan, and Shabana I. Khan, “Intestinal and Blood-Brain Barrier Permeability of Ginkgolides and Bilobalide: *In Vitro* and *In Vivo* Approaches”, *Planta Med*, 76 (2010) 599-606.
 37. S.M. Maregesi, N. Hermans, L. Dhooghe, K. Cimanga, D. Ferreira, C. Pannecouque, D.A. Vanden Berghe, P. Cos, L. Maes, A.J. Vlietinck, S. Apers, and L. Pieters, “Phytochemical and Biological Investigations of *Elaeodendron schlechteranum*”, *J. Ethnopharmacol.*, 129 (2010) 319-326.
 38. 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*, 55 (2010) 1209-1216.
 39. Emil Mincsovics, Nurhayat Tabanca, Agnes M. Moricz, David E. Wedge, and Erno Tyihak, “Preliminary Investigation of *Origanum onites* Essential Oil by Overpressured Layer Chromatography and BioArena”, *Journal of Planar Chromatography*, 23 (2010) 225-226.
 40. 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 Med.*, 76 (2010) 796-802.
 41. J.B. Morgan, F. Mahdi, Y. Liu, V. Coothankandaswamy, M.B. Jekabsons, T.A. Johnson, K.V. Sashidhara, P. Crews, D.G. Nagle, and Y.-D. Zhou, “The marine sponge metabolite mycothiazole: A novel prototype mitochondrial complex I inhibitor”, *Bioorg. Med. Chem.*, 18 (2010) 5988-5994.
 42. M-K. Na, Y. Ding, B. Wang, B.L. Tekwani, R.F. Schinazi, S. Franzblau, M. Kelly, R. Stone, X-C. Li, D. Ferreira, and M.T. Hamann, “Anti-Infective Discorhabdins from a Deep-Water Alaskan Sponge of the Genus *Latrunculia*”, *J. Nat. Prod.*, 73 (2010) 383-387.
 43. Claus Henrik Nielsen, Premalatha Balachandran, Ole Christensen, Nirmal D. Pugh, Hemlata Tamta, Kenneth J. Sufka, Xiangmei Wu, Anette Walsted, Michelle Schjorring-Thyssen, Christian Enevold, and David S. Pasco, “Enhancement of Natural Killer Cell Activity in Healthy Subjects by Immulina®, a *Spirulina* Extract Enriched for Braun-Type Lipoproteins”, *Planta Med*, 76 (2010) 1802-1808.
 44. Mae Grace Nillos, Sarah Chajkowski, John M. Rimoldi, Jay Gan, Ramon Lavado, and Daniel Schlenk, “Stereoselective Biotransformation of Permethrin to Estrogenic Metabolites in Fish”, *Chem. Res. Toxicol*, 23 (2010) 1568-1575.
 45. Ronak Y. Patel and Robert J. Doerksen, “Protein Kinase-Inhibitor Database: Structural Variability of and Inhibitor Interactions with the Protein Kinase P-Loop”, *Journal of Proteome Research*, 9 (2010) 4433-4442.
 46. Shiby Paul, Cassia S. Mizuno, Hong Jin Lee, Xi Zheng, Sarah Chajkowski, John M. Rimoldi, Allan Conney, Nanjoo Suh, and Agnes M. Rimando, “*In vitro* and *in vivo* studies on stilbene analogs as potential treatment agents for colon cancer”, *European Journal of Medicinal Chemistry*, 45 (2010) 3702-3708.
 47. Anupam Pradhan, Abhai K. Tripathi, Prashant V. Desai, Prasenjit K. Mukherjee, Mitchell A. Avery, Larry A. Walker, and Babu L. Tekwani, “Structure and function of *Plasmodium falciparum* malate dehydrogenase: Role of critical amino acids in co-substrate binding pocket”, *Biochimie*, 91 (2009) 1509-1517.

48. Y. Ren, E.J.C. de Blanco, L.B.S. Kardono, S. Riswan, H. Chai, C.E. Cottrell, N.R. Farnsworth, S.M. Swanson, Y. Ding, X-C. Li, J.P.J. Marais, D. Ferreira, and A.D. Kinghorn, "Proteasome-Inhibitory and Cytotoxic Constituents of *Garcinia laterifolia*: Absolute Configuration of Caged Xanthenes", *Tetrahedron*, 66 (2010) 5311-5320.
49. Daniel Riche, and Travis King, "Bone loss and fracture risk associated with thiazolidinedione therapy", *Pharmacotherapy*, 30 (2010) 716-727.
50. Raquel Rodriguez-Guzman, Mohamed M. Radwan, Charles L. Burandt, John S. Williamson, and Samir A. Ross, "Xenobiotic Biotransformation of 4-Methoxy-*N*-methyl-2-quinolone, Isolated from *Zanthoxylum monophyllum*", *Natural Product Communications*, 5 (2010) 1463-1464.
51. Kevin K. Schrader, John W. Davidson, Agnes M. Rimando, and Steven T. Summerfelt, "Evaluation of ozonation on levels of the off-flavor compounds geosmin and 2-methylisoborneol in water and rainbow trout *Oncorhynchus mykiss* from recirculating aquaculture systems", *Aquacultural Engineering*, 43 (2010) 46-50.
52. Kevin K. Schrader, Anna Andolfi, Charles L. Cantrell, Alessio Cimmino, Stephen O. Duke, Weste Osbrink, David E. Wedge, and Antonio Evidente, "A Survey of Phytotoxic Microbial and Plant Metabolites as Potential Natural Products for Pest Management", *Chemistry & Biodiversity*, 7 (2010) 2261-2280.
53. M. Sisa, S.L. Bonnet, D. Ferreira, and J. H. Van der Westhuizen, "Photochemistry of Flavonoids", *Molecules*, 15 (2010) 5196-5245.
54. Alan R. Spies, Noel E. Wilkin, John P. Bentley, Alicia S. Bouldin, Marvin C. Wilson, and Erin R. Holmes, "Instrument to Measure Psychological Contract Violation in Pharmacy Students", *American Journal of Pharmaceutical Education*, 74 (2010).
55. Nurhayat Tabanca, Ulrich R. Bernier, Maia Tsikolia, James J. Becnel, Blair Sampson, Chris Werle, Betul Demirci, Kemal Husnu Can Baser, Eugene K. Blythe, Cecil Pounders, and David E. Wedge, "*Eupatorium capillifolium* Essential Oil: Chemical Composition, Antifungal Activity, and Insecticidal Activity", *Natural Product Communications*, 5 (2010) 1409-1415.
56. Nurhayat Tabanca, Betul Demirci, Jimmy L. Turner, Cecil Pounders, Fatih Demirci, Kemal Husnu Can Baser, and David E. Wedge, "Microdistillation and Analysis of Volatiles from Eight Ornamental *Salvia* Taxa", *Natural Product Communications*, 5 (2010) 1421-1426.
57. Natascha Techen, Suman Chandra, Hemant Lata, Mahmoud A. ElSohly and Ikhlas A. Khan, "Genetic Identification of Female *Cannabis sativa* L. Plants at Early Developmental Stage", *Planta Medica*, 16 (2010) 1938-1939.
58. Wei Wang, Jianpin Zhao, Yan-hong Wang, Troy A. Smillie, Xing-Cong Li, and Ikhlas A. Khan, "Diterpenoids from *Casearia sylvestris*", *Planta Med*, 75 (2009) 1436-1441.
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62. Wei Wang, Zulfiqar Ali, Xing-Cong Li, and Ikhlas A. Khan, "Neolignans from the Leaves of *Casearia sylvestris* SWARTZ", *Helvetica Chimica Acta*, 93 (2010) 139-146.

63. Wei Wang, Zulfiqar Ali, Xing-Cong Li, and Ikhlas A. Khan, "A New *ent*-Labdane Diterpene Glycoside from the Leaves of *Casearia sylvestris*", *Natural Product Communications*, 5 (2010) 771-774.
64. Wei Wang, Zulfiqar Ali, Xing-Cong Li, Yunheng Shen, and Ikhlas A. Khan, "18,19-Secooleanane Type Triterpene Glycosyl Esters from the Bark of *Terminalia arjuna*", *Planta Med*, 76 (2010) 903-908.
65. Wei Wang, Zulfiqar Ali, Xing-Cong Li, Yunheng Shen, and Ikhlas A. Khan, "Triterpenoids from Two *Terminalia* Species", *Planta Med*, 76 (2010) 1751-1754.
66. Wei Wang, Zulfiqar Ali, Yunheng Shen, Xing-Cong Li, and Ikhlas A. Khan, "Ursane triterpenoids from the bark of *Terminalia arjuna*", *Fitoterapia*, 81 (2010) 480-484.
67. Terri L. Warholak, Donna West, and David A. Holdford, "The Educating Pharmacy Students and Pharmacists to Improve Quality Program: Tool for Pharmacy Practice", *Journal of the American Pharmacists Association*, 50 (2010) 534-538.
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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 since July, 2010:	1
U. S. Patent Applications Pending:	22
Recent U. S. Patents Granted:	1

High Molecular Weight Polysaccharide from Aloe Vera with Immunostimulatory Activity [CON]; 7,767,655, issued 8/3/10,

Inventors: David Pasco, Nirmal Pugh, Mahmoud ElSohly, Samir Ross

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

- **Dr. Daneel Ferreira** received the International Tannin Award at the 7th Tannin Conference/GA Joint Meeting in Berlin. The award is in recognition of his life-long contributions to the chemistry of condensed tannins (proanthocyanidids).

- **Dr. Ikhlas Khan** was recently awarded Guest Professorship at the University of Soochowin and Heilongjiang University of Chinese Medicine. **Dr. Khan** was also elected as Vice Chairman (TCM Pharmaceutical Analysis) of World Federation of Chinese Medicine Societies.
- **Mr. Zlatko Mehmedic** presented a paper at the 20th Annual Symposium on the Cannabinoids, International Cannabinoid Research Society, July 23-27, 2010 in Lund, Sweden: **Zlatko Mehmedic, Suman Chandra, Hemant Lata, Ikhlas Khan and Mahmoud ElSohly**, “CO₂ assimilation and stomatal response to elevated CO₂ in *Cannabis sativa*”.
- **Dr. Larry Walker** and **Dr. Babu Tekwani** traveled to Geneva, Switzerland, in September to present some of their research team’s work to the Expert Scientific Advisory Committee of the Medicines for Malaria Venture. The researchers hope to continue to receive funding for their project, which focuses on reducing the toxicity of Primaquine.
- Professor Douglass F. Taber has cited a reduction method published by **Dr. Mark Hamann** and Ph.D. student, **Amir Wabha**, in his highlight column about “Best Synthetic Methods: Oxidation and Reduction”: <http://www.organic-chemistry.org/Highlights/2010/24May.shtm>.

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