TO: All School of Pharmacy and USDA Personnel  
FROM: Charles D. Hufford, Associate Dean for Research and Graduate Programs  
DATE: July 25, 2011  
SUBJECT: Research News

The following GRANTS/CONTRACTS have recently been awarded:


3. **Dr. Charles Cantrell** (P.I.-USDA), and **Dr. Samir Ross** (Co-P.I.-NCNPR). Project Agreement #K-1896p (The International Science and Technology Center), $240,000, November 2010-November 2013.

4. **Dr. Alice M. Clark** (P.I.-NCNPR), and **Dr. Ameeta Agarwal** (Co-P.I.-NCNPR). New Drugs for Opportunistic Infections - FY 2011-12 (National Institute of Allergy and Infectious Diseases), $384,375, July 1, 2011-June 30, 2012.

5. **Dr. John Cleary** (P.I.-Pharmacy Practice), and **Dr. Kayla Stover** (Co-P.I.-Pharmacy Practice). Cardiac Toxicity of Echinocandin Antifungals, $118,880, May 23, 2010-March 15, 2013.

6. **Dr. Robert Doerksen** (P.I.-Medicinal Chemistry), Dr. Dawn Wilkins (Co-P.I.-Computer Science), and Dr. Yixin Chen (Co-P.I.-Computer Science). Combined Computational Chemistry and Computational Biology Modeling for Understanding Protein-Protein and Protein-Ligand Interactions - Competitive Seed Grant (Mississippi State University/National Science Foundation/Experimental Program to Stimulate Competitive Research), $36,388, September 1, 2009-August 31, 2011.


11. **Dr. Ikhlas Khan** (P.I.-NCNPR), and **Dr. Larry Walker** (Co-P.I.-NCNPR). Botanical Dietary Supplement Research - FY 2010-11 (Food and Drug Administration), $1,608,000, September 20, 2010-August 31, 2011.

12. **Dr. Ikhlas Khan** (P.I.-NCNPR), **Dr. Mahmoud ElSohly** (Co-P.I.-NCNPR), **Dr. Troy Smillie** (Co-P.I.-NCNPR), and **Dr. Aruna Weerasoriya** (Co-P.I.-NCNPR). Advancing Drug Development in Medicinal Plants Using Transcriptomics and Metabolics - Year 2 (University of Kentucky/National Institutes of Health), $344,906, September 30, 2010-August 31, 2011.

13. **Dr. Ikhlas Khan** (P.I.-NCNPR), and **Dr. Troy Smillie** (Co-P.I.-NCNPR). Botanical Identification, Characterization, Quality Assurance and Quality Control (University of Illinois/National Institutes of Health), $176,555, September 1, 2010-August 31, 2011.


18. **Dr. Dale Nagle** (P.I.-Pharmacognosy), and **Dr. Yu-Dong Zhou** (Co-P.I.-Pharmacognosy). Anticancer Drug Discovery that Targets Tumor Hypoxia - Year 7 (National Institutes of Health), $243,214, June 1, 2011-May 31, 2012.


20. **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 2 (Hercules Incorporated), $47,440, January 1, 2010-December 31, 2011.

22. Dr. Leigh Ann Ross (P.I.-Pharmacy Practice), and Dr. Lauren Bloodworth (P.I.-Pharmacy Practice). Pharmacy Cardiovascular Risk Reduction Project (Mississippi State Department of Health/Centers for Disease Control), $300,000, July 1, 2011-June 29, 2011.

23. Dr. Leigh Ann Ross (P.I.-Pharmacy Practice). Mississippi State Hospital and University of Mississippi School of Pharmacy Practice Agreement - 2011-12 (Mississippi State Hospital), $24,000, July 1, 2011-June 30, 2012.


25. Dr. Justin Sherman (P.I.-Pharmacy Practice), Dr. Laurie Warrington (Co-P.I.-Pharmacy Practice), Dr. Daniel Riche (Co-P.I.-Pharmacy Practice), Dr. Leigh Ann Ross (Co-P.I.-Pharmacy Practice), Dr. Lauren Bloodworth (Co-P.I.-Pharmacy Practice). Active Surveillance Attitudes and Perceptions in Prostate Cancer (National Rural Health Association/Emory University/U.S. Department of Health & Human Services/Centers for Disease Control), $49,000, October 1, 2010-September 30, 2011.


27. Dr. Gregory Tschumper (P.I.-Chemistry), Dr. Amal Dass (Co-P.I.-Chemistry), Dr. Nathan Hammer (Co-P.I.-Chemistry), Dr. Keith Hollis (Co-P.I.-Chemistry), Dr. Randy Wadkins (Co-P.I.-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), $375,128, September 1, 2010-August 31, 2011.


29. Dr. Larry Walker (P.I.-NCNPR), Dr. Babu Tekwani (Co-P.I.-NCNPR), and Dr. Dhammika Nanayakkara (Co-P.I.-NCNPR). Development of Safer Drugs for Malaria and Leishmaniasis in US. Troops, Civilian Personnel and Travelers - Modification No. 1 (U.S. Army Medical Research and Materiel Command), $1,000,000, September 1, 2010-August 31, 2012.

30. Dr. Barbara Wells (P.I.-Pharmacy Dean’s Office), and Dr. Charles Hufford (Co-P.I.-Pharmacy Dean’s Office). National Center for Natural Products Research - Phase 2 (Department of Health and Human Services/Health Resources and Services Administration), $8,479,000, September 1, 2010-August 31, 2013.


33. **Dr. Jordan Zjawiony** (P.I.-Pharmacognosy), and **Dr. Charles Burandt** (Co-P.I.-NCNPR). Psychopharmacology of Plants and Their Metabolites Used as Marijuana Substitutes (National Institutes of Health), $71,500, June 15, 2011-May 31, 2012.

The following **PUBLICATIONS** have appeared:


40. Xing-Cong Li, K. Suresh Babu, Melissa R. Jacob, Shabana I. Khan, Ameeta K. Agarwal, and Alice M. Clark. “Natural Product-Based 6-Hydroxy-2,3,4,6-tetrahydropyrrolo[1,2-


82. Ajay S. Yekkirala, Mary M. Lunzer, Christopher R. McCurdy, Michael D. Powers, Alexander E. Kalyuzhny, Sandra C. Roerig, and Philip S. Portoghese. “N-naphthoyl-β-


**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: 16

Recent U. S. Patents Granted: 4 (see below)

**U. S. Issued Patents:**

- Delivery of Medicaments to the Nail via "Etching"
  - Repka et al; Pharmaceutics; *US Patent Number 7,959,904; Issue date 6/14/11*

- Highly Purified Amphotericin B
  - Cleary et al; Pharmacy Practice; *US Patent Number 7,867,981; Issue date 1/11/11*

- Potent Immunostimulatory Extracts from Microalgae
  - Pasco et al; NCNPR; *US Patent Number 7,846,452; Issue date 12/7/10*

- High Molecular Weight Polysaccharide from Aloe [CON]
  - Pasco et al; NCNPR; *US Patent Number 7,767,655; Issue date 8/3/10*

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

- **Dr. Charles Cantrell** (USDA) and **Dr. Samir Ross** (NCNPR) traveled to the Republic of Kazakhstan from July 4-10 to discuss the ISTC funded project between the Institute of Plant Biology and Technology (in Almaty, Kazakhstan), USDA, and the University of Mississippi. Drs. Cantrell and Ross are collaborators in this project and were very successful in collecting certain promising plants from Kazakhstan.

- **Ms. Xiefan Fang** (Pharmacology) and **Mr. Clive Mendonca** (Pharmacy Administration) were honored with Graduate Achievement Awards during School of Pharmacy Commencement activities in May.

- **Ms. Xiefan Fang** also recently won three awards to support her research and travel: South Central Chapter of the Society of Toxicology Transfer Award - $1,000; Graduate
Student Council Research Grant, 2010-2011 - $500; and Society of Toxicology Graduate Student Travel Support Award to attend the SOT 50th Anniversary Annual Meeting in Washington, DC, during March - $1,000.

- **Mr. Swapnil Kulkarni** (Medicinal Chemistry) was selected as a Class Marshal of the graduating doctoral students during Commencement activities in May. Mr. Kulkarni took part in the doctoral hooding ceremony on Friday night and also led the graduate students into the Saturday morning University Commencement ceremony.

- One of the Five Most Downloaded Articles from the *Physiology and Molecular Biology of Plants* during January-June 2011 was: “Propagation through Alginate Encapsulation of Axillary Buds of *Cannabis sativa* L.-An Important Medicinal Plant” – **Dr. Hemant Lata, Dr. Suman Chandra, Dr. Ikhlas Khan** and **Dr. Mahmoud ElSohly**.

- **Mr. Falgun Shah** (Medicinal Chemistry) and **Mr. John Bowling** (Pharmacognosy) were selected to receive the American Chemical Society’s Ole Miss Local Section Graduate Students Research Awards in the Pharmaceutical Sciences, which were presented at the ACS Annual Awards Banquet in April.

- **Ms. Amanda Waters** (Pharmacognosy) was selected to receive a 2011 National Science Foundation Graduate Research Fellowship Program (GRFP) Fellowship. Ms. Waters will receive a $30,000 stipend for 2011-12 Fellowship Year.

- **Ms. Waters** also received The Robert A. Magarian Outstanding Podium Presentation Award at the 2011 MALTO Meeting in Houston, TX.

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