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## Research News: 2003, no. 3

University of Mississippi. School of Pharmacy

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# *The University of Mississippi*

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## *Interoffice Memorandum*

**SCHOOL OF PHARMACY  
OFFICE OF THE DEAN  
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Phone: (662) 915-7265 Fax: (662) 915-5704**

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**TO: All School of Pharmacy Personnel**

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

**DATE: September 22, 2003**

**SUBJECT: Research News (#3)**

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

1. **Dr. Mitchell Avery** (P.I. – Medicinal Chemistry) – Development and Testing of New Medications for Treatment of Emerging Infectious Diseases (Centers for Disease Control), \$203,673.00.
2. **Dr. John Bentley and Dr. Noel Wilkin** (Co-P.Is – Pharmacy Administration) – The Medicare Prescription Continuity of Care Project: Development and Implementation of the PCCS (Years 2 and 3) (Information and Quality Healthcare/U.S. Department of Health and Human Services Centers for Medicare and Medicaid Services), \$500,000.00 – July 1, 2003-June 30, 2005.
3. **Dr. Joseph Byrd** (P.I. – Pharmacy Practice) – Agreement for Co-Funding Faculty: Dr. Amy Jeager (University of Mississippi Medical Center Department of Medicine), \$23,389.00 – September 1, 2003-August 31, 2004.
4. **Dr. Joseph Byrd** (P.I. – Pharmacy Practice) – Agreement for Teaching, Patient Care, and Clinical Research: Pediatrics (University of Mississippi Medical Center Department of Pediatrics), \$22,008.00 – July 1, 2003-June 30, 2004.
5. **Dr. Alice Clark** (P.I. – NCNPR) and **Dr. Dale Nagle** (Co-P.I. – Pharmacognosy) – New Drugs for Opportunistic Infectious Diseases (National Institute for Allergy and Infectious Diseases), \$251,125.00 – July 1, 2003-February 28, 2004.
6. **Dr. John Cleary** (P.I. – Pharmacy Practice) – Pharmacogenomics of Natural Products with Antifungal Activity (National Institute of Allergy and Infectious Diseases), \$278,733.00 – July 1, 2003-June 30, 2004.
7. **Dr. Leigh Ann Ramsey** (P.I. – Pharmacy Practice) and **Dr. Joseph Byrd** (Co-P.I.- Pharmacy Practice) – Contract for Professional Services (Mississippi Division of Medicaid), \$60,000.00 – July 1, 2003-June 30, 2004.
8. **Dr. Michael Repka** (P.I. – Pharmaceutics) and **Dr. Mahmoud ElSohly** (Co-P.I. – NCNPR) – Assessing THC Pro-Drugs for Transmucosal Matrix Patch Delivery (University of Mississippi Medical Center/National Institutes of Health), \$50,000.00 – June 1, 2003-May 31, 2005.
9. **Dr. Michael Repka** (P.I. – Pharmaceutics) and **Dr. Samir A. Ross** (Co-P.I.- NCNPR) – Transmucosal Intra-Oral Drug Delivery System for THC (Small Business Technology Transfer Program, National Institutes of Health), \$59,980.00 – September 1, 2003-February 28, 2004.

10. **Dr. Marc Slattery** (P.I. – Pharmacognosy) – Chemical Mixtures: Consequences of MNV Eradication on Water Quality (Mississippi State University/U.S. Geological Survey), \$16,540.00 – March 1, 2003-February 28, 2004.
11. **Dr. Larry Walker** (P.I. – NCNPR) – Development of Natural Products from Plants and Microbes for Replacement of Synthetic Pesticides (U.S. Department of Agriculture), \$2,862,800.42.
12. **Dr. Larry Walker** (P.I. – NCNPR) and **Dr. Ikhlas Khan** (Co-P.I. – NCNPR) – Botanical Dietary Supplements: Science-Base for Authentication and Analysis (Food and Drug Administration), \$832,557.00 – September 30, 2003-September 29, 2004.
13. **Dr. Kristine Willett** (P.I. – Pharmacology) – Screening of Environmental Contaminants Detected in Mississippi Sediments as Inducers and/or Inhibitors of CYP1B1 Expression in Channel Catfish – Continuation (Mississippi State University/U.S. Geological Survey), \$16,800.00 – March 1, 2003-February 29, 2004.
14. **Dr. John Williamson** (P.I. – Medicinal Chemistry) – University of Mississippi/University of the Virgin Islands Partnership of MBRS-RISE/GM061325 (University of the Virgin Islands/National Institutes of Health), \$3,000.00 – July 1, 2003.
15. **Dr. John Williamson** (P.I. – Medicinal Chemistry) – MBRS RISE Program – Summer 2003 (Mississippi Valley State University), \$3,479.44 – May 29, 2003-August 15, 2003.
16. **Dr. John Williamson** (P.I. – Medicinal Chemistry) – Research Experience Opportunities (University of Southern Mississippi/U.S. Department of Health and Human Services), \$27,950.00 – June 1, 2003-August 31, 2003.
17. **Dr. Jordan Zjawiony** (P.I. – Pharmacognosy) and **Dr. Mark Hamann** (Co-P.I. – Pharmacognosy) – Design and Synthesis of New Anticancer and Antitubercular Agents Based on Marine Natural Product, *Puupehenone* (University of Southern Mississippi/Mississippi-Alabama Sea Grant Consortium), \$54,925.00 – February 1, 2003-January 31, 2004.

The following **PUBLICATIONS** have appeared:

1. E.A. Abourashed, M. Ganzera, **I.A. Khan, S. Khan**, J.S. Mossa and F.S. El-Feraly – “HPLC Fingerprinting and Estimation of the Bioactive Components of *Clutia richardiana* L. as a Potential Hypoglycemic Herbal Tea”, *Phytotherapy Research*, **17**, pp. 657-660, 2003.
2. E.A. Abourashed, J. Vanderplank and **I.A. Khan** – “High-Speed Extraction and HPLC Fingerprinting of Medicinal Plants – II. Application to Harman Alkaloids of Genus *Passiflora*”, *Pharmaceutical Biology*, **41**, pp. 100-106, 2003.
3. E.A. Abourashed, A.T. El-Alfy, **I.A. Khan** and **L.A. Walker** – “Ephedra in Perspective – a Current Review”, *Phytotherapy Research*, **17**, pp. 703-712, 2003.
4. **A.K. Agarwal**, P.D. Rogers, **S.R. Baerson, M.R. Jacob**, K.S. Barker, **J.D. Cleary, L.A. Walker, D.G. Nagle** and **A.M. Clark** – “Genome-wide Expression Profiling of the Response to Polyene, Pyrimidine, Azole, and Echinocandin Antifungal Agents in *Saccharomyces cerevisiae*”, *The Journal of Biological Chemistry*, **278**, pp. 34998-35015, 2003.
5. **B. Avula, R.B. Manyam**, E. Bedir and **I.A. Khan** – “HPLC analysis of *neo*-clerodane diterpenoids from *Teucrium chamaedrys*”, *Pharmazie*, **58**, pp. 494-496, 2003.
6. E. Bedir, **R. Manyam** and **I.A. Khan** – “*Neo*-clerodane diterpenoids and phenylethanoid glycosides from *Teucrium chamaedrys* L.”, *Phytochemistry*, **63**, pp. 977-983, 2003.
7. D.M. Blackwell, **R.C. Speth** and M.A. Miranda – “Morphometric analysis of the uterine endometrium of swine on days 12 and 16 postestrus”, *The Anatomical Record*, **270**, pp. 59-66, 2003.
8. B.J. Bradbury, P. Bartyzel, T.S. Kaufman, **M.J. Nieto**, R.D. Sindelar, S.M. Scesney, B.R. Gaumond and H.C. Marsh, Jr. – “Synthesis and Complement Inhibitory Activity of B/C/D-Ring Analogues of the Fungal Metabolite 6,7-Diformyl-3',4',4a',5',6',7',8',8a'-octahydro-4,6',7'-trihydroxy-2',5',5',8a'-tetramethylspiro[1'(2'H)-naphthalene-2(3H)-benzofuran]”, *Journal of Medicinal Chemistry*, **46**, pp. 2697-2705, 2003.
9. K.E. Cushman, M. Maqbool, P.D. Gerard, E. Bedir, **H. Lata**, and **R.M. Moraes** – “Variation of Podophyllotoxin in Leaves of Eastern Red Cedar (*Juniperus virginiana*)”, *Planta Medica*, **69**, pp. 477-478, 2003.
10. **M. Donia** and **M.T. Hamann** – “Marine natural products and their potential applications as anti-infective agents”, *The Lancet Infectious Diseases*, **3**, pp. 338-348, 2003.

11. C.J.G. Duncan, W. Cibula and **S.A. Ross** – “A Survey of Southeast North American Wild Growing Macromycetes (Higher Basidiomycetes and Ascomycetes) Sporophores for Biological Activity”, *International Journal of Medicinal Mushrooms*, **5**, pp. 171-180, 2003.
12. **D. Ferreira, J.P.J. Marais** and **D. Slade** – “Phytochemistry of the mopane, *Colophospermum mopane*”, *Phytochemistry*, **64**, pp. 31-51, 2003.
13. J.K. Glisson, **H.E. Rogers**, E.A. Abourashed, R. Ogletree, **C.D. Hufford** and **I.A. Khan** – “Clinic at the Health Food Store? Employee Recommendations and Product Analysis”, *Pharmacotherapy*, **23**, pp. 64-72, 2003.
14. **D.J. Gochfeld**, K.A. ElSayed, **M. Yousaf, J.F. Hu**, P. Bartyzel, **D.C. Dunbar**, S.P. Wilkins, **J.K. Zjawiony**, R.F. Schinazi, S.S. Wirtz, P.M. Tharnish and **M.T. Hamann** – “Marine Natural Products as Lead Anti-HIV Agents”, *Mini Reviews in Medicinal Chemistry*, **3**, pp. 401-424, 2003.
15. R. Gormann, M. Kaloga, **X.C. Li, D. Ferreira**, D. Bergenthal and H. Kolodziej – “Furanonaphthoquinones, atraric acid and a benzofuran from the stem barks of *Newbouldia laevis*”, *Phytochemistry*, **64**, pp. 583-587, 2003.
16. **W. Herath, J.R. Mikell, D. Ferreira** and **I.A. Khan** – “Microbial Metabolites of Harman Alkaloids”, *Chem. Pharm. Bull.*, **51**, pp. 646-648, 2003.
17. **W.H.M.W. Herath, D. Ferreira** and **I.A. Khan** – “Microbial Transformation of the Phthalideisoquinoline Alkaloid, (-)- Hydrastine”, *Natural Products Research*, **17**, pp. 269-274, 2003.
18. **W.H.M.W. Herath, D. Ferreira** and **I.A. Khan** – “Microbial transformation of xanthohumol”, *Phytochemistry*, **62**, pp. 673-677, 2003.
19. **N. Kasanah, K.V. Rao, M. Yousaf, D.E. Wedge** and **M.T. Hamann** – “The biocatalytic conversion of 8-hydroxymanzamine A to manzamine A”, *Tetrahedron Letters*, **44**, pp. 1291-1293, 2003.
20. **H. Lata, Z. DeAndrade, B. Schaneberg**, E. Bedir, **I. Khan** and **R. Moraes** – “Arbuscular Mycorrhizal Inoculation Enhances Survival Rates and Growth of Micropropagated Plantlets of *Echinacea pallida*”, *Planta Med*, **69**, pp. 679-682, 2003.
21. **X.C. Li, M.R. Jacob, H.N. ElSohly, D.G. Nagle, T.J. Smillie, L.A. Walker** and **A.M. Clark** – “Acetylenic Acids Inhibiting Azole-Resistant *Candida albicans* from *Pentagonia gigantifolia*”, *Journal of Natural Products*, **66**, pp. 1132-1135, 2003.
22. H.E. Master, **S.I. Khan** and K.A. Poojari – “Synthesis of Low Molecular Weight Compounds with Complement Inhibition Activity”, *Bioorganic & Medicinal Chemistry Letters*, **13**, pp. 1249-1251, 2003.
23. **I. Muhammad, X.C. Li, M.R. Jacob, B.L. Tekwani, D.C. Dunbar** and **D. Ferreira** – “Antimicrobial and Antiparasitic (+)-trans-Hexahydrodibenzopyrans and Analogues from *Machaerium multiflorum*”, *Journal of Natural Products*, **66**, pp. 804-809, 2003.
24. **I. Muhammad, D.C. Dunbar, S.I. Khan, B.L. Tekwani**, E. Bedir, **S. Takamatsu, D. Ferreira** and **L.A. Walker** – “Antiparasitic Alkaloids from *Psychotria klugii*”, *Journal of Natural Products*, **66**, pp. 962-967, 2003.
25. **L.M. Murphey** and **E.H. Hood** - “Bosentan and Warfarin Interaction”, *The Annals of Pharmacotherapy*, **37**, pp. 1028-1031, 2003.
26. **L.M. Murphey** and D.C. Byrd - “Phytonadione Education Program in a Community Hospital”, *Hospital Pharmacy*, **38**, pp. 458-462, 2003.
27. **D.G. Nagle, M.S. Slattery**, and **A.M. Clark** – “Chemical Ecology and Natural Products from Wetlands: Emerging Perspectives”, *Achieving Sustainable Freshwater Systems: A Web of Connections*, pp. 157-169, 2003.
28. **D.G. Nagle, G.N.N. Sultana, K.K. Schrader, C.F. Hossain, R. Stanikunaite, M.T. Hamann** and I. Rajbandari – “Secondary Metabolites from Plants and Marine Organisms as Selective Anti-Cyanobacterial Agents”, *American Chemical Society Symposium Series – Off-Flavors in Aquaculture*, pp. 179-194, 2003.
29. **J.N. Ngwendson**, E. Bedir, S.M.N. Efang, C.O. Okunji, M.M. Iwu, B.G. Schuster and **I.A. Khan** – “Constituents of *Peucedanum zenkeri* seeds and their antimicrobial effects”, *Pharmazie*, **58**, pp. 587-589, 2003.
30. H.G. Pentes, F.A. Macias and **N.H. Fischer** – “Preparation of 11-Hydroxylated 11,13-Dihydrosesquiterpene Lactones”, *Revista de la Sociedad Quimica de Mexico*, **47**, pp. 132-138, 2003.
31. **K.V. Rao, B.D. Santarsiero, A.D. Mesecar, R.F. Schinazi, B.L. Tekwani** and **M.T. Hamann** – “New Manzamine Alkaloids with Activity against Infectious and Tropical Parasitic Diseases from an Indonesian Sponge”, *Journal of Natural Products*, **66**, pp. 823-828, 2003.

32. **M.A. Repka, S. Prodduturi and S.P. Stodghill** – “Production and Characterization of Hot-Melt Extruded Films Containing Clotrimazole”, *Drug Development and Industrial Pharmacy*, **29**, pp. 757-765, 2003.
33. R.A.S. Santos, A.C.S. e Silva, C. Maric, D.M.R. Silva, R.P. Machado, I de Buhr, S.H. Walther, S.V.B. Pinheiro, M.T. Lopes, M. Bader, E.P. Mendes, V.S. Lemos, M.J.C. Santos, H.P. Schultheiss, **R.C. Speth** and T. Walther – “Angiotensin-(1-7) is an endogenous ligand for the G protein-coupled receptor Mas”, *Proc. Nat. Acad. Sci.*, **100**, pp. 8258-8263, 2003.
34. **B.T. Schaneberg**, W.L. Applequist and **I.A. Khan** – “Determination of aristolochic acid I and II in North American species of *Asarum* and *Aristolochia*”, *Pharmazie*, **57**, pp. 686-689, 2002.
35. H. Villa, A.R.O. Marcos, R.M. Reguera, R.B. Fouce, C.G. Estrada, Y.P. Pertejo, **B.L. Tekwani**, P.J. Myler, K.D. Stuart, M.A. Bjornsti and D. Ordonez – “A Novel Active DNA Topoisomerase I in *Leishmania donovani*”, *The Journal of Biological Chemistry*, pp. 3521-3526, 2003.
36. **B.G. Wells** – “Leadership for Ethical Decision Making”, *American Journal of Pharmaceutical Education*, **67**, 2003.
37. S.P. Wilkins, A.J. Blum, D.E. Burkepille, T.J. Rutland, A. Wierzbicki, M. Kelly and **M.T. Hamann** – “Isolation of an antifreeze peptide from the Antarctic sponge *Homaxinella balfourensis*”, *Cellular and Molecular Life Sciences*, **59**, pp. 2210-2215, 2002.
38. **Q. Zhang, H.N. ElSohly, X-C. Li and L.A. Walker** – “A New Triterpene from *Leandra chaetodon*”, *Planta Med*, **69**, pp. 582-584, 2003.
39. **Q. Zhang, K.K. Schrader, H.N. ElSohly and S. Takamatsu** – “New Cell-cell Adhesion Inhibitors from *Streptomyces* sp. UMA-044”, *The Journal of Antibiotics*, **56**, pp. 673-681, 2003.

**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.

<i>Invention Disclosures Filed in 2003:</i>	10
<i>US Patent Applications Pending:</i>	19
<i>Patent Issues in 2003:</i>	0
<i>Patents Recently Assigned to UM:</i>	0

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

- **Dr. Daneel Ferreira** has been installed as president of the Phytochemical Society of North America.
- **Dr. Debbie King** is the recipient of the 2003 University of Mississippi Faculty Achievement Award.
- **Dr. Rachel Robinson** is the recipient of the 2002-2003 Kappa Epsilon Outstanding Advisor Award. The Award was presented July 12, 2003 at the 44<sup>th</sup> Kappa Epsilon National Convention in Kansas City, Missouri,. In addition, she will be considered for Kappa Epsilon Fraternity’s nominee for the 2004 Professional Fraternity Association Outstanding Faculty Award of Excellence.

Please continue to send me important research and graduate information so that I might share it with your faculty colleagues. **THIS INFORMATION IS NOW BEING POSTED ON THE SCHOOL OF PHARMACY WEB PAGE!** Thank you.

cc: Dean Barbara G. Wells  
Ms. Dabney Weems