Division of Pharmaceutics

Longtime faculty member Robert Pearlman retires

Robert Pearlman first walked into the office of the dean of the UT College of Pharmacy in 1978, an eager, young researcher with an idea of using computers to speed up the drug discovery process. Pearlman retired in August 2009.

During his 31-year career, Pearlman developed many large software packages for computer-aided drug discovery (CADD). Beginning with Concord, the world’s first program for the automatic generation of 3D molecular structures, Pearlman’s software has been commercially distributed since 1986. The software enables scientists to narrow the number of compounds that are synthesized in hopes of finding “the one” that will make a difference. By reducing the dependence upon trial and error, the software saves pharmaceutical companies billions of dollars in development costs and greatly reduces the time before a product can reach the marketplace. The software is also widely used by agrochemical companies to accelerate the discovery of new and improved pesticides.

He has been recognized for his research accomplishments with invitations to speak at 24 symposia at national meetings of the American Chemical Society. He also has been invited to speak at six Gordon Research Conferences in three different fields, including computer-aided drug design, computational chemistry and combinatorial chemistry. In 2007, Pearlman received the Herman Skolnik Award, the premier award of the Chemical Information Division of the American Chemical Society. He also has been invited to speak at six Gordon Research Conferences in three different fields, including computer-aided drug design, computational chemistry and combinatorial chemistry. In 2007, Pearlman received the Herman Skolnik Award, the premier award of the Chemical Information Division of the American Chemical Society.

He is the holder of the Coulter R. Sublett Regents Chair in Pharmacy and has been nominated 14 times for the Texas Excellence Teaching Award, winning the award in 1987.

Faculty and Staff

Faculty

Robert O. Williams III, Ph.D., Professor, Johnson & Johnson Professor, Division Head
James T. Doluisio, Ph.D., Professor, Johnson & Johnson Chair
Robert S. Pearlman, Ph.D., Professor, Sublett Chair
James T. Doluisio, Ph.D., Hoescht-Roussel Professor Emeritus
Salomon A. Stavchansky, Ph.D., Alcon Professor
Maria A. Croyle, Ph.D., Associate Professor
Jason T. McConville, Ph.D., Assistant Professor
Walkow, Janet C., Clinical Associate Professor

Joint/Adjunct Faculty

Steven E. Kornuth, Ph.D., Research Professor, UT Austin Institute of Advanced Technology

Grad student earns pre-doctoral fellowship

Nicole Nelson, a pharmaceutics graduate student, is one of two students nationally to receive a pre-doctoral fellowship from the National Institute on Drug Abuse.

Dr. Robert Pearlman, second from left, worked with three deans during his 31-year tenure with The University of Texas at Austin College of Pharmacy, including from left: current Dean M. Lynn Crismon, former Dean James T. Doluisio, and former Dean Steven W. Leslie.

GRANTS AND CONTRACTS

Funds directed through UT Austin Accounts

<table>
<thead>
<tr>
<th>FUNDING SOURCE</th>
<th>AMOUNT</th>
<th>TITLE</th>
<th>INVESTIGATOR</th>
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<tbody>
<tr>
<td>National Institute on Drug and Alcohol Abuse</td>
<td>$80,000</td>
<td>Medication Development for the Treatment of Alcoholism</td>
<td>Croyle</td>
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<tr>
<td>CRBNE Research and Technology Initiative</td>
<td>$162,000</td>
<td>Preclinical Development of a Nasal Adenovirus-Based Vaccine Against Ebola Virus</td>
<td>Croyle</td>
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<tr>
<td>Immunobiosciences Inc.</td>
<td>$203,736</td>
<td>Phase I Proof of Concept Study: Effect of Adenovirus-Antibody Complexes on the Immune Response Against Encoded Antigen</td>
<td>Croyle</td>
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<tr>
<td>National Institute of Allergy and Infectious Disease</td>
<td>$261,596</td>
<td>Evaluation of Protective Immunity After Mucosal Immunization Against Ebola Virus</td>
<td>Croyle</td>
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<tr>
<td>Texas A&amp;M University Department of Defense-Army</td>
<td>$193,868</td>
<td>RADI Congressional Special Interest Microencapsulation and Drug Delivery Research</td>
<td>McConville</td>
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<td>Cytotech LLC</td>
<td>$108,580</td>
<td>Pre-formulation Development for Lung Cancer Treatment</td>
<td>McConville</td>
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<tr>
<td>Nanomedical Systems</td>
<td>$58,502</td>
<td>Implantable Drug Delivery Device</td>
<td>McConville</td>
</tr>
<tr>
<td>Askla Asahi</td>
<td>$50,000</td>
<td>Graduate Student Fellowship in Industrial Pharmacy</td>
<td>McGinity</td>
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<tr>
<td>Dispersol</td>
<td>$15,000</td>
<td>Graduate Student Fellowship in Industrial Pharmacy</td>
<td>McGinity</td>
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<tr>
<td>Abbott</td>
<td>$12,500</td>
<td>Patent Royalties</td>
<td>McGinity</td>
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<td>Rohm Pharma</td>
<td>$1,376</td>
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<td>Evonik</td>
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<td>Hoffman LaRoche</td>
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<td>Graduate Student Fellowship in Industrial Pharmacy</td>
<td>McGinity</td>
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<td>Brooke Army Medical Center</td>
<td>$1,006</td>
<td>Continuation of the Amerlioration of the Adverse Responses of Mice and Humans to Traumatic Injury by Gene Expression Analysis</td>
<td>Stavchansky</td>
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<tr>
<td>Brooke Army Medical Center</td>
<td>$62,640</td>
<td>Amelioration of the Genetic Response of Mice to Hemorrhage by Gene Expression Profiling and Application of Drug Delivery Principles</td>
<td>Stavchansky</td>
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<td>Brooke Army Medical Center</td>
<td>$52,200</td>
<td>Amelioration of the Genetic Response of Mice to Hemorrhage by Gene Expression Profiling and Application</td>
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<td>Nanomedical Systems Inc.</td>
<td>$58,502</td>
<td>Implantable Drug Delivery Device</td>
<td>Williams</td>
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<td>Aeonclad Biomedical LLC</td>
<td>$55,354</td>
<td>Proof of Concept Studies for Enablement of Aeonclad Biomedical LLC Particle Coating Technology</td>
<td>Williams</td>
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Subtotal - Division of Pharmaceutics funds directed through UT Austin accounts

Direct | $1,481,860

(Indirect) ($0)
Funds Directed through Other Agencies or Institutions

<table>
<thead>
<tr>
<th>Funding Source</th>
<th>Amount</th>
<th>Grant Title</th>
<th>Investigator</th>
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<tr>
<td>Royalty Payment</td>
<td>$12,500</td>
<td>Graduate Student Fellowships In Industrial Pharmacy</td>
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<tr>
<td>Science Technology Center for Envir Responsible Solvents and Processes</td>
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<td>Williams</td>
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<td>Galderma</td>
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<td>Graduate Student Fellowships in Industrial Pharmacy</td>
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<td>Taylor Francis Group</td>
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<td>Graduate Student Fellowships in Industrial Pharmacy</td>
<td>Williams</td>
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<td>Munck Carter</td>
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<td>Graduate Student Fellowships in Industrial Pharmacy</td>
<td>Williams</td>
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<td>Beijing Asia-East Bio-Pharmaceutical Co.</td>
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<td>Graduate Student Fellowships in Industrial Pharmacy</td>
<td>Williams</td>
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<td>Aprecia Pharmaceuticals</td>
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<td>Graduate Student Fellowships in Industrial Pharmacy</td>
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</table>

**Subtotal - Division of Pharmaceutics funds directed through other agencies or institutions**

Direct $379,496
(Indirect) ($50)

**Total - Division of Pharmaceutics**

Direct $1,481,860
Direct $379,496
Funds through UT Austin accounts
Funds through other agencies or institutions

**TOTAL** $1,861,356

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**Publications**

Croyle, Maria A.

(Patel, Tran, Gray, Zhang, Strong, Feldmann, Kobering)  
“Nasal Delivery of an Adenovirus-Based Vaccine Bypasses Pre-existing Immunity to Vaccine Carrier and Improves the Immune Response in Mice.” Public Library of Science One 3(10), p. e5548, ’08.

(Callahan, Wongnan)  


“Long-Term Virus-Induced Alterations of CYP3A-Mediated Drug Metabolism: A Look at the Virology, Immunology and Molecular Biology of a Multi-Faceted Problem.” Expert Opinion on Drug Metabolism Toxicology 5(10), pp. 1189-1211, ’09.

McConville, Jason T.


(Son) “Dissolution Testing for Inhalation Formulations.” Inhalation 2(6), pp. 8-11, ’09.


“Development of Fast Disintegrating Tablets Using Starch and Starch Derivatives” and “An Investigation of Natu-


(Tolman, Nelson, Bosselm an, Wiederhold, Peters, 6 PHARMACEUTICS DIVISION 2008-09 PHARMACEUTICS DIVISION 2008-09


(DeNunzio, Brough, McGinity) “In Vitro Characterization of Concentration Enhancing Polymer Solid Dispersions Containing Itraconazole Produced by KinetiSol Dispersing.” Proceedings of the 36th Annual Meeting and Exposition of the Controlled Release Society, Copenhagen, Denmark, July ’09.

Presentations

Croyle, Maria A.


“Improved Efficacy of a Recombinant Adenovirus-Based Ebola Vaccine: Lessons Learned from Molecular Pharmacology and the DNA Vaccine Communities.” University of Alabama Birmingham Gene Therapy Center and Department of Pharmacology and Toxicology, Birmingham, AL, Dec. ’08.

“Pharmacology and Toxicology of Highly Efficient Recombinant Adenovirus-Based Ebola Vaccines.” University of Houston, College of Pharmacy, Houston, TX, March ’09.


McConvile, Jason T.

“The Oral Use of Highly Efficient Formulations.” Tate & Lyle, Decatur, IL, Sept. ’08.

“Impoved Therapy by Direct Lung Targeting for the Treatment of Pulmonary Aspergillosis.” Purdue University, Indianapolis, IN, Sept. ’08.

“Formulation and Characterization of Prosolv® Fast Disintegrating Tablets.” Prosolv® Advisory Board Meeting, San Juan, Puerto Rico, April ’09.


McGinity, James W.


“How to Prepare for the Transition from College to Industry.” keynote speech, 5th Annual Louis C. Littlefield Celebrating Pharmacy Research Excellence Day, University of Texas at Austin, Austin, TX, April ’09.

Stavchansky, Salomon


(Wang, Pang, Neuman, Bowman, Kerwin) “Pharmaceuticals of Caffeic Acid Phenethyl Ester (CAPE) and Its Catechol-Ring Fluorinated Derivative (FCAPE) Following Intravenous Administration to Rats.” American Association of Pharmaceutical Sciences Annual Meeting and Exposition, Atlanta, GA, Nov. ’08.


Williams III, Robert O.


“Pulmonary Delivery of Itraconazole Nanoparticle to Treat Life Threatening Fungal Infections.” School of Pharmacy, University of Kansas, Lawrence, KS, April ’09.

Symposium on the Harmonization of Bioequivalence Standards, USP Annual Scientific Meeting, Kansas City, MO, Sept. ’08.


(Wang, Pang, Neuman, Bowman, Kerwin) “Pharmaceuticals of Caffeic Acid Phenethyl Ester (CAPE) and Its Catechol-Ring Fluorinated Derivative (FCAPE) Following Intravenous Administration to Rats.” American Association of Pharmaceutical Sciences Annual Meeting and Exposition, Atlanta, GA, Nov. ’08.


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