

**Collaborations Between the University of Kentucky & the University of Louisville  
Effective February 2009**

| College                       | Project                                 | Narrative Description  |
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| <b>College of Agriculture</b> | Tracy Farmer Center for the Environment | UK has been awarded a grant on Science Literacy for Middle School Teachers from CPE for \$140,000/year for two years (dependent upon the success of year 1). Dr. Teddie Phillipson- Mower, Co-Director for the U of L Center for Environmental Education, is a Co-PI with Carol Hanley, Tracy Farmer Center.   |
|                               | Department of Entymology                | Dr Reddy Palli has been using the DNA Microarray Center located in U of L and directed by Nigel G. F. Cooper (Professor and Vice Chair, Anatomical Sciences and Neurobiology, Ophthalmology and Visual Sciences) to perform analysis of gene expression. Dr Palli's group pays reagent costs and the center lets them use all the equipment and technician services. UK does not have facilities to process Agilent microarrays. Dr Palli has saved at least \$100,000 during past two years by using this facility rather than going to commercial vendor.  |
|                               | Department of Entymology                | In collaboration with a team of allergists at the U of L Medical School, College of Agriculture faculty conducted the first study to estimate the prevalence of hypersensitivity among people whose homes were infested with Asian lady beetles, a common fall invader of homes, hospitals and other buildings in Kentucky. The results, published in the Annals of Allergy, Asthma and Immunology and Pest Control Magazine, suggest that the beetles could be a significant cause of respiratory allergy in heavily infested structures.   |
|                               | Department of Entymology                | UL has merged its insect collection with UK. It will be housed and maintained by UK. We are currently renovating space in Animal Pathology to house and combine both collections. This will create the best regional collection of insects for KY — and the western Appalachians.  |
|                               | Department of Agriculture Economics     | UK faculty member Jill Stowe is working with Rich Wilcke and Tim Capps (U of L College of Business, Equine Business Program) on a project analyzing the economic impact that horse shows have on local communities in Kentucky. They are also jointly taking a tour of England's Equine Industry this summer as part of a course looking at international issues in horseracing and the equine industry in general. U of L has 13 students and 3 faculty/staff attending; UK has 6 students and 1 faculty members participating.   |
|                               | UK Equine Initiative                    | <p>The U of L's Equine Industry Program and the UK Equine Initiative are involved in numerous partnership activities. Examples include:</p> <ol style="list-style-type: none"> <li>1) The "Kentucky International Equine Summit," an international conference in 2008, planned to repeat in 2010.</li> <li>2) The U of L and UK have recently agreed to begin trading specialized equine courses, beginning in the fall of 2009, UK faculty will teach a U of L course "Advanced Horse Science" and concurrently, faculty from U of L will teach a UK course "Advanced Equine Business".</li> <li>3) A joint research project measuring the economic scope of the industry beyond central Kentucky and apart from Thoroughbred racing and breeding.</li> <li>4) An Equine Study Tour to England, as described above.</li> <li>5) The Council on Postsecondary Education has developed a statewide committee co-chaired by UK and U of L to develop educational projects and events that can take advantage of the fact that the World Equestrian Games.</li> </ol> |

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|                                       | Department of Plant Pathology   | Three Plant Pathology faculty have collaborations with the Center for Regulatory and Environmental Analytical Metabolomics (CREAM) at the U of L. Plant Pathology projects concern the roles of biological molecules (e.g.: fatty acids, alkaloids) in plant defense and plant protection. The biosynthesis and regulation of such molecules are of interest because they represent metabolic cross-talk and signaling between plants and microbes, both pathogenic and beneficial.   |
|                                       | Health Education, Extension Leadership Program                        | UK and the U of L are collaborating with Norton Cancer Center, Louisville Metro Health Department, Health Care Excel, the American Cancer Society, Kentucky Public Health, and community based organizations to develop a racial and ethnic approach to address and eliminate health disparities for breast and cervical cancer. The UK Health Education, Extension Leadership Program and Kentucky Cancer Programs are providing guidance in the development of outreach and community based programs to target African American women in the three counties with the greatest population, Christian, Fayette, and Jefferson counties. The CDC is providing \$35,000 total for the development of these efforts. |
| <b>College of Arts &amp; Sciences</b> | Department of Chemistry   | There is a collaboration between UK and U of L through the Proteomics Consortium. Integration and Extension of Bioinformatics Tools for Proteomics. Bert Lynn (UK), Haining Zhu (UK), William Nelson (UK), Michael Merchant (U of L), and Xiang Zhang (U of L)  |
|                                       | Department of Mathematics   | Secondary Mathematics Curriculum Framework Project. Funded by the Kentucky Department of Education. The purpose is to develop formative assessments that will assist teachers in preparing students for end-of-course assessments in Algebra I, Geometry, and Algebra II. The project also involves designing a professional development program to assist teachers in using the formative assessments during instruction. David Leep (UK) and Bill Bush (U of L). January 2009-June 2010   |
|                                       | Department of English   | Alan Nadel from the UK Department of English has co-edited a book entitled The Men Who Knew Too Much: Henry James and Alfred Hitchcock with U of L faculty member Susan Griffin.  |
|                                       | Department of Sociology   | Dwight Billings collaborated on a book chapter entitled Not Your Grandmother's Agrarianism: The Kentucky Community Farm Alliance's New Agrifood Activism and its Implications for Appalachia with U of L faculty member Lisa Markowitz.   |
|                                       | Department of Physics and Astronomy                                   | On April 2009, UK and U of L are jointly hosting Frank Wilczek, American theoretical physicist and Nobel Prize Winner.  |
| <b>College of Dentistry</b>           | Division of Restorative Dentistry, Department of Oral Health Practice | The College of Dentistry currently has a teaching collaboration where faculty from UK and U of L serve on each other's mock licensure boards.   |
|                                       | Department of Oral Health Practice                                    | Dr. Mark Lindner has been collaborating with us on the COBRE grant in which we are studying genetic polymorphisms in smokers with and without periodontitis. Some of the laboratory analysis is being done in his lab   |
|                                       | Department of Oral Health Practice                                    | The UK College of Dentistry graduate program is involved in two collaborative efforts with the orthodontic graduate program at U of L. The first one is an annual continuing education initiative where one resident from each program makes a research or clinical presentation. Additionally, there is an annual Kentucky Orthodontic Association/UofL/UK annual continuing education symposium. This is an all-day affair where the KOA invites a renowned speaker for a day of CE and alumnae, faculty and residents of both programs attend.   |

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|                             | Center for Oral Health Research          | <p>(1) The Colleges of Dentistry and Medicine are currently working with colleagues in dentistry, cardiology, and emergency department physicians at UofL in a multicenter U01 grant from the NIH to develop salivary diagnostics for acute myocardial infarction. This is linked to engineering collaborators at UT Austin and clinical collaborators at UT Health Science Center at San Antonio</p> <p>(2) The COBRE project at UK Dentistry is collaborating with Dr. Marc Linder, a pharmacogeneticist at UofL to evaluate selected gene polymorphisms in periodontal disease linked to smoking</p> <p>(3) UK's Dr. John Novak is on the advisory board of the March of Dimes program to lower preterm birthrates in Kentucky with UofL hospital as one of the test sites for the program</p> <p>(4) Annually, College of Dentistry faculty collaborate with colleagues in U of L Dentistry to advocate for improvement in oral health for the U.S. population by meeting with federal legislators and their health staffers in Washington</p> <p>(5) Currently UK's Dr. Ebersole is Co-Chair with Dr. Kinane (U ofL Dentistry) for the 2009 Gordon Research Conference in Periodontal Disease</p> |
| <b>College of Design</b>    | Urban Design Studio                      | A collaborative endeavor between UK's Architecture, U of L's Department of Urban & Public Affairs and Louisville Development Authority. The UDS will bring together resources from the public, private, and non-profit sectors to address urban design issues in the greater Louisville Metropolitan area. The research undertaken through the UDS is intended to significantly increase the knowledge of urban issues and design issues in Louisville, and to develop solutions which can serve as prototypes for similar problems. The UDS will provide a means by which academics, city officials, and professionals can share ideas, address issues, and evaluate approaches to solving problems in the city's neighborhoods. Over time, the work carried out by the UDS can provide a meaningful history and archive for a longer-term evaluation of urban strategies.  |
|                             | Brown Forman Studio                      | The College of Design at the University of Kentucky is conducting a year-long research and design study of the Shippingport area in Louisville. The fall semester research studio of architecture students was led by Gary Bates, Brown Forman Visiting Chair in Urban Design, and principal of Spacegroup Architects in Oslo, Norway. The spring studio is led by Julien de Smedt, Brown Forman Visiting Chair in Urban Design, and principal of JDS Architects in Copenhagen. Professor Jason Scroggin from the School of Architecture is co-teaching both fall and spring semesters. The year-long research and design study will be presented at the end of the spring semester at the Urban Design Studio in downtown Louisville, a joint venture with the University of Louisville and the City of Louisville.   |
| <b>College of Education</b> | Department of Educational Policy Studies | The National Academic Advising Association has commissioned Dr. John Thelin to join with U of L Professor Amy L. Hirschy to write the lead article for their 50th anniversary celebration of the national's organization's founding. The work is entitled "Higher Education's Fantastic Voyage" and addresses college students and academic patterns from 1636 to the present. Additionally, for the past several years Dr. Thelin has been involved closely with the archivists and special collections at U of L in a study of the documents and historic photographs associated with Kentucky's HBCUs (Historically Black Colleges and Universities).   |
| <b>College of Fine Arts</b> | Department of Art                        | While the College of Fine Arts does not have a formal partnership, the Departments of Art at both universities have begun to connect by each making faculty presentations at the other's symposia. Recently, for example, the UK Department of Art hosted a REgionalism Symposium and a U of L faculty member highlighted as a guest lecturer. Additionally, a UK art historian is now serving on two separate graduate student committees a U of L.   |

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| <b>College of Medicine</b> | Department of Surgery   | The Kentucky Lung Cancer Research Program is a joint research initiative between the University of Kentucky and the University of Louisville ( <a href="http://kentuckylungcancer.org/">http://kentuckylungcancer.org/</a> ), established by the Kentucky General Assembly in 2000 in response to the high mortality rate in Kentucky associated with lung cancer. The Kentucky Clinical Trials Network is one of the primary initiatives included in the program, conducting investigator-initiated and industry sponsored trials.  |
|                            |                         | Dr. Henry Vasconez, Chief of Division of Plastic Surgery, serves as a collaborator on the NIH-funded project entitled "Breast Cancer Chemoprevention Strategies" (RO1CA118114). The Principal Investigator on the project is Dr. Ramesh Gupta at the University of Louisville. We have cooperated with tissue samples and analysis. The goal of the project is to utilize free-radical mediation and combination of chemopreventive agents to provide a more effective prevention of breast cancer than individual agents alone would provide.   |
|                            | Statewide Trauma System | State Trauma Advisory Committee - This is a multi-disciplinary group of individuals (all volunteers) appointed by the KY Commissioner of Health, responsible for developing and overseeing an integrated system of trauma care for the Commonwealth. This is accomplished through monthly teleconferences with all committee members and subcommittees which meet and act separately. The Chief of Trauma at U of L, the Chief of Pediatric Trauma at U of L, the Residency Program Director (who is also a trauma surgeon at U of L), and Dr. Andrew Bernard of UK are all members of the Committee. Dr. Bernard serves as Chair. They work together on a regular, ongoing basis on the trauma system and collaborate very closely. |
|                            |                         | U of L Trauma Conference - Drs. Phillip Chang and Andrew Bernard each give a lecture annually at the U of L Trauma Conference.   |
|                            |                         | Trauma Investigation - Dr. Andrew Bernard is collaborating on a study of chest wall trauma from motor vehicle collisions with the Trauma Institute at U of L.  |
|                            | Markey Cancer Center    | Kentucky Cancer Program, a cooperative/collaborative venture between the University of Kentucky Markey Cancer Center (Debra Armstrong) and the University of Louisville James Graham Brown Cancer Center (Connie Sorrell). Provides community outreach and education for all citizens of Kentucky concerning cancer risks, signs and symptoms of cancer and path-finding for cancer-related services. Funded by legislative mandate since the early 1970s through the Commonwealth of Kentucky.  |
|                            |                         | Kentucky Lung Cancer Research Program, a cooperative venture between the University of Kentucky Markey Cancer Center (Robert T. Means, Jr., MD) and the University of Louisville James Graham Brown Cancer Center (Donald Miller, MD). Provides funding for research projects on all aspects of lung cancer as well as infrastructure support to increase the capacity and broaden the base for expanded cancer-related research in general. Funded by the state legislature from tobacco settlement funds.  |
|                            |                         | Kentucky Clinical Trials Network is a collaborative venture between the University of Kentucky Markey Cancer Center and the University of Louisville James Graham Brown Cancer Center. This program seeks to expand offerings of clinical trials to cancer patients in Kentucky through formal partnership affiliations with qualified provider organizations/ institutions/agencies throughout the Commonwealth. 99 patients currently enrolled on study at 17 sites serving all Area Development Districts of the Commonwealth of Kentucky. Funded as a component of the Kentucky Lung Cancer Research Program.  |
|                            |                         | Pharmacokinetics - This is a shared resource for drug development jointly supported by the Markey Cancer Center and the College of Pharmacy. This collaborative partnership was instrumental in bringing the formulation DB-67 through pre-clinical testing into clinical trials which are currently underway.   |

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|  | Area Health Education Centers (AHEC)            | The AHEC Program has been a collaborative effort of the University of Louisville and UK since its inception in the 1980s. U of L is the federal grantee and UK is a subcontract. State funds flow independently to the two institutions. There is continuous programmatic collaboration, the AHEC Navigator data tracking system being a prime example. Once fully implemented, Navigator will allow tracking of participants in all AHEC sponsored activities statewide, from school-based health career pipeline programs, through undergraduate and professional school and on to continuing professional education and participation as community-based faculty. It also will provide ongoing productivity data in programmatic areas. The key faculty drivers of this process are the two AHEC Program Administrators, at U of L, Fay Jones, MD, Associate Dean and faculty member in Pediatrics and at UK, James Norton, PhD, Associate Dean and faculty member in Psychiatry and Neurology. This initiative began in earnest two years ago and should be fully rolled out by the end of 2009. |
|  | Kentucky Telehealth Network                     | UK and U of L are the University Training Centers that oversee the statewide, videoconference-based telehealth initiative. Rob Sprang at UK and Tim Bickel at U of L run the training centers and ensure that the network is operational to perform:<br>1. Clinical activity – University physicians are able to see patients in community health facilities without requiring costly travel.<br>2. Educational programs – Health professional training from Universities is available in small community hospitals/clinics/health departments<br>3. Research efforts – Research has been done/is being done to validate the benefit of telehealth and that it is a viable alternative for medically underserved Kentuckians.<br>The contract funding to UK and UL is approximately \$70,000 for each site.  |
|  |   | Dr. Michael Mendenhall has an informal collaboration with Dr. David Powell at the University of Louisville (Dept. of Nephrology/Biochemistry) that began Jan 1, 2008 and is ongoing. It has resulted in an oral presentation at the American Society of Nephrology conference in November 2008 titled, “Proteomic analysis reveals Elongin C as a mediator of Notch4 activity in renal tubule cells”. A manuscript is currently in preparation. The project is investigating the role of the elongin ubiquitin ligase complex in notch regulation with an emphasis on how it might be involved in kidney disease, particularly diseases associated with diabetes and renal cell hyperplasia.   |
|  | Department of Molecular & Cellular Biochemistry | Dr. Michael Mendenhall has an informal collaboration with Dr. David Powell at the University of Louisville (Dept. of Nephrology/Biochemistry) that began Jan 1, 2008 and is ongoing. It has resulted in an oral presentation at the American Society of Nephrology conference in November 2008 titled, “Proteomic analysis reveals Elongin C as a mediator of Notch4 activity in renal tubule cells”. A manuscript is currently in preparation. The project is investigating the role of the elongin ubiquitin ligase complex in notch regulation with an emphasis on how it might be involved in kidney disease, particularly diseases associated with diabetes and renal cell hyperplasia.   |
|  | Department of Internal Medicine                 | Dr. Susan Smyth supervises one of our fellows, Ahmed Latif-Abdel, who is collaborating with Mariusz Ratajczak (U of L Brown Cancer Center) to study the role of primitive stem cells in regenerating myocardium after infarction. An abstract of their findings was presented at the scientific sessions of the American Heart Association, Nov 2008.  |
|  | Department of Neurosurgery                      | Dr. Markesbery and Dr. Tibbs serve on the Spinal Cord Injury and Head Injury Research Trust (KSCHIRT) Board in concert with UL representatives to administer the funds generated by moving traffic violation surcharges. KSCHIRT generates about \$2.8-3.0 million a year which is roughly divided between the UK Center and the Center at U of L.   |
|  | Department of Emergency Medicine                | The UK Department of Emergency Medicine is collaborating with EM at U of L on an NIH pre-hospital seizure study called Rampart. UK is the funded institution but we will also do the study in Louisville through EM at UofL.   |

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|                            | College of Medicine Admissions                               | The College of Medicine Admissions Office has two collaborations:<br>1) Presentation and paper submission on the utility of an instrument we used in the admissions process: "Assessing Professionalism in Medical School Applicants" with Ruth Greenberg and Craig Ziegler. Papers presented at the Southern Group on Educational Affairs meeting, March 2008 and the Association of American Medical Colleges Meeting, November 2008; paper currently being written and will be submitted Spring 2009.<br>2) Currently initiating a three school study with University of Louisville and Wright State University on Factors Associated With Medical Students' Career Aspirations in Academic Medicine. Dr. Sheila Woods from UKCOM is the PI on this effort.   |
|                            | Center for the Advancement of Women's Health                 | Kentucky Women's Health Registry staff collaborate regularly with the University Of Louisville's Advancing Women's Health advocates. Advancing Women's Health advocates at the University of Louisville are a group of investigators strategizing enrollment opportunities of the Louisville area women into studies involving researchers at the U of L. One of the University of Louisville researchers, Dr. Tamara Newton, PI of The Women's Stress and Aging Study uses Kentucky Women's Health Registry subjects that have left a stressful marriage or intimate relationship in order to learn how these experiences affect women's emotional health, physical health, and aging process. The Advancing Women's Health meetings are also used as part of an ongoing process to develop the Kentucky Women's Health survey into a tool that will allow researchers at both the University of Kentucky and the University of Louisville investigate women's health problems. |
|                            | Graduate Center for Nutritional Sciences                     | Ramesh Gupta of the U of L Brown Cancer Center and UK's Dr. Howard Glauert are collaborating on projects related to nutrition and cancer.  |
| <b>College of Pharmacy</b> | Regional IRB Consortium                                      | Collaboration with regard to the respective University human subjects protections programs. The COP has engaged Louisville in the initial stages of a regional IRB consortium that will be aligned with the Bioethics and Research Integrity Core( KF3) of the U KY Center for Clinical and Translational Science( CCTS).  |
|                            | ORI/IRB Functions  | The COP has also worked with U of L to evaluate electronic media for carrying out the ORI/IRB functions. Louisville was an early adopter of the BRAAN® SYSTEM. We visited their site and as a result of the collaboration and advice, we decided not to purchase the BRAAN system.   |
|                            | Immunomodulator-Coated nanoparticles for Brain Resuscitation | Investigate use iif a coated nanoparticle to enhance brain uptake  |
|                            | Optimizing Direct ATP Delivery to Ischemic Tissues           | Develop a safe and effective technique to combat tissue damage by ischemia and hypoxia   |
|                            | Kentucky Pharmacy Residency Network Program (KPRN)           | The U ofL Hospital collaborates with the UK College of Pharmacy through membership in the Kentucky Pharmacy Residency Network (KPRN). The UK-sponsored KPRN serves as an outreach to pharmacy residency training sites across the Commonwealth to assist in their development and expansion. The UofL program is a major constituent of the KPRN, and is a routine host for KPRN member meetings.  |
|                            | Clinical Education and Training Contract                     | The UK College of Pharmacy affiliates with the UofL Hospital Medical Center / James Brown Graham Cancer Center to expand the ability to provide clinical education and training throughout KY, and in doing so provides individuals, agencies and affiliate with a means of contributing timely input into the development and conduct of clinical education and training for pharmacy students enrolled at the university.  |

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|   | Rural Health Bioterrorism and Emergency Preparedness: SCOPE C  | The University of Louisville Health Sciences Center is pleased to collaborate with the University of Kentucky to provide continuing education to the healthcare workers and first responders of the state and surrounding region. In addition to working with Kentucky's major metropolitan areas we will focus much of our efforts to bring this vital information and training to Appalachian and rural communities that typically do not have access to continuing education. The University of Louisville Health Sciences Campus will provide training from experts in the fields of Public Health, Medicine, Dentistry, Nursing, and Infection Control. The Standardized Patient Program and the Paris Simulation Center will be utilized as central components of all training, assessment and drill activities. The University of Kentucky will contribute significantly to this process by providing expertise from the Schools of Agriculture and Social Work as well as coordinating efforts with the Kentucky Department of Public Health and the Kentucky TeleHealth Network to further extend our ability to reach rural Kentuckians. |
|   | Rural Health Bioterrorism and Emergency Preparedness: SCOPE B  | The University of Louisville Health Sciences Center is pleased to collaborate with the University of Kentucky to provide continuing education to the healthcare workers and first responders of the state and surrounding region. In addition to working with Kentucky's major metropolitan areas we will focus much of our efforts to bring this vital information and training to Appalachian and rural communities that typically do not have access to continuing education. The University of Louisville Health Sciences Campus will provide training from experts in the fields of Public Health, Medicine, Dentistry, Nursing, and Infection Control. The Standardized Patient Program and the Paris Simulation Center will be utilized as central components of all training, assessment and drill activities. The University of Kentucky will contribute significantly to this process by providing expertise from the Schools of Agriculture and Social Work as well as coordinating efforts with the Kentucky Department of Public Health and the Kentucky TeleHealth Network to further extend our ability to reach rural Kentuckians. |
|   | Hometown Security: Novel Barrier System for Continuous Economical Mitigation of Nerve Agent Threats in Air-Handling and HVAC Systems | Project seeks to design and manufacture low-cost filters capable of rapidly degrading organophosphorus nerve gases using bulk enzymes produced in transgenic plants.   |
| <b>College of Social Work</b>             |  | The College of Social Work has a joint PhD program with the U of L School of Social Work, a partnership instituted in 1998, and a School Social Work Graduate Certification Program that was created in 2003. Additionally, the UK and U of L social work programs have an ongoing collaborative for a Credit for Learning, a component of the Cabinet for Health & Family Services training for social workers.   |
| <b>Interdisciplinary Research Centers</b> | Human Development Institute  | One area in which UK and the U of L are joining to address a critical need in our Commonwealth is in the early screening, identification, and services for children with autism, and in the development of a statewide training initiative for teachers of children and youth with autism, ages birth through 21. This initiative has two distinct components: First, Kentucky's Act Early Team facilitates statewide screening, identification, intervention, and coordination of services, for children with autism spectrum disorders and their families. Secondly, Kentucky was one of only three states selected by the National Professional Development Center on Autism Spectrum Disorders to create a coordinated system of professional development for teachers of children with autism spectrum disorders, ages 0-21, in our state. This two-year initiative that has the capacity to touch all school districts and is a collaboration between UK and U of L.   |
|   | Center for Applied Energy Research   | UK and U of L faculty organized the first "Kentucky Nanomaterials Workshop" in 2002. The following year the workshop was named KYNanoMat (2003) and focused on Kentucky nanotechnology research by universities and the state's industrial partners. The Kentucky workshop was succeeded by the International Symposium: KYNanoMat 2004 held in Lexington at the Marriott Griffin Gate with more than 300 attendees.   |

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|  |                             | <p>A first of its kind study on Fly Ash has been published by the American Chemical Society. It is entitled, "Association of the Sites of Heavy Metals with Nanoscale Carbon in a Kentucky Electrostatic Precipitator Fly Ash." Its authors are from UK (CAER and the Electron Microscopy Center: Jim Hower and Uschi Graham) and U of L (Dept. of Anatomical Sciences and Neurobiology: Michael Tseng).</p> |
|  | Center on Membrane Sciences | <p>Dr. Alan Butterfield, Director of the Center on Membrane Sciences has an extremely productive collaboration with Dr. William M. Pierce, Professor of Pharmacology and Dean of the Graduate School at UL. Professor Butterfield's and Professor Pierce's collaboration, funded by Professor Butterfield's NIH grants, has been highly productive resulting in 27 co-authored publications.</p>             |