Department of Pharmaceutical and Administrative Sciences Annual Report 2015 - 2016
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Dear Colleague,

During this past academic year, the department has continued its work on restructuring the basic and administrative science curriculum of our school. This is part of the school's curriculum revitalization efforts. This has resulted in focused discussions on teaching and learning. Our faculty members have planned substantial changes in their course delivery and there are a number of collaborative efforts with our colleagues in the Department of Pharmacy Practice, that will result in increased integration with clinical sciences. Our research program continues to mature and increased scholarly activity is evident.

At this point, I would like to express my deepest and most sincere appreciation to the faculty and staff of the department. Each of these individuals are critical to our success.

Sincerely,

Willie Davis, PhD
The mission of Loma Linda University School of Pharmacy, Department of Pharmaceutical and Administrative Sciences is to use our teaching, research and service to contribute to the education of Loma Linda University pharmacy students.
Pharmaceutical Science Research Resources

The department has its research space in the Chan Shun Pavilion. This building was constructed as a basic science research building and is located adjacent to the Loma Linda University Medical Center. The department has three laboratories in the building and the cumulative size of these is approximately 3500 square feet.

Chemistry Laboratory
This laboratory contains 2, 6-foot preparative chemistry hoods along with analytic equipment. An enclosed area in this laboratory contains the department’s cell culture and microscopy facility. This year, we upgraded our microscopy equipment with the addition of an automated fluorescence microscope. The Chemistry lab is utilized by Dave Weldon, Kristopher Boyle, Rich Maskiewicz, and Vicki Maskiewicz, while the cell culture and microscopy facility is shared space.

Neuropharmacology Laboratory
This laboratory contains two rooms where whole-animal and single cell electrophysiological recordings can be made. The lab also includes space and equipment for immunohistochemistry, microscopy, and other biological analyses. This lab is utilized exclusively by Dr. Wei-Xing Shi.

Molecular Biology Laboratory
This laboratory contains analytical and preparatory equipment including real-time quantitative PCR, ultra-centrifuge, and imaging equipment. This lab is utilized by Danyetta Anderson, Vicki Maskiewicz, and Willie Davis.

There are abundant shared resources on the LLU campus, to which our faculty members have access. These include the Advanced Imaging and Microscopy Core Facility, Flow Cytometry Center, Atomic Absorption, Mass Spectroscopy, and Magnetic Resonance Imaging. Departmental researchers also have access to equipment at Redlands University and the University of California - Riverside.
Kristopher Boyle, PhD  
Assistant Professor

**Biography**

I completed my undergraduate education at Allegheny College in Meadville, PA in 1998 (B.S., Chemistry). After a three-year stint in industry at the DuPont Pharmaceuticals Company, I entered the University of California, Irvine and received a PhD in Organic Chemistry in 2008. I then moved to The Scripps Research Institute for post-doctoral studies where I focused on synthetic and medicinal chemistry. I was privileged to join the Loma Linda University School of Pharmacy in July 2012. My current research interests include studying the fungal metabolite, monocerin, and its analogs, as potential agents to treat multi-drug resistant malaria. My teaching philosophy focuses on challenging the students in the LLUSP program to learn for themselves and to think critically, and to understand how to integrate their Christian faith into their life and profession.

**Courses Taught in the 2015 - 2016 Academic Year**

- Course Coordinator - RXPS 652, Principles of Medicinal Chemistry 2
- Course Coordinator - RXPS 653, Principles of Medicinal Chemistry 3

**Service Activities**

- Member - LLUSP Assessment Committee
- LLUSP Faculty Representative - LLU Faculty of Graduate Studies

**2015 - 2016 Publication**

Willie Davis, PhD
Chair and Associate Professor

Biography
I earned a PhD in Biochemistry from Meharry Medical College and afterwards completed a post-doctoral fellowship in the Laboratory of Gene Regulation, Department of Pathology at the National Cancer Institute in Bethesda, Maryland. I joined the LLUSP faculty in 2004 as an Assistant Professor, and in 2009 was promoted to Associate Professor. I was appointed Acting Chair, Department of Pharmaceutical Sciences in January 2012 and became Chair in June 2012. My laboratory research projects are pharmacogenomics of responsiveness to prescription appetite suppressants in obese individuals. My teaching research interest is in the area of determining predictive metrics of pharmacy student success. My teaching philosophy is that by providing a supportive environment and appropriate motivation, all students have the potential to learn effectively.

Courses Taught in the 2015 - 2016 Academic Year
Course Coordinator - Biochemistry 1, RXPS 581
Course Coordinator - Biochemistry 2, RXPS 582
Course Coordinator - Biochemical and Social Aspects of Obesity and Metabolic Syndrome, RXPS 783 (Autumn, Winter and Fall)

Service Activities
Member - LLU Educational Effectiveness Committee
Member - LLU Faculty of Graduate Studies Admission Review Committee
Member - LLUSP Admissions Committee
Member - LLUSP Executive Committee
Member - LLUSP Accreditation Oversight Committee
Chair - LLUSP Curriculum Committee
Biography

I received my Master of Science and Doctor of Philosophy (PhD) degrees in Pharmacy Administration from The University of Texas at Austin in 2007 and 2010 respectively. I joined the faculty of the Loma Linda University School of Pharmacy as an Associate Professor in January 2014. Prior, I was an Assistant Professor at Appalachian College of Pharmacy, Oakwood, Virginia. My primary research interests include social, economic and behavioral aspects of pharmacy practice and outcomes research. I coordinate and teach Social Behavioral Pharmacy and Health Systems, Reimbursement and Pharmacoeconomics courses to second and third year pharmacy students respectively.

Courses Taught in the 2015 - 2016 Academic Year

Course Coordinator - Health Systems, Reimbursement, and Pharmacoeconomics, RXSA 751

Course Coordinator - Social and Behavioral Aspects of Pharmacy Practice, RXSA 743

2015 - 2016 Publications


**Service Activities**

Chair - LLUSP Assessment Committee

Faculty scholar - LLU Institute for Health Policy and Leadership.

Chair - LLUSP Program Assessment Committee

Member - LLUSP Admissions Committee

Member - LLUSP Accreditation Oversight Committee

Member - LLUSP Curriculum Committee

Member - LLUSP Executive Committee

Alternate member - LLUH Institutional Review Board

Alternate member - Graduate Council

Invited reviewer - *Research in Social and Administrative Pharmacy*
Elvin Hernandez, MPH, DrPH
Associate Professor

Biography
I earned a Master of Public Health degree at Drexel University School of Public Health and a Doctor of Public Health from the Loma Linda University School of Public Health. I joined the faculty of the Loma Linda University School of Pharmacy in 2005. My research interest is to explore patient-clinician communication factors that may be associated with medication adherence in diverse, racial and ethnic populations with an emphasis on lowering health disparities in ethnic and minority populations in Southern California. I have expertise in community health and promotion, health education, health behavior, biostatistics/epidemiology, and research methodology. I have also been a certified health educator since 2001, and is currently credentialed as Master Certified Health Education Specialist (MCHES). The goal in my teaching is for students to leave my courses with a positive impression on the content and self-confidence in performing and discussing the techniques in the future. Furthermore, I strive for a respectful atmosphere in which students are comfortable in asking questions and engaging in discussions, particularly when the abstract nature of biostatistical and epidemiological interpretation is required for various presentations and discussion. I firmly believe that providing this nurturing environment will eliminate an intimidating atmosphere in the classroom which may often lead to student disengagement in the learning process.

Courses Taught in the 2015 - 2016 Academic Year
Course Coordinator - Public Health and Lifestyles, RXSA 545
Course Coordinator - Epidemiology and Biostatistics, RXSA 640
Course Coordinator - Clinical Research Methodology, RXSA 757
Instructor - Drug Information and Literature Evaluation, RXDI 664
Service Activities
Member - LLUSP Admissions Committee
Member - LLUSP Promotion and Tenure Committee
Member - LLUSP Accreditation Oversight Committee
Kathryn Knecht, PhD
Associate Professor

Biography
I came to Loma Linda University in 2004, having previously taught at the Raabe College of Pharmacy, Ohio Northern University, for the previous eleven years. I earned a BS in Toxicology from the Philadelphia College of Pharmacy and Science (now University of the Sciences in Philadelphia) and a PhD in Toxicology from the University of North Carolina. My current research interests focus on the use of dietary supplements, particularly in ethnic populations. In regard to teaching, I believe students need to start with a framework of basic principles that they can be guided to apply in real-life settings, though examples, case studies, and service activities. In addition to the scientific background of pharmacy, students need to consider the socioeconomic factors that can also affect health care and thus it is important to present information in a broader context. In regard to process, learning requires a certain amount of struggle and challenge, albeit in a supportive environment.

Courses Taught in the 2015 - 2016 Academic Year
Instructor - Pharmacist Guided Self-Care 2, RXPC 572
Course Coordinator - Dietary Supplements, RXPC 710
Course Coordinator - Clinical Toxicology, RXPS 718
Course Coordinator - Professional Development
**Service Activities**

Chair - LLUSP Assessment Committee
Chair - LLU Co-curricular Assessment Sub-Committee
Faculty Director - CKC-Music
Member - LLU Educational Effectiveness Committee
Member - LLU Assessment Committee
Member - LLU ICP
Richard Maskiewicz, PhD
Associate Professor

Biography
I earned a PhD in bioorganic chemistry from The University of California, Santa Barbara. I joined the faculty of the Loma Linda University School of Pharmacy in 2006, and I currently serve as the course coordinator and primary instructor in our physical pharmacy and dosage form evaluation courses. My research interests focus on two areas - evaluation of the utility of sublimable matrices for achieving sustained oral release of drugs and the characterization of the physical properties of high entropy fluids. My teaching philosophy is for the most part pragmatic, guided by end of course student opinions, and realizing that “fine tuning” of lecture material is a never ending process. My teaching philosophy further entails assessment of student competence in lecture topics, on a real-time basis through lecture-embedded quizzes, and in adjusting course presentation, as necessary, to each particular year’s incoming class of students.

Courses Taught in the 2015 - 2016 Academic Year
Course Coordinator - Pharmaceutics 2, RXPS 512
Course Coordinator - Pharmaceutics 3, RXPS 513

Service Activities
Chair - LLUSP Curriculum Committee
Member - LLUH Institutional Review Board
Member - LLU GRASP Review Panel
Member - LLUSP Accreditation Oversight Committee
Member - LLU Intellectual Property Committee
Biography

I obtained my BS degree in pharmacy from the University of Rhode Island School of Pharmacy, and subsequently obtained a PhD in Pharmaceutical Chemistry from the University of California San Francisco. In addition, I am a registered patent agent with the United States Patent and Trademark Office. Prior to coming to LLU, I served as a consultant in intellectual property, emphasizing biotechnology and pharmaceutical patents. I also have extensive pharmaceutical industry experience, specializing in transdermal delivery of small molecules, and injectable and implantable drug delivery systems for recombinant proteins and peptides. My current research projects include the development of a novel microcomposite drug delivery system for the treatment of osteomyelitis, stabilization of reactive molecules in drug delivery matrices, and the pharmacokinetics of piperacillin/tazobactam in obese patients. I teach pharmaceutics and pharmacokinetics. In both of the disciplines I teach, pharmaceutics and pharmacokinetics, the goal of my lectures is to acquaint students with a physical description of systems, in many cases by using the quantitative language of mathematics. I use problem sets extensively in teaching, often to present new material. This can often be a very time-consuming way for the student to learn, but I have been pleased to hear from many of them that they consider it time well spent. I firmly believe that my task as a teacher is to maintain high academic standards and then offer students the assistance they need to achieve them.
Courses Taught in the 2015 - 2016 Academic Year

Course Coordinator - Pharmacokinetics, RXPS 610
Instructor - Clinical Pharmacokinetics, RXPC 760
Instructor - Pharmaceutics 2, RXPS 512

2015 - 2016 Publications/Presentations


Service Activities

Chair - LLUSP Promotion and Tenure Committee
Member - LLUSP Admissions Committee
Member - LLU Academic Standing Committee
Biography

Having taught Pharmacy Law at Loma Linda University School of Pharmacy since 2009, I continue to innovate with new teaching approaches. Some of those approaches include using low-stakes failure, maintain minimal lecturing, use half of the class time for case solving in small and large groups. It was a privilege to be invited to guest lecture at Western University of Health Sciences and Touro University. The Advanced Pharmacy Law elective course remains at full capacity. Students research and present legal articles and pending legislation/regulations.

My scholarship can be best summarized as pharmacy law education for students, pharmacists, and technicians. For all three groups, I provide a law update presentation at California Society of Health-System Pharmacists Seminar conference. I also publish in their journal each year, “California Journal of Health-System Pharmacists”. This year the textbook I coauthored with Fred Weissman, PharmD, JD, “Pharmacy Practice and Tort Law” was published and is available nationally.

Having an opportunity to interact with the best and brightest students is a privilege. Knowing that students who just a few years ago sat in Pharmacy Law have now graduated and are extending the healing ministry of Jesus Christ is a reminder that being a pharmacist is more than filling prescriptions. Students must be prepared to protect their licenses, protect their patients, and to do so in a manner that helps the patient to realize their pharmacist has gone the extra mile to help them.

Courses Taught in the 2015 - 2016 Academic Year

Course Coordinator - Pharmacy Law, RXSA, 547
Course Coordinator - Advanced Pharmacy Law
**2015 - 2016 Publications**


**Service Activities**

Member - LLUSP Executive Committee

Member - LLUSP Academic Standing Committee

Rotary Club of Redlands, Calif. Board of Trustees
Biography

My research interests are in the neurobiology and pharmacology of dopamine-related brain disorders including schizophrenia, Parkinson’s disease, and drug addiction. In collaboration with colleagues in the School of Medicine, we have recently begun to study also neurodegenerative disorders including multiple sclerosis, Alzheimer’s disease, and ischemia-induced brain injury. My research involves the use of a wide range of techniques including in vivo and in vitro electrophysiological recordings, opto- and chemogenetics, behavioral analysis, and immunohistochemistry.

I consider it a great honor to teach our students at LLUSP, and believe that teachers can have an important impact on not only students’ learning outcome, but also their future career decision and development. I am committed to providing the best possible education for my students, and strive to ensure that my lectures are up-to-date, coherent, and logically presented. I think that one of my greatest strengths is my enthusiasm and passion for the subjects that I teach. I believe that I, as a teacher, bear the responsibility to persuade students that the knowledge we are studying is interesting and relevant. I have found that students learn more effectively when they can make connections with their past knowledge and real-world experiences. The number of medications available today is vast and it is climbing. To many students, the information they need to learn is overwhelming. I strive to distill complicated topics into their essentials and teach students a framework with which to organize their information. My goal is to help students become active, lifelong learners who are capable of locating, evaluating, processing, synthesizing, and producing information from different resources. I discourage students from simple accumulation of facts and encourage them to engage in discussions in every class and to teach their fellow classmates. I believe knowledge is best learned by teaching others. In my upper-level elective courses, every student is encouraged to give presentations. I also enjoy teaching students in my research laboratory. Exposure to research helps students gain deeper understanding of the mechanisms of action of drugs and foster their critical thinking skills. Experiences in research also help students develop an area of interest and improve their future employability.
Courses Taught in the 2015 - 2016 Academic Year
Course Coordinator - Physiology 1, RXPS 524
Course Coordinator - Introduction to Neuropsychopharmacology, RXPS 784

2015 - 2016 Publications/Presentations


Service Activities
Member - LLUSP Promotion and Tenure Committee
Member - LLU Rank and Tenure Committee
Member - LLU FGS Graduate Council
Member - LLU Institutional Biosafety Committee
Member - LLU Clinical Trials Committee
Member - LLU Stem Cell Research Oversight Committee
Biography
I earned a PhD in Medicinal Chemistry from The University of Mississippi in 2008 and joined the faculty of the Loma Linda University School of Pharmacy in the same year. I teach in the medicinal chemistry series that is offered to second year pharmacy students. My research interests lie in the synthesis and manipulation of natural products to improve the drug-like properties of the compounds for pharmaceutical evaluation and developing new methodologies of synthesis. Currently, I am pursuing a natural product that has been shown to have moderate activity against pre-B ALL, the most common form of childhood leukemia. My teaching philosophy is rooted in my belief that students need to be challenged so that they can consolidate material from various disciplines and formulate a framework in which they can understand the treatment of disease from a pharmacological perspective. In my courses, I not only teach the pharmacology and medicinal chemistry of therapeutics, but I incorporate clinical application of material learned in the classroom, along with the extensive use of discussion boards, to integrate material between courses.

Courses Taught in the 2015 - 2016 Academic Year
Course Coordinator - Principles of Medicinal Chemistry 1, RXPS 651

2015 - 2016 Publications
**Service Activities**

Member - LLUSP Accreditation Oversight Committee

Member - LLUSP Curriculum Committee

Faculty Advisor - LLUSP Rho Chi Chapter
Part-Time Faculty and Faculty With Secondary Appointments in the Department

Several individuals hold either part-time or secondary appointments to our department. They are listed below.

Samuel Achilefu, PhD
Director of Optical Radiology Lab
Professor of Radiology
Washington University School of Medicine

Eileen Brantley, PhD
Assistant Professor, Department of Basic Sciences
Division of Pharmacology
Loma Linda University School of Medicine

Christopher Perry, PhD
Assistant Professor, Department of Basic Sciences
Division of Biochemistry
Loma Linda University School of Medicine
Part-Time Faculty and Faculty With Secondary Appointments in the Department

Richard Sun, PhD
Assistant Professor, Basic Sciences
Division of Physiology
Loma Linda University School of Medicine

Robert Teel, PhD
Professor, Pharmaceutical and Administrative Sciences
Loma Linda University School of Medicine

Sean Wilson, PhD
Assistant Professor, Basic Sciences
Division of Pharmacology
Loma Linda University of School of Medicine
2015 - 2016 Seminar Speakers

Kate Wassum, PhD - Assistant Professor, Department of Psychology - UCLA
Tiffany Powell-Wiley, MD, MPH - National Heart, Lung, and Blood Institute
Ilhem Messaoudi Powers - Associate Professor, Biomedical Sciences - UCR
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<th>Investigator</th>
<th>Title</th>
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<td>Boyle</td>
<td>Exploring Moncerin - structure and antimalarial activity</td>
<td>US Army</td>
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<td>Boyle</td>
<td>Combination of radiotherapy and chemotherapy against cancer</td>
<td>Marcelo Vasquez - LLUSM</td>
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<td>Boyle</td>
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<td>Rich Maskiewicz - LLUSP</td>
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<td>Knecht</td>
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<td>Natasha Plantak - LLUSPH</td>
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<td>Pharmacokinetics and pharmacodynamics of high-dose piperacillin/tazobactam in obese patients</td>
<td>Steve Forland and John Veillette - LLUH/LLUSP Ingrid K. Blomquist - LLUSM David Bland - LLUH</td>
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