TABLE OF CONTENTS

DEPARTMENT PHOTO - 3
MISSION - 4
OVERVIEW – 4
NEW FACULTY AND ADMINISTRATIVE APPOINTMENTS– 8
FACULTY PROMOTIONS – 13
FACULTY RESIGNATIONS – 14
STAFF APPOINTMENTS AND RETIREMENTS - 15
FACULTY WITH PRIMARY APPOINTMENTS -16
FACULTY WITH SECONDARY APPOINTMENTS -20
FACULTY WITH EMERITUS AND ADJUNCT APPOINTMENTS - 30
OFFICE STAFF -31
NEW GRADUATE STUDENT CLASS - 32
GRADUATE STUDENTS – 34
GRADUATES– 35
FACULTY HONORS – 36
STUDENT HONORS - 38
PUBLICATIONS - 39
ABSTRACTS - 45
RESEARCH GRANTS ACTIVE - 57
RESEARCH GRANTS SUBMITTED - 60
INVITED SCIENTIFIC PRESENTATIONS - 64
INTELLECTUAL PROPERTY ACTIONS – 67
DEPARTMENTAL COURSES - 68
STANDING COMMITTEES – 69
DEPARTMENTAL EVENTS AND RECOGNITION - 70
NCI CANCER EDUCATION PROGRAM STUDENTS- 71
MISSION

The Department of Pharmacology and Toxicology is committed to academic excellence and to the attainment of regional, national, and international recognition for the quality of its educational, research, and service activities. Guided by the University of Louisville Strategic Plan (The 2020 Plan) to continue our path to national prominence, the mission of the Department of Pharmacology and Toxicology focuses on five broad objectives:

- Provide instruction in pharmacology and toxicology of the highest quality for the education and preparation of medical, dental, nursing, and other health care professional students. Emphasis is placed on the fundamental principles necessary for life-long learning and the essential knowledge required for rational, effective, and safe use of drug therapy.

- Advance biomedical knowledge through high quality research and other scholarly activities, particularly in pharmacology and toxicology and other areas of focus within the University of Louisville 2020 Plan.

- Provide high quality research and educational experiences in pharmacology and toxicology for the education and training of future biomedical scientists who will provide and advance biomedical education, research, and service.

- Provide instruction of the highest quality in pharmacology and toxicology that is appropriate for students at the undergraduate, graduate, and postgraduate levels.

- Provide high quality service to the School of Medicine, the Health Sciences Center, the University, the people of Louisville and the surrounding region, the Commonwealth of Kentucky, professional organizations, the nation, and the world.

OVERVIEW

2014 was a very transformative year for the Department of Pharmacology and Toxicology. We mourned the death of **Dr. William Waddell** who led the Department of Pharmacology and Toxicology as Professor and Chair with distinction from 1977 to 1997. He recruited an outstanding faculty and staff and the department experienced significant growth. He received both his A.B (chemistry) and his MD from the University of North Carolina. He held faculty appointments at the University of North Carolina and the University of Kentucky prior to his recruitment to the University of Louisville as Professor and Chair. Soon after his arrival, he initiated the change in Department name to Pharmacology and Toxicology. He served as President of the Association of Medical School Pharmacology Chairs, and the Ohio Valley Society of Toxicology. He led the Department
of Pharmacology and Toxicology’s hosting of the first joint meeting between the Society of Toxicology and the American Society for Pharmacology and Experimental Therapeutics held in Louisville. He was appointed professor and chair emeritus in 1997 and continued to be active in Department of Pharmacology and Toxicology activities to his death on March 2, 2014.

The Department also underwent a major transition in personnel. We began 2014 with new administrative staff (Tracey Pender and Florence Su) who replaced two long-time administrative staff (Sharon Carpenter and Heddy Rubin-Teitel) who retired in 2013. During the 2014 year, we also bid farewell to our long-time unit business manager (Edie Greca) who was replaced by Blair Cade. Following the retirements of two long-time faculty members in 2013 (Professors Theresa Chen and Mike Williams) we added retirements of our additional long-time faculty members in 2014 (Professors Fred Benz, Harrell Hurst, Donald Nerland, and Peter Rowell). Each was appointed professor emeritus (Donald Nerland’s appointment was effective January 1, 2015 and will be highlighted in next year’s report). Faculty searches led to the recruitment Drs. Shao-yu Chen, Jonathan Freedman, and Joshua Hood (the latter two appointments were effective January 1, 2015 and will be highlighted in the 2015 annual report). Significant changes in Department Administration included the appointment of Dr. Brian Ceresa and Director of Graduate Admissions and Recruitment, Dr. Steven Myers are Associate Chair for Professional Education, and Dr. J. Christopher States as Vice Chair of Graduate Education and Director of the Graduate Program.

Kenneth Palmer, Ph.D., professor of pharmacology and toxicology and director of the Owensboro Cancer Research Program is leading a team of researchers from the University of Pittsburgh, the Magee-Women’s Research Institute in Pittsburgh, the Centers for Disease Control and Prevention, Karolinska Institutet in Stockholm, Sweden, the University of Manitoba in Winnipeg, Canada, the University of Maryland, Baltimore and Kentucky Bioprocessing Inc. and Intrucept Biomedicine LLC in Owensboro. The research team which also includes Dr. Nobi Matoba was awarded a five-year, $14.7 million grant from the National Institutes of Health to lead an international effort to utilize tobacco plants to develop a gel containing a specific protein that will prevent the transmission of HIV.

The team is working with the carbohydrate combining protein Griffithsin (GRFT), which is found in red algae. To develop the microbicide, Palmer’s team takes a synthetic copy of the protein and injects it into a tobacco mosaic virus, which carries the protein into the tobacco leaves. After 12 days, the researchers harvest the leaves and extract the mass-produced protein for development into the vaccine. The goal of the project is to optimize the delivery system of the protective agent, which in this case is a gel, and determine its safety and estimates of its efficacy, leading to a first-in-humans clinical trial.
As documented in data from the Blue Ridge Institute for Medical Research (see below), for FY2014, the Department of Pharmacology and Toxicology rose to 27th in the country among all Universities in the United States.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Name</th>
<th>Pharmacology</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>UNIVERSITY OF PENNSYLVANIA</td>
<td>$30,407,124</td>
</tr>
<tr>
<td>2</td>
<td>UNIVERSITY OF CALIFORNIA SAN DIEGO</td>
<td>$21,723,678</td>
</tr>
<tr>
<td>3</td>
<td>ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI</td>
<td>$18,908,396</td>
</tr>
<tr>
<td>4</td>
<td>UNIV OF NORTH CAROLINA CHAPEL HILL</td>
<td>$17,565,724</td>
</tr>
<tr>
<td>5</td>
<td>VANDERBILT UNIVERSITY</td>
<td>$15,633,201</td>
</tr>
<tr>
<td>6</td>
<td>DUKE UNIVERSITY</td>
<td>$14,408,337</td>
</tr>
<tr>
<td>7</td>
<td>UNIVERSITY OF CALIFORNIA, SAN FRANCISCO</td>
<td>$14,128,580</td>
</tr>
<tr>
<td>8</td>
<td>UNIVERSITY OF PITTSBURGH AT PITTSBURGH</td>
<td>$13,256,172</td>
</tr>
<tr>
<td>9</td>
<td>UNIVERSITY OF ILLINOIS AT CHICAGO</td>
<td>$12,910,580</td>
</tr>
<tr>
<td>10</td>
<td>VIRGINIA COMMONWEALTH UNIVERSITY</td>
<td>$11,786,419</td>
</tr>
<tr>
<td>11</td>
<td>UNIVERSITY OF NEBRASKA MEDICAL CENTER</td>
<td>$11,647,369</td>
</tr>
<tr>
<td>12</td>
<td>UNIVERSITY OF TEXAS HLTH SCIENCE CENTER</td>
<td>$10,432,714</td>
</tr>
<tr>
<td>13</td>
<td>UT SOUTHWESTERN MEDICAL CENTER</td>
<td>$9,927,229</td>
</tr>
<tr>
<td>14</td>
<td>UNIVERSITY OF KENTUCKY</td>
<td>$9,411,980</td>
</tr>
<tr>
<td>15</td>
<td>CASE WESTERN RESERVE UNIVERSITY</td>
<td>$9,076,130</td>
</tr>
<tr>
<td>16</td>
<td>YALE UNIVERSITY</td>
<td>$9,022,791</td>
</tr>
<tr>
<td>17</td>
<td>UNIVERSITY OF COLORADO DENVER</td>
<td>$8,362,217</td>
</tr>
<tr>
<td>18</td>
<td>TEMPLE UNIV OF THE COMMONWEALTH</td>
<td>$8,292,755</td>
</tr>
<tr>
<td>19</td>
<td>UNIVERSITY OF CALIFORNIA LOS ANGELES</td>
<td>$8,059,777</td>
</tr>
<tr>
<td>20</td>
<td>JOHNS HOPKINS UNIVERSITY</td>
<td>$7,775,253</td>
</tr>
<tr>
<td>21</td>
<td>EMORY UNIVERSITY</td>
<td>$7,750,546</td>
</tr>
<tr>
<td>22</td>
<td>UNIVERSITY OF WASHINGTON</td>
<td>$7,653,512</td>
</tr>
<tr>
<td>23</td>
<td>WEILL MEDICAL COLL OF CORNELL UNIV</td>
<td>$7,556,557</td>
</tr>
<tr>
<td>24</td>
<td>UNIVERSITY OF TEXAS MEDICAL BR GALVESTON</td>
<td>$7,164,438</td>
</tr>
<tr>
<td>25</td>
<td>UNIVERSITY OF CALIFORNIA AT DAVIS</td>
<td>$6,932,561</td>
</tr>
<tr>
<td>26</td>
<td>UNIVERSITY OF ROCHESTER</td>
<td>$6,865,472</td>
</tr>
<tr>
<td>27</td>
<td>UNIVERSITY OF LOUISVILLE</td>
<td><strong>$6,292,179</strong></td>
</tr>
<tr>
<td>28</td>
<td>ALBERT EINSTEIN COLLEGE OF MEDICINE</td>
<td>$6,110,800</td>
</tr>
<tr>
<td>29</td>
<td>NORTHWESTERN UNIVERSITY AT CHICAGO</td>
<td>$5,980,694</td>
</tr>
<tr>
<td>30</td>
<td>UNIVERSITY OF IOWA</td>
<td>$5,193,226</td>
</tr>
<tr>
<td>31</td>
<td>UNIVERSITY OF MISSOURI-COLUMBIA</td>
<td>$5,073,730</td>
</tr>
<tr>
<td>32</td>
<td>UNIVERSITY OF MINNESOTA</td>
<td>$4,983,541</td>
</tr>
<tr>
<td>33</td>
<td>UNIVERSITY OF NORTH DAKOTA</td>
<td>$4,682,179</td>
</tr>
<tr>
<td>34</td>
<td>UNIVERSITY OF MICHIGAN</td>
<td>$4,564,330</td>
</tr>
<tr>
<td>35</td>
<td>UNIVERSITY OF VIRGINIA</td>
<td>$4,461,606</td>
</tr>
<tr>
<td>36</td>
<td>UNIVERSITY OF ARIZONA</td>
<td>$4,416,113</td>
</tr>
<tr>
<td>37</td>
<td>UNIVERSITY OF KANSAS MEDICAL CENTER</td>
<td>$4,247,145</td>
</tr>
<tr>
<td>38</td>
<td>MEDICAL UNIVERSITY OF SOUTH CAROLINA</td>
<td>$4,029,884</td>
</tr>
<tr>
<td>39</td>
<td>BOSTON UNIVERSITY MEDICAL CAMPUS</td>
<td>$4,014,122</td>
</tr>
<tr>
<td>40</td>
<td>STATE UNIVERSITY NEW YORK STONY BROOK</td>
<td>$3,967,142</td>
</tr>
<tr>
<td>41</td>
<td>MARSHALL UNIVERSITY</td>
<td>$3,790,279</td>
</tr>
<tr>
<td>42</td>
<td>UNIVERSITY OF MARYLAND BALTIMORE</td>
<td>$3,723,758</td>
</tr>
<tr>
<td>43</td>
<td>NEW YORK UNIVERSITY SCHOOL OF MEDICINE</td>
<td>$3,604,587</td>
</tr>
<tr>
<td>44</td>
<td>PENNSYLVANIA STATE UNIV HERSHEY MED CTR</td>
<td>$3,554,339</td>
</tr>
<tr>
<td>45</td>
<td>UNIVERSITY OF VERMONT &amp; ST AGRIC COLLEGE</td>
<td>$3,438,605</td>
</tr>
<tr>
<td>46</td>
<td>MEDICAL COLLEGE OF WISCONSIN</td>
<td>$3,140,037</td>
</tr>
<tr>
<td>Rank</td>
<td>Institution</td>
<td>Funding</td>
</tr>
<tr>
<td>------</td>
<td>--------------------------------------------------</td>
<td>----------</td>
</tr>
<tr>
<td>47</td>
<td>RBHS-NEW JERSEY MEDICAL SCHOOL</td>
<td>$3,085,292</td>
</tr>
<tr>
<td>48</td>
<td>DARTMOUTH COLLEGE</td>
<td>$2,777,730</td>
</tr>
<tr>
<td>49</td>
<td>WAYNE STATE UNIVERSITY</td>
<td>$2,748,575</td>
</tr>
<tr>
<td>50</td>
<td>SAINT LOUIS UNIVERSITY</td>
<td>$2,734,165</td>
</tr>
<tr>
<td>51</td>
<td>UNIVERSITY OF PUERTO RICO MED SCIENCES</td>
<td>$2,673,203</td>
</tr>
<tr>
<td>52</td>
<td>UNIVERSITY OF MIAMI SCHOOL OF MEDICINE</td>
<td>$2,661,950</td>
</tr>
<tr>
<td>53</td>
<td>NEW YORK MEDICAL COLLEGE</td>
<td>$2,601,722</td>
</tr>
<tr>
<td>54</td>
<td>STATE UNIVERSITY OF NEW YORK AT BUFFALO</td>
<td>$2,582,322</td>
</tr>
<tr>
<td>55</td>
<td>UNIVERSITY OF SOUTH ALABAMA</td>
<td>$2,525,601</td>
</tr>
<tr>
<td>56</td>
<td>UNIVERSITY OF TENNESSEE HEALTH SCI CTR</td>
<td>$2,513,863</td>
</tr>
<tr>
<td>57</td>
<td>DREXEL UNIVERSITY</td>
<td>$2,285,298</td>
</tr>
<tr>
<td>58</td>
<td>INDIANA UNIV-PURDUE UNIV AT INDIANAPOLIS</td>
<td>$2,113,420</td>
</tr>
<tr>
<td>59</td>
<td>LSU HEALTH SCIENCES CENTER</td>
<td>$2,080,449</td>
</tr>
<tr>
<td>60</td>
<td>UNIVERSITY OF MISSISSIPPI MED CTR</td>
<td>$2,073,801</td>
</tr>
<tr>
<td>61</td>
<td>GEORGE WASHINGTON UNIVERSITY</td>
<td>$1,890,465</td>
</tr>
<tr>
<td>62</td>
<td>UNIVERSITY OF WISCONSIN-MADISON</td>
<td>$1,852,691</td>
</tr>
<tr>
<td>63</td>
<td>OHIO STATE UNIVERSITY</td>
<td>$1,778,721</td>
</tr>
<tr>
<td>64</td>
<td>BAYLOR COLLEGE OF MEDICINE</td>
<td>$1,714,097</td>
</tr>
<tr>
<td>65</td>
<td>UNIVERSITY OF CINCINNATI</td>
<td>$1,662,811</td>
</tr>
<tr>
<td>66</td>
<td>GEORGIA REGENTS UNIVERSITY</td>
<td>$1,597,576</td>
</tr>
<tr>
<td>67</td>
<td>UNIVERSITY OF CALIFORNIA-IRVINE</td>
<td>$1,582,358</td>
</tr>
<tr>
<td>68</td>
<td>BROWN UNIVERSITY</td>
<td>$1,488,653</td>
</tr>
<tr>
<td>69</td>
<td>RBHS-ROBERT WOOD JOHNSON MEDICAL SCHOOL</td>
<td>$1,431,876</td>
</tr>
<tr>
<td>70</td>
<td>CREIGHTON UNIVERSITY</td>
<td>$1,355,037</td>
</tr>
<tr>
<td>71</td>
<td>UNIVERSITY OF FLORIDA</td>
<td>$1,343,043</td>
</tr>
<tr>
<td>72</td>
<td>LOYOLA UNIVERSITY CHICAGO</td>
<td>$1,207,908</td>
</tr>
<tr>
<td>73</td>
<td>UNIV OF ARKANSAS FOR MED SCI</td>
<td>$1,164,932</td>
</tr>
<tr>
<td>74</td>
<td>THOMAS JEFFERSON UNIVERSITY</td>
<td>$1,096,319</td>
</tr>
<tr>
<td>75</td>
<td>TEXAS TECH UNIVERSITY HEALTH SCI CTR</td>
<td>$1,076,445</td>
</tr>
<tr>
<td>76</td>
<td>MICHIGAN STATE UNIVERSITY</td>
<td>$1,032,586</td>
</tr>
<tr>
<td>77</td>
<td>ROSALIND FRANKLIN UNIV OF MEDICINE &amp; SCI</td>
<td>$978,284</td>
</tr>
<tr>
<td>78</td>
<td>UNIVERSITY OF NEVADA RENO</td>
<td>$951,057</td>
</tr>
<tr>
<td>79</td>
<td>UNIVERSITY OF SOUTH CAROLINA AT COLUMBIA</td>
<td>$859,489</td>
</tr>
<tr>
<td>80</td>
<td>GEORGETOWN UNIVERSITY</td>
<td>$843,310</td>
</tr>
<tr>
<td>81</td>
<td>EAST CAROLINA UNIVERSITY</td>
<td>$811,244</td>
</tr>
<tr>
<td>82</td>
<td>RUSH UNIVERSITY MEDICAL CENTER</td>
<td>$806,171</td>
</tr>
<tr>
<td>83</td>
<td>COLUMBIA UNIVERSITY HEALTH SCIENCES</td>
<td>$733,332</td>
</tr>
<tr>
<td>84</td>
<td>MOREHOUSE SCHOOL OF MEDICINE</td>
<td>$703,733</td>
</tr>
<tr>
<td>85</td>
<td>SOUTHERN ILLINOIS UNIVERSITY SCH OF MED</td>
<td>$634,969</td>
</tr>
<tr>
<td>86</td>
<td>ALBANY MEDICAL COLLEGE</td>
<td>$632,416</td>
</tr>
<tr>
<td>87</td>
<td>LOUISIANA STATE UNIV HSC SHREVEPORT</td>
<td>$527,543</td>
</tr>
<tr>
<td>88</td>
<td>WRIGHT STATE UNIVERSITY</td>
<td>$401,810</td>
</tr>
<tr>
<td>89</td>
<td>UNIVERSITY OF ALABAMA AT BIRMINGHAM</td>
<td>$328,492</td>
</tr>
<tr>
<td>90</td>
<td>UPSTATE MEDICAL UNIVERSITY</td>
<td>$311,403</td>
</tr>
<tr>
<td>91</td>
<td>HOWARD UNIVERSITY</td>
<td>$298,341</td>
</tr>
<tr>
<td>92</td>
<td>TEXAS A&amp;M UNIVERSITY HEALTH SCIENCE CTR</td>
<td>$287,426</td>
</tr>
<tr>
<td>93</td>
<td>TULANE UNIVERSITY OF LOUISIANA</td>
<td>$232,047</td>
</tr>
<tr>
<td>94</td>
<td>PONCE SCHOOL OF MEDICINE</td>
<td>$139,552</td>
</tr>
<tr>
<td></td>
<td><strong>GRAND TOTAL</strong></td>
<td><strong>$465,141,336</strong></td>
</tr>
<tr>
<td></td>
<td><strong>MEAN</strong></td>
<td><strong>$4,948,312</strong></td>
</tr>
<tr>
<td></td>
<td><strong>MEDIAN</strong></td>
<td><strong>$2,931,511</strong></td>
</tr>
</tbody>
</table>
NEW FACULTY APPOINTMENTS (Primary appointments)

Shao-yu Chen, PhD most recently at the Department of Cancer Biology and Pharmacology at the University of Illinois College of Medicine at Peoria joined UofL’s Department of Pharmacology and Toxicology with appointments as tenured professor and university scholar effective October 15, 2014. His research program, funded by multiple R01 grant awards from the National Institutes of Health, focuses on elucidation of cellular and molecular mechanisms of alcohol-induced birth defects utilizing a combination of experimental approaches including RNA interference, microRNA technology, and ultrasound-guided in utero microinjection in cellular, whole embryo and in vivo mouse models.

UNIVERSITY ADMINISTRATIVE APPOINTMENTS

Kenneth E. Palmer, PhD, Professor of Pharmacology & Toxicology was appointed Executive Director, Owensboro Cancer Research Program, a unit of the James Graham Brown Cancer Center and Helmsley Chair in Plant-based Pharmaceutical Research. Dr. Palmer also was appointed Interim Co-Director of the Center for Predictive Medicine.

Igor S. Lukashevich, MD, PhD, DSci, Professor of Pharmacology & Toxicology was appointed Distinguished University Scholar and Interim Co-Director of the Center for Predictive Medicine.
Craig McClain, MD was appointed Associate Vice President for Health Affairs/Research

DEPARTMENT ADMINISTRATIVE APPOINTMENTS

Brian P. Ceresa, PhD, Associate Professor of Pharmacology & Toxicology was appointed Director of Graduate Admissions and Recruitment.

Steven R. Myers, PhD, Associate Professor of Pharmacology & Toxicology was appointed Associate Chair for Professional Education.

J. Christopher States, PhD, Professor of Pharmacology & Toxicology was appointed Vice Chair for Graduate Education and Director of the Graduate Program.
FACULTY EMERITUS APPOINTMENTS

George Aronoff, MD, retired and was appointed Professor Emeritus of Medicine effective July 1, 2014.

Frederick W. Benz, PhD retired and was appointed Professor Emeritus of Pharmacology & Toxicology effective July 1, 2014.

Harrell E. Hurst, PhD retired and was appointed Professor Emeritus of Pharmacology & Toxicology effective July 1, 2014.

Peter P. Rowell, PhD retired and was appointed Professor Emeritus of Pharmacology & Toxicology effective July 1, 2014.
NEW FACULTY APPOINTMENTS (Secondary appointments)

**Chendil Damodaran, PhD**, Associate Professor of Urology received a secondary faculty appointment in the Department of Pharmacology & Toxicology.

**Leila Gobejishvili, PhD**, Assistant Professor of Medicine received a secondary faculty appointment in the Department of Pharmacology & Toxicology.

**Irina Kirpich, PhD, MPH**, Assistant Professor of Medicine received a secondary faculty appointment in the Department of Pharmacology & Toxicology.
NEW FACULTY ADJUNCT APPOINTMENTS

Kevyn E. Merten
Adjunct Assistant Professor of Pharmacology and Toxicology
PhD, Pharmacology and Toxicology, University of Louisville School of Medicine (2007)

Arnold J. Schecter
Adjunct Professor of Pharmacology and Toxicology
MD, Howard University Medical School (1962)
MPH, Columbia University (1975)

Jesse D. Sutton
Assistant Clinical Professor of Pharmacology and Toxicology
PharmD, University of Montana (2012)

Joshua M. Thornburg
Adjunct Assistant Professor of Pharmacology and Toxicology
PhD, Pharmacology and Toxicology, University of Louisville School of Medicine (2007)

Chad Wilkerson
Adjunct Assistant Professor of Pharmacology and Toxicology
PhD, Biochemistry & Molecular Biology, Louisiana State University Health Sciences Center (2002)
FACULTY PROMOTIONS

Wenke Feng, PhD was promoted to Associate Professor of Medicine

Michal Hetman, MD, PhD was promoted to Professor of Neurological Surgery.

David A. Scott, PhD was promoted to Professor of Oral Immunology & Infectious Diseases.
FACULTY RESIGNATIONS

Keith R. Davis, PhD, resigned his position as Professor of Pharmacology and Toxicology and Director of the Owensboro Cancer Research Program to take a position as Director of the Johnson Entrepreneur Center for Biotechnology at Indiana University and a Professor in the Biotechnology Program.

Colleen B. Jonsson, PhD resigned her position as Professor of Microbiology and Immunology with secondary appointment in the Department of Pharmacology & Toxicology to take position as Professor and Director of the National Institute for Mathematical and Biological Synthesis at the University of Tennessee.

Uma Sankar, PhD, resigned her position as Associate Professor of Pharmacology and Toxicology, to accept a position as Associate Professor of Anatomy and Cell Biology at Indiana University Purdue University of Indianapolis.
STAFF APPOINTMENTS AND RETIREMENTS

Edit Greca retired effective March 1, 2014 following an outstanding 35-year tenure as Unit Business Manager for the Department of Pharmacology and Toxicology. She is deeply missed.

Blair Cade was appointed Unit Business Manager February 17, 2014 and later promoted to Program Manager. Blair was selected to participate in the Provost Leadership Academy.

Tracey Pender was appointed Administrative Assistant effective January 6, 2014 and later promoted to Program Coordinator, Sr.
FACULTY WITH PRIMARY APPOINTMENTS

Gavin E. Arteel, PhD
Professor and Associate Chair for Research
Ph.D., Toxicology, University of North Carolina-Chapel Hill (1997)

Research Interests: Mechanisms of oxidative stress; mechanisms of alcohol-induced hepatitis, pancreatitis, and hepatocellular carcinoma.

Juliane I. Arteel, PhD (Juliane Beier in professional publications)
Assistant Professor
Ph.D., Biochemistry and Molecular Biology, Heinrich-Heine-Universität (2005)

Research Interests: Interactions of diet and environmental toxins in the production of non-alcoholic fatty liver disease.

Frederick W. Benz, PhD
Professor
Ph.D., Pharmacology, University of Iowa (1970)

Research Interests: Biochemical pharmacology and toxicology; biochemical mechanisms of drug action and toxicity.

Brian P. Ceresa, PhD
Associate Professor and Graduate Director: Recruitment and Admissions
PhD, Pharmacology, Vanderbilt University (1995)

Research Interests: Membrane trafficking and signaling of the epidermal growth factor receptor (EGFR); the EGFR is overexpressed and hyperactivated in many cancers; our goal is to better understand how signaling by this receptor is regulated with the goal of attenuating its signaling in cancer.

Shao-yu Chen, PhD
Professor
Ph.D., Biochemistry, Fujian Agricultural and Forest University, China (1991)

Research Interests: Elucidation of cellular and molecular mechanisms of alcohol-induced birth defects utilizing a combination of experimental approaches including RNA interference, microRNA technology, and ultrasound-guided in utero microinjection in cellular, whole embryo and in vivo mouse models.
Geoffrey J. Clark, PhD  
Associate Professor  
Ph.D., Molecular Oncology, University of Manchester (1989)

**Research Interests:** Role of RAS oncogenes and RASSF family of tumor suppressors in cancer etiology; development of oncopig model for human cancer; and the identification and development of novel small molecules for cancer therapy.

Keith R. Davis, PhD  
Professor  
Ph.D., Molecular, Cellular and Developmental Biology, University of Colorado (1985)

**Research Interests:** Development of plant-made pharmaceuticals; activation of gene expression by oxidative stress; and the role of innate immunity in cancer initiation and progression.

Ramesh C. Gupta, PhD  
Professor and Agnes Brown Duggan Chair of Oncological Research  
Ph.D. Analytical/Physical Chemistry, University of Roorkee (1972)

**Research Interests:** Development and identification of intermediate biomarkers to investigate etiology and prevention of human cancers resulting from both environmental and endogenous exposures.

David W. Hein, PhD  
Professor and Peter K. Knoefel Chair of Pharmacology and Toxicology  
Ph.D., Pharmacology, University of Michigan (1982)

**Research Interests:** Molecular pharmacogenetics; molecular epidemiology; functional genomics; genetic predisposition to chemical carcinogenesis and drug toxicity; molecular genetics; and environmental toxicology

Harrell E. Hurst, PhD  
Professor  
Ph.D., Toxicology, University of Kentucky (1978)

**Research Interests:** Analytical toxicology and kinetics with emphasis on qualitative and quantitative techniques, including gas chromatography, high pressure liquid chromatography and GC/mass spectrometry
Y. James Kang, PhD
Professor
Ph.D., Cell Biology and Zoology, Iowa State University (1989)

**Research Interests**: Molecular and cardiac toxicology; transgenic and knock-out animal models to study oxidative injury and antioxidant systems in the heart; biological functions and toxicological significance of metallothionein and glutathione in vivo

La Creis R. Kidd, PhD, MPH
Associate Professor and Our Highest Potential Endowed Chair in Cancer Research
Ph.D., Toxicology, Massachusetts Institute of Technology (1997)

**Research Interests**: Gene-gene and gene-environmental interactions; polymorphic xenobiotic metabolizing enzymes and prostate cancer susceptibility; and cancer health disparities

Igor S. Lukashevich, MD, PhD, DSci
Professor
M.D., Minsk Medical Institute, Belaris (1973)
Ph.D., Institute of Virology, Academy of Medical Science, Moscow Russia (1976)
D.Sc., Institute of Virology, Academy of Medical Science, Moscow Russia (1987)

**Research Interests**: Novel vaccine technologies (virus-like-particle vectors; reassortant vaccines, infectious DNA vaccination); molecular biology and pathogenesis of viral hemorrhagic fevers

Nobuyuki Matoba, PhD
Associate Professor
Ph.D., Applied Life Sciences, Kyoto University, Japan (2001)

**Research Interests**: Development of vaccines and antivirals; mucosal immune response to foreign substances; and plant biotechnology for human health

Steven R. Myers, PhD
Associate Professor and Associate Chair for Professional Education
Ph.D., Pharmacology, University of Kentucky (1986).

**Research Interests**: Drug metabolism; metabolism of xenobiotics and chemical carcinogens; use of hemoglobin as biomarker in exposure to xenobiotics
Donald E. Nerland, PhD
Professor
Ph.D., Medicinal Chemistry, University of Kansas (1974).

Research Interests: Biochemical toxicology; metabolism of drugs and environmental pollutants

Kenneth E. Palmer, PhD
Professor and Hemsley Chair in Plant-Based Pharmaceutical Research
Ph.D., Microbiology, University of Cape Town (1997)

Research Interests: Development of vaccines and antiviral proteins to prevent and treat viral diseases that predispose people to development of cancer

William M. Pierce Jr, PhD
Professor and Executive Vice President for Research and Innovation
Ph.D., Pharmacology and Toxicology, University of Louisville (1981).

Research Interests: Mechanisms of bone formation and resorption; design of novel drugs for management of osteoporosis; biomolecular mass spectrometry; proteomics in structural biology

Peter P. Rowell, PhD
Professor
Ph.D., Pharmacology and Therapeutics, University of Florida (1975).

Research Interests: Neuropharmacology; effect of drugs on brain neurotransmitters and receptors

Uma Sankar, PhD
Associate Professor
Ph.D., Molecular, Cellular, and Developmental Biology, Ohio State University (2003).

Research Interests: Role of calcium/calmodulin-dependent protein kinase signaling in hematopoietic stem cell biology and cancer

Leah J. Siskind, PhD
Associate Professor
Ph.D., Biology, University of Maryland (2003)
**Research Interests:** Role of sphingolipids in regulating cellular processes such as apoptosis, necrosis, proliferation, and inflammation in the context of disease states; Design of drugs to re-balance sphingolipid metabolism and improve disease outcomes

Zhao-Hui (Joe) Song, PhD
Professor
Ph.D., Pharmacology, University of Minnesota (1992).

**Research Interests:** Molecular pharmacology; cloning and functional characterization of novel G protein-coupled receptors; molecular mechanisms of action and structure-function relationships of cannabinoid (marijuana) receptors

J. Christopher States, PhD
Professor and Vice Chair for Graduate Education
Ph.D., Molecular Biology and Pathology, Albany Medical College/Union University (1980).

**Research Interests:** Molecular biology and molecular genetics of DNA damage and repair in humans; mechanisms of chemoresistance; arsenic toxicity and cell cycle disruption

**FACULTY WITH SECONDARY APPOINTMENTS**

George R. Aronoff, MD
Professor of Medicine
M.D., Indiana University (1975)

**Research Interests:** Effects of uremia on drug disposition in humans; drug nephrotoxicity and renal drug metabolism, artificial intelligence.

Shirish Barve, PhD
Professor of Medicine
Ph.D., Molecular Pathogenesis, University of Kentucky (1990)

**Research Interests:** Effects of alcohol on molecular mechanisms of cytokine action, gene expression and liver injury.

Levi J. Beverly, PhD
Assistant Professor of Medicine
Ph.D., Molecular Biology, Biochemistry, and Microbiology, University of Cincinnati (2007)

**Research Interests:** Regulation of anti-apoptotic proteins in cancer progression and treatment.
Aruni Bhatnagar, PhD  
Professor of Medicine  
Ph.D., Chemistry, University of Kanpur (1985)

**Research Interests:** Cardiovascular toxicology; oxidative mechanisms of cardiovascular disease; lipid peroxidation in atherosclerosis; gene expression; secondary complications of diabetes.

Haribabu Bodduluri, PhD  
Professor of Microbiology & Immunology  
Ph.D., Biochemistry, Indian Institute of Science (1983)

**Research Interests:** Signal transduction and chemoreceptors; role of leukotriene receptors in inflammation and host response.

Michael E. Brier, PhD  
Professor of Medicine  
Ph.D., Industrial and Physical Pharmacy, Purdue University (1986)

**Research Interests:** Clinical pharmacokinetics/dynamics; Drug dosing in renal failure.

Guy N. Brock, PhD  
Associate Professor of Bioinformatics and Biostatistics  
PhD. Statistics, University of New Mexico (2003)

**Research Interests:** Methodological research in statistical bioinformatics and statistical genetics, with emphasis on cluster validation, missing value imputation, and classification for high-throughput data. Main areas of clinical and collaborative research include transplantation, liver disease, community acquired pneumonia, genetic variants related to breast and prostate cancer, and the molecular determinants of developmental defects during the neural tube and secondary palate formation.

Jian Cai, PhD  
Assistant Professor of Medicine  
Ph.D., Pharmacology and Toxicology, University of Louisville (1999)

**Research Interests:** Application of mass spectrometry in biomedical research; Drug and metabolite identification and quantification; Protein identification and post-translational modification; Hemoglobin adducts as biomarkers of chemical exposure and pathogenesis.
Lu Cai, MD, PhD
Professor of Pediatrics and Radiation Oncology
M.D., Norman Bethune University of Medical Sciences (1983)
Ph.D., Radiation Biology/Oncology, Norman Bethune University of Medical Sciences (1987)

Research Interests: Diabetic cardiomyopathy and nephropathy

Matthew C. Cave, MD
Associate Professor of Medicine
M.D., University of Kentucky (2001)

Research Interests: Steatohepatitis and liver cancer related to environmental and occupational chemical exposures; Complementary and alternative medicine in liver disease; Alcoholic and nonalcoholic fatty liver disease; Treatment of Hepatitis C.

Jason A. Chesney, MD, PhD
Professor of Medicine
Ph.D., Biomedical Sciences/Immunology, University of Minnesota (1997)
M.D., University of Minnesota (1998)

Research Interests: Novel regulators of cancer cell metabolism; identification of emerging viruses and the development of immune-based therapies against widely metastatic cancers.

Daniel J. Conklin, PhD
Associate Professor of Medicine
Ph.D., University of Notre Dame (1995)

Research Interests: Environmental cardiology; cardiovascular toxicology

Albert R. Cunningham, PhD
Associate Professor of Medicine
Ph.D., Environmental and Occupational Health, University of Pittsburgh (1998)

Research Interests: Structure-Activity Relationship Modeling: Carcinogens, Chemotherapeutics, and Molecular Targets.

Chendil Damodaran, PhD
Associate Professor of Urology
Ph.D., Environmental Toxicology (Cancer Biology), University of Madras (1984).
**Research Interests:** Identifying novel therapeutic compounds of natural origin that possess anti proliferative properties in prostate cancer cells, both androgen-dependent and – independent.

**John W. Eaton, PhD**
James Graham Brown Professor of Medicine
Ph.D., Biological Anthropology and Human Genetics, University of Michigan (1969)

**Research Interests:** Biological oxidation/reduction reactions with special emphasis on inflammatory diseases and neoplasia.

**Paul N. Epstein, PhD**
Professor of Pediatrics
Carol B. McFerran Chair in Pediatric Diabetes Research
Ph.D., Pharmacology, Baylor College of Medicine (1981)

**Research Interests:** Molecular mechanisms of diabetogenesis. The use of transgenic animals to study genetics and molecular mechanisms in vivo.

**Wenke Feng, PhD**
Associate Professor of Medicine
Ph.D, Biochem/Biotech, University for Bodenkultur (1998)

**Research Interests:** Mechanisms of alcoholic liver disease; Mechanisms of nonalcoholic steatohepatitis; Tissue hypoxia and diabetic complications

**Hermann B. Frieboes, PhD**
Assistant Professor of Bioengineering
Ph.D., Biomedical Engineering, University of California, Irvine (2006)

**Research Interests:** 1) Develop and apply realistic, predictive biocomputational models integrated with clinical and laboratory data to study cancer growth and treatment; 2) Design of patient-specific therapies; and 3) Design of multiscale biocomputational models to describe the complex interaction between cancer treatment and the immune system.

**Leila Gobejishvili, PhD**
Assistant Professor of Medicine
Ph.D. Physiology, I. Beritashvili Institute of Physiology, Georgian Academy of Sciences (1995)
**Research Interests:** Alcohol induced changes in innate immunity; alcohol mediated epigenetic changes of pro-inflammatory cytokines; role of phosphodiesterases in priming of monocytes and development of liver injury/fibrosis.

**Evelyne Gozal, PhD**  
Associate Professor of Pediatrics  
Ph.D., Toxicology, University of Southern California (1997)

**Research Interests:** Signal transduction pathways involved in neuronal cell survival and neuronal cell death during hypoxia; cellular mechanisms underlying brain adaptation to chronic and intermittent hypoxia; identification of the kinases and transcription factors activated by hypoxia, leading to gene induction and to adaptation to oxygen deprivation.

**Yiru Guo, MD**  
Associate Professor of Medicine  
M.D., Xinjiang Medical University (1982)

**Research Interests:** Cardio-thoracic and vascular surgery, physiology, and pharmacology. Research focuses on: (i) elucidating the mechanisms of ischemic- pharmacologic- and exercise-induced preconditioning by using the ischemia/reperfusion model in genetically engineered animals, (ii) studying protection of ischemic myocardium by using gene and/or cell therapy, and (iii) elucidating adaptations to ischemia/reperfusion injury in the aging heart.

**Michal Hetman, MD, PhD**  
Professor of Neurological Surgery  
Endowed Professor of Molecular Signaling  
M.D., Warsaw Medical School (1994)  
Ph.D., Experimental and Clinical Medicine, Polish Academy of Sciences (1997)

**Research Interests:** Role of signaling kinases in neuronal repair and demise.

**Ben Jenson, MD**  
Professor and Senior Scientist, James Graham Brown Cancer Center  
M.D., Baylor College of Medicine (1966)

**Research Interests:** Translational immunology: humoral responses to prevent infection by papillomavirus.

**Steven P. Jones, PhD**  
Associate Professor of Medicine  
Ph.D., Physiology, Louisiana State University Health Sciences Center, Shreveport (2002)
Research Interests: Metabolic signaling in the cardiovascular system

Colleen B. Jonsson, PhD
Professor of Microbiology and Immunology
Ph.D., Biochemistry, Purdue University (1990)

Research Interests: Molecular virology of emerging negative-strand RNA viruses; natural history, ecology, evolution and treatment.

Swati Joshi-Barve, PhD
Assistant Professor of Medicine
Ph.D., Biochemistry, University of Kentucky (1992)

Research Interests: Mechanisms of Steatohepatitis (nonalcoholic and alcoholic fatty liver disease); Mechanisms of Alcohol-induced Immune Dysfunction; Mechanisms of Hepatocellular Carcinoma.

Brad B. Keller, MD
Professor of Pediatrics and Bioengineering
Kosair Charities Chair and Chief, Division of Pediatric Heart Research
M.D., Pennsylvania State University (1985)

Research Interests: Cardiovascular bioengineering: Development of 3D tissues for heart repair and regeneration.

Irina Kirpich, PhD, MPH
Assistant Professor of Medicine
Ph.D., Biology and Physiology, Pomor State University (1997)
MPH, University of Louisville (2014)

Research Interests: Gut-liver interactions in alcoholic and non-alcoholic liver disease; alcohol and dietary fat mediated intestinal and liver injury; gut barrier, microbiome, probiotics; epigenetics and hepatic steatosis; Oxidized Metabolites of Linoleic Acid (OXLAMs)

Chi Li, PhD
Assistant Professor of Medicine
Ph.D, Molecular Biology, Columbia University (1998)
**Research Interests:** Mechanisms of apoptotic pathways initiated from different intracellular organelles. Molecular and cellular mechanisms that affect inflammation and immunity.

**Robert C. G. Martin, MD, PhD**
Professor and Sam and Lolita Weakley Endowed Chair in Surgical Oncology  
M.D., University of Louisville (1995)  
Ph.D., Pharmacology & Toxicology, University of Louisville (2008)

**Research Interests:** Genetic predisposition to cancer

**Craig J. McClain, MD**
Professor of Medicine  
M.D., University of Tennessee-Memphis (1972)

**Research Interests:** Role of cytokines in liver injury and other forms of hepatotoxicity, interactions with nutrition and toxicology.

**Kelly M. McMasters, MD, PhD**
Endowed Professor and Chair of Surgical Oncology  
Ph.D., Cell and Developmental Biology, Rutgers University (1988)  
M.D., University of Medicine and Dentistry of New Jersey (1989)

**Research Interests:** Adenoviral vector cancer gene therapy; Development of vectors that selectively replicate in cancer cells; Mechanisms of E2F-1-induced apoptosis.

**Lacey R. McNally, PhD**
Assistant Professor of Medicine  
PhD, Veterinary Medical Science, Louisiana State University (2004)

**Research Interests:** Metastasis suppressors, such as KISS1, as a method for preventing and treating metastatic pancreatic and ovarian cancers; Mechanisms of chemotherapy resistance and alternative treatment for macro-metastasis and recurrence in ovarian and prostate cancers; Mechanisms involved in organ specific metastasis of pancreatic, prostate, and breast cancers

**Michael L. Merchant, PhD**
Associate Professor of Medicine  
PhD, Chemistry, University of Arkansas (1994)

**Research Interests:** Translational research - the discovery and understanding of biomarkers of renal disease; Basic Research - Mechanisms of renal function decline and fibrosis; Basic Research - Mechanisms for the transition from acute to chronic disease
Chin K. Ng, PhD  
Associate Professor of Radiology  
Ph.D., Medical Physics, University of Wisconsin (1989)  

**Research Interests:** Development, evaluation, and kinetic studies of radiopharmaceuticals; the use of molecular imaging for biomedical research.

Timothy E. O’Ttoole, PhD  
Assistant Professor of Medicine  
Ph.D., Biological Chemistry, University of Michigan (1987)  

**Research Interests:** Function and regulation of the endothelium in various disease states; Role of miRNA in endothelial regulation towards understanding how diabetic conditions and pollutant exposure affects endothelial miRNA content and the consequent changes in protein expression levels and cellular function.

Donald M. Miller, MD, PhD  
James Graham Brown Professor of Medicine  
M.D., Duke University (1973); Ph.D., Biochemistry, Duke University (1973)  

**Research Interests:** Molecular and clinical oncology; modulation of oncogene expression; triplex DNA based gene therapy; treatment of melanoma.

M. Michele Pisano, PhD  
Professor of Molecular, Cellular and Craniofacial Biology  
Ph.D., Anatomy, Thomas Jefferson University (1985)  

**Research Interests:** Molecular developmental toxicology; gene-environment interactions in normal and abnormal embryonic development; growth factor directed cellular signal transduction in embryonic cell growth and differentiation.

Shesh N. Rai, PhD  
Professor of Bioinformatics and Biostatistics; Wendell Cherry Chair in Clinical Trial Research  
Ph.D., Statistics, University of Waterloo (1993)  

**Research Interests:** Clinical Trials, Survival Analysis, Bioinformatics, Mixed Effects Model, Sample Survey, Quantitative Risk Assessment

George C. Rodgers, MD, PhD  
Professor of Pediatrics; Humana Chair of International Pediatrics  
Ph.D., Organic Chemistry, Yale University (1964)  
M.D., State University of New York (1975).  

**Research Interests:** Toxicokinetics in drug overdoses and pharmacokinetics in pediatric disease states.
Jesse Roman, MD
Professor and Chair of Medicine
M.D., University of Puerto Rico School of Medicine (1983)

Research Interests: Extracellular matrices and integrin receptors in lung development, injury, and repair; Role of nicotinic acetylcholine receptors and control of matrix expression in lung; Lung tissue remodeling in tobacco- and ethanol-related lung disorders; Control of lung carcinoma growth by extracellular matrices.

David A. Scott, PhD
Professor of Oral Immunology & Infectious Diseases
Ph.D., Microbiology and Immunology, McGill University (1997)

Research Interests: Tobacco-induced alterations to microbial-associated molecular patterns of Porphyromonas gingivalis; Tobacco-induced alterations to innate-pathogen interactions; Tobacco alkaloid amplification of endogenous anti-inflammatory pathways; Identification of gingivitis- and periodontitis-specific infrared molecular signatures

Sanjay Srivastava, PhD
Professor of Medicine
Ph.D., Chemistry, University of Lucknow (1993)

Research Interests: Delineating the mechanisms by which environmental pollutants cause endothelial activation, vascular inflammation, insulin resistance and atherosclerosis.

Jill M. Steinbach, PhD
Assistant Professor of Bioengineering
Ph.D., Biomedical Engineering, Arizona State University (2009)

Research Interests: Design and development of drug and gene delivery vehicles for physiologically difficult-to-deliver-to microenvironments.

Yi Tan, PhD
Assistant Professor of Pediatrics
Ph.D., Biomedical Engineering, Chongqing University (2004)

Research Interests: Signaling pathways and therapeutic strategies in diabetic complications including cardiomyopathy, cardiac insulin resistance, stem cell mobilization and ischemic angiogenesis.

David J. Tollerud, MD
Professor and Chair of Environmental and Occupational Health Sciences
M.D., Mayo Medical School (1978)
M.P.H., Harvard Medical School (1990)
**Research Interests:** Occupational and environmental health; Occupational toxicology; molecular epidemiology.

**Janice E. Sullivan, MD**  
Professor of Pediatrics  
M.D., University of Minnesota (1988)

**Research Interests:** Clinical pharmacology with a focus on developmental pharmacokinetics and pharmacodynamics.

**Brian (Binks) W. Wattenberg, PhD**  
Associate Professor of Medicine  
Ph.D., Biological Chemistry, Washington University (1981)

**Research Interests:** Sphingosine-kinase and lipid signaling. Trafficking of tail-anchored proteins.

**Jun Yan, MD, PhD**  
Professor of Medicine and Endowed Chair in Translational Research  
M.D., Jiangsu University School of Medicine (1985)  
Ph.D., Immunology, Shanghai Jiaotong University School of Medicine (1997)

**Research Interests:** Immunotherapy and vaccines for treatment of cancer and infectious diseases

**Hong Ye, PhD**  
Associate Professor of Medicine  
Ph.D., Biophysics, Keele University (1998)

**Research Interests:** Research to understand the structure and mechanism of tumorigenesis, with focus on Notch signaling pathway and chromosome DNA damage; X-ray crystallography, in combination with other biochemical and biophysics methods to understand the function of various molecular complexes.

**Walter H. Watson, PhD**  
Assistant Professor of Medicine  
Ph.D., Toxicology, University of Kentucky (1999)

**Research Interests:** Oxidative stress and redox signaling; Mechanistic toxicology; Alcoholic and nonalcoholic fatty liver disease.

**Wolfgang Zacharias, PhD**  
Professor of Medicine  
Ph.D., Biochemistry, Philipps-University, Marburg, Germany (1980)
Research Interests: Ribozymes for gene therapy in rheumatoid arthritis; involvement and roles of cathepsins in oral cancers; gene expression profiling with DNA microarray chip technology.

Xiang Zhang, PhD
Professor of Chemistry
Ph.D., Bioanalytical Chemistry, Purdue University (2001)

Research Interests: Molecular systems biology, by exploiting practical and efficient high-throughput technologies for analyses of complex mixtures to facilitate the development of preventive, predictive and personalized medicine for the promotion of health and wellness.

FACULTY WITH EMERITUS APPOINTMENTS

Benz, Frederick W., Professor Emeritus, Ph.D., Pharmacology, University of Iowa (1970)

Carr, Laurence A., Professor Emeritus; Ph.D., Michigan State University (1969).

Chen, Theresa, Professor Emerita; Ph.D., University of Louisville (1971).

Dagirmanjian, Rose, Professor Emerita; Ph.D., University of Rochester (1960).

Darby, Thomas D., Professor Emeritus; Ph.D., Medical College of South Carolina (1957).

Hurst, Harrell E., Professor Emeritus, Ph.D., Toxicology, University of Kentucky (1978)

Jarboe, Charles H., Professor Emeritus; Ph.D., University of Louisville (1956).

Rowell, Peter P., Professor Emeritus, Ph.D., Pharmacology and Therapeutics, University of Florida (1975).

Waite, Leonard C., Professor Emeritus, Ph.D., University of Missouri (1969).

Williams, W. Michael, Professor Emeritus, Ph.D., University of Louisville (1970); M.D., University of Louisville (1974).

FACULTY WITH ADJUNCT APPOINTMENTS

- James A. Blank, Adjunct Associate Professor of Pharmacology and Toxicology; PhD, Pharmacology and Toxicology, University of Louisville School of Medicine (1985).

- Adrian J. Fretland, Adjunct Assistant Professor of Pharmacology and Toxicology; PhD, Pharmacology and Toxicology, University of Louisville School of Medicine (2000).
• **John C. Lipscomb**, Adjunct Associate Professor of Pharmacology and Toxicology; PhD, Pharmacology and Toxicology, University of Arkansas for Medical Sciences (1991).

• **Kevyn E. Merten**, Adjunct Assistant Professor of Pharmacology and Toxicology, PhD, Pharmacology and Toxicology, University of Louisville School of Medicine (2007).

• **Kristin J. Metry-Baldauf**, Adjunct Assistant Professor of Pharmacology and Toxicology; PhD, Pharmacology and Toxicology, University of Louisville School of Medicine (2007).

• **Arnold J. Schecter**, Adjunct Professor of Pharmacology and Toxicology, MD, Howard University Medical School (1962); MPH, Columbia University (1975).

• **Jesse D. Sutton**, Assistant Clinical Professor of Pharmacology and Toxicology, PharmD, University of Montana (2012).

• **Joshua M. Thornburg**, Adjunct Assistant Professor of Pharmacology and Toxicology, PhD, Pharmacology and Toxicology, University of Louisville School of Medicine (2007).

• **Eric M. Vela**, Adjunct Assistant Professor of Pharmacology and Toxicology; PhD, Virology and Gene Therapy, University of Texas Health Sciences Center at Houston (2005).

• **Chad Wilkerson**, Adjunct Assistant Professor of Pharmacology and Toxicology, PhD, Biochemistry & Molecular Biology, Louisiana State University Health Sciences Center (2002).

**OFFICE STAFF**

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blair Cade</td>
<td>Unit Business Manager/Program Manager</td>
</tr>
<tr>
<td>Edie Greca</td>
<td>Unit Business Manager</td>
</tr>
<tr>
<td>Tracey Pender</td>
<td>Administrative Assistant/Program Coordinator Sr.</td>
</tr>
<tr>
<td>Florence Su</td>
<td>Administrative Assistant</td>
</tr>
<tr>
<td>Marion McClain</td>
<td>Research Facilitator (Primary appointment in Department of Medicine; Part time in Department of Pharmacology and Toxicology)</td>
</tr>
<tr>
<td>Shiloh Tatum</td>
<td>Unit Business Manager (Primary appointment in Department of Medicine; Part time in Pharmacology and Toxicology)</td>
</tr>
</tbody>
</table>
2014 New Graduate Student Class

Kyakulaga Al Hassan
Bachelor of Biomedical Laboratory Technology, Makerere University
MSc., Pharmacology, Makerere University

Aditya S. Barve
B.S., Biology, University of Louisville

Marc M. Dwenger
B.A., Biology, Simpson College

Julie A. Gosney
B.A., Biology, Psychology, Anderson University
J. Mason Hoffman
B.S., Biochemistry, The University of the South

Anna L. Lang
B.S., Biology, Northern Kentucky University

Ashley M. Mudd
B.S., Chemistry, Wilson College
M.S., Chemistry, Brown University

Tuo Shao
B.S., Pharmacy, Wuhan Bioengineering Institute
M.S., Neuropharmacology, Wenzhou Medical University
Cierra N. Sharp  
B.S., Biology, Transylvania University

Hongxue Shi  
Bachelor of Pharmaceutical Engineering, Huaiyin Institute of Technology  
M.S., Chinese Pharmacology, Wenzhou Medical University

Kevin M. Tyo  
B.S., Biochemistry, Virginia Polytechnic Institute and State University

Graduate Students

Adcock, Scott  
Al-Maqtari, Tareq  
Aloway, April  
Avila, Diana  
Baldauf, Keegan  
Barton, Chris  
Barve, Aditya S.  
Carlisle, Samantha  
Chen, Wei Yang (Jeremy)  
Dupre, Tess  
Donde, Hridgandh  
Dwenger, Marc M.  
England, Christopher  
Finch, Jordan  
Gosney, Julie A.  
Greenwell, Caleb  
Grewal, Jaspreet  
Hallgren, Justin  
Hoffman, J. Mason  
Holz, Gretchen  
Hudson, Shanice  
Jackson, Nicole
Graduates

<table>
<thead>
<tr>
<th>Name</th>
<th>Degree</th>
<th>Advisor(s)</th>
<th>Research/Project Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Veronica L. Massey</td>
<td>Ph.D.</td>
<td>Gavin E. Arteel, Ph.D.</td>
<td>Extracellular matrix proteins and the liver-lung axis in disease</td>
</tr>
<tr>
<td>Christopher G. England</td>
<td>Ph.D.</td>
<td>Hermann B. Frieboes, Ph.D.</td>
<td>Study of novel nanoparticle transport and drug release for cancer treatment</td>
</tr>
<tr>
<td>Banrida Wahlang</td>
<td>Ph.D.</td>
<td>Matthew C. Cave, M.D.</td>
<td>Evaluating the effects of polychlorinated biphenyls in non-alcoholic fatty liver disease</td>
</tr>
<tr>
<td>Christopher P. Shidal</td>
<td>M.S.</td>
<td>Keith R. Davis, Ph.D.</td>
<td>Lunasin reduces the melanoma stem cell population in-vitro and inhibits tumor proliferation in-vivo</td>
</tr>
<tr>
<td>Dominique Z. Jones</td>
<td>M.S.</td>
<td>La Creis R. Kidd, Ph.D.</td>
<td>The role of inflammatory and immune response-related sequence variants and miR-186 in prostate cancer</td>
</tr>
<tr>
<td>Diana V. Avila</td>
<td>M.S.</td>
<td>Shirish Barve, Ph.D. &amp; Leila Gobejishvilli, Ph.D.</td>
<td>Pathogenic role of PDE4 in the development of alcohol induced hepatic steatosis</td>
</tr>
<tr>
<td>Wei Yan (Jeremy) Chen</td>
<td>M.S.</td>
<td>Craig J. McClain, M.D.</td>
<td>The pathogenic role of acrolein in alcoholic liver disease</td>
</tr>
<tr>
<td>Marcus W. Stepp</td>
<td>M.S.</td>
<td>David W. Hein, Ph.D.</td>
<td>Inducible tumor difference between rapid and slow rat Nat2 congenic Fischer 344 rats administered methyl-nitrosourea</td>
</tr>
<tr>
<td>Morgan L. Stathem</td>
<td>M.S.</td>
<td>Levi J. Beverly, Ph.D. &amp; Leah J. Siskind, Ph.D.</td>
<td>Building a metabolic bridge between glycolysis and sphingolipid biosynthesis: Implications for cancer</td>
</tr>
<tr>
<td>Christopher L. Barton</td>
<td>Ph.D.</td>
<td>Kenneth E. Palmer, Ph.D.</td>
<td>Evaluation of the safety and pharmacokinetic profile of the broad spectrum antiviral lectin griffithsin</td>
</tr>
<tr>
<td>Name</td>
<td>Degree</td>
<td>Advisor</td>
<td>Project</td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------</td>
<td>--------------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Ryan C. McAllister</td>
<td>M.S.</td>
<td>Colleen B. Jonsson, Ph.D.</td>
<td>Development of models for the study of the molecular mechanisms of host restriction and adaptation of hantaviruses</td>
</tr>
<tr>
<td>Zachary J. Pritchard</td>
<td>M.S.</td>
<td>Uma Sankar, Ph.D.</td>
<td>Bone strength and architecture: pharmacological targeting of CaMKK2 as a method for enhancing bone quality</td>
</tr>
<tr>
<td>Laila Al-Eryani</td>
<td>M.S.</td>
<td>Matthew C. Cave, M.D.</td>
<td>The role of pesticides in non-alcoholic fatty liver disease (NAFLD)</td>
</tr>
<tr>
<td>Melissa E. Skibba</td>
<td>M.S.</td>
<td>Lu Cai, M.D., Ph.D.</td>
<td>Preventive effect of non-mitogenic acidic fibroblast growth factor on diabetes-induced testicular cell death</td>
</tr>
<tr>
<td>Justin L. Hallgren</td>
<td>M.S.</td>
<td>Michal Hetman, M.D., Ph.D.</td>
<td>The role of the nucleolus in neurodegeneration</td>
</tr>
</tbody>
</table>

**FACULTY HONORS**

**Arteel, Gavin:**
- Senior author on poster selected for presidential posters of distinction at the AASLD annual meeting in Boston, MA
- Coauthor on poster selected for presidential posters of distinction at the AASLD annual meeting in Boston, MA

**Arteel, Juliane:**
- Abstract selected for oral presentation; Digestive Disease Week 2014; Chicago IL
- Young Investigation Award, oral presentation; 22nd International Congress on Fibrinolysis & Proteolysis; Marseille, France
- Basic Science Research Faculty Award at Research!Louisville; Louisville, KY
- President’s Choice Award at the AASLD 65th annual meeting; Boston, MA

**Chen, Shao-yo:**
- Invited to participate in NIH Special Emphasis Review Panel ZAA1Dd
- Review Panel, Italian Ministry of Health; Italy

**Hein, David:**
- Peter K. Knoefel Endowed Chair of Pharmacology and Toxicology; University of Louisville
- Distinguished University Scholar; University of Louisville
- President’s Distinguished Faculty Award for Outstanding Scholarship, Research and Creative Activity in Career of Service.
Dean Toni Ganzel, Professor David Hein, and President James Ramsey

Kidd, LaCreis:
- 2004-present: “Our Highest Potential” Endowed Chair in Cancer Research, James Brown Cancer Center, University of Louisville, School of Medicine
- 2014 Celebration of Faculty of Excellence for Patents and Licenses

Lukashevich, Igor:
- Distinguished University Scholar Award

Matoba, Nobuyuki:
- Julep Ball Scientist of the Year; James Brown Cancer Center; University of Louisville

Palmer, Kenneth:
- Kentucky Derby Mint Julep Ball Scientist of the Year Award; May 2014
- Appointed to an endowed chair in the School of Medicine as the Helmsley Chair in Plant-made Pharmaceuticals Research; October 2014

Chendil Damodaran, Associate Professor of Urology and Xiang Zhang, Professor of Chemistry were appointed as University Scholars.

Craig McClain delivered the 19th annual Mark Keller Honorary Lecture at the National Institutes of Health.
STUDENT HONORS

Dominique Jones received the Alice Eaves Barns Award, which recognizes a student who has displayed tenacity in the face of adversity, while attaining excellence in the both the classroom and outside endeavors. Dominique also was selected to carry the School of Medicine's banner and lead its graduates into UofL's winter 2014 commencement ceremony. She received her MS in pharmacology and toxicology under the direction of Dr. La Creis Kidd and is continuing towards completion of her PhD dissertation.

Nicole Jackson received a Southern Regional Education Board (SREB) Doctoral Scholars Fellowship for Underrepresented Minorities. She is pursuing her PhD in pharmacology & toxicology under the direction of Dr. Brian Ceresa.

Banrida Wahlang received the 2013 KC Huang Outstanding Graduate Student Award. Her dissertation entitled “Evaluating the effects of polychlorinated biphenyls in non-alcoholic fatty liver disease” was completed under the direction of Dr. Matthew Cave.

Dominique Jones, Veronica Massey, Banrida Wahlang, Diana Avila and Marcus Stepp received Dean’s citations at the December commencement ceremony.
Student Awards Presented at Research!Louisville

Master’s Basic Science Graduate Student Award

1st place Zimple Kurlawala
2nd place Stephen Wechman
3rd place Diana Avila

NCI Cancer Education Program Norbert J. Burzynski Award Professional Student Category

1st place Dillon Pender (Lacey McNalley)
2nd place Eric Riedinger (Jorge Gomez-Gutierrez)
3rd place Deepa Patel (Kelly McMasters)

NCI Cancer Education Program Norbert J. Burzynski Award Undergraduate Student Category

1st place Lee Sims (Jill Steinbach)
2nd place TIE: Tejas Sangoi (Brian Ceresa)
2nd place TIE: Harold Ghooray (Shirish Barve)
3rd place TIE: Kendall Huddleston (Ramesh Gupta & Rhada Munagala)
3rd place TIE: Adrienne Voelker (Brian Ceresa)

PHARMACOLOGY & TOXICOLOGY PUBLICATIONS
Faculty with Primary Appointments and Students


Fromme P, Mor TS. Expression, purification and crystallization of CTB-MPR, a candidate mucosal vaccine component against HIV-1. *IUCrJ* 1, 305-317, 2014.


PHARMACOLOGY & TOXICOLOGY ABSTRACTS
Faculty with Primary Appointments and Students

Arteel, Gavin:
National/International


Local/Regional


Arteel, Juliane:
National/International


5. Arteel GE, Beier JI, Jokinen JD, Whang PS, Martin AM, Warner NL, and Lukashevich IS


**Local/Regional**


2. Bushau AM, Anders LC, Douglas AN, Poole LG, Massey VL, Lang AL, Falkner KC, Cave M, McClain CJ and Beier JI (2014) Mechanistic Insight Into Vinyl Chloride-Induced Liver Injury. Research! Louisville annual meeting, Louisville, KY.


4. Anders LC, Bushau AM, Douglas AN, Lang AL, Falkner KC, Arteel GE, Cave MC, McClain MJ and Beier JI (2014) Exposure to Vinyl Chloride Metabolites Exacerbates Liver Injury Caused by High Fat Diet in Mice. Research! Louisville annual meeting, Louisville, KY. (Basic Science Research Faculty Award)


6. Bushau AM, Anders LC, Douglas AN, Poole LG, Massey VL, Lang AL, Falkner KC, Cave M, McClain CJ and Beier JI (2014) Mechanistic Insight Into Vinyl Chloride-Induced Liver Injury. OVSOT annual meeting, Dayton, OH.
Ceresa, Brian:  
National/International  

Chen, Shao-yu:  

Clark, Geoffrey:  
1. Howard Donninger, Diego Calvisi, Thibaut Barnoud, M. Lee Schmidt and Geoffrey J. Clark. NORE1A is a double-barreled Ras senescence effector linking Ras to p53 and Rb. AACR Ras conference Orlando FL, February 2014.  


**Gupta, Ramesh:**


49
Hein, David:


acetyltransferase 1 (NAT1). Proceedings of annual meeting of the Ohio Valley Society of Toxicology, Dayton, Ohio, September 2014.


Kidd, LaCreis:
National/International


Student Symposium, Memphis, TN, December 15, 2014. (INVITED TO GIVE AN ORAL PRESENTATION)

Local/Regional


7. Ronke-Hervey A., Jones D.Z., Kidd L.R. Impact of Quercetin on two miRNAs (miR-25, -106b) and Cell Proliferation and Migration of Metastatic and Non-Metastatic Prostate Cancer Cell lines Brown Cancer Center Retreat, Louisville, Kentucky, September 24 2014.

Lukashevich, Igor S:


Matoba, Nobuyuki:


Myers, Stephen:


Siskind, Leah:
National/International


Local/Regional


States, J. Christopher:


Regional:


## ACTIVE GRANTS/CONTACTS

**Faculty with Primary Appointments**

<table>
<thead>
<tr>
<th>Agency/Number</th>
<th>Title</th>
<th>Role</th>
<th>PI</th>
<th>Project Period</th>
<th>Budget Award</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gavin Arteel:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T32 ES011564</td>
<td>UofL Environmental Health Sciences Training Program</td>
<td>Mentor</td>
<td>Hein</td>
<td>07/01/09-06/30/14</td>
<td>$407,549</td>
</tr>
<tr>
<td>U01 AA021901</td>
<td>Novel therapies in alcoholic hepatitis</td>
<td>Co-I</td>
<td>McClain</td>
<td>10/01/12-09/31/17</td>
<td>$310,966</td>
</tr>
<tr>
<td>R21 ES021311</td>
<td>Effect of dietary fat on the hepatotoxicity of</td>
<td>Co-I</td>
<td>Watson</td>
<td>05/25/12-04/30/14</td>
<td>$224,875</td>
</tr>
<tr>
<td>R01 AA021978</td>
<td>Role of ECM and inflammatory remodeling in alcohol-</td>
<td>PI</td>
<td>Arteel</td>
<td>02/01/14-01/31/19</td>
<td>$337,500</td>
</tr>
<tr>
<td>R13 ES024661</td>
<td>Environmental Chemicals and Liver Disease (R13</td>
<td>Co-I</td>
<td>Cave</td>
<td>2014</td>
<td>$15,430</td>
</tr>
<tr>
<td><strong>Juliane Beier:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NIDDK/1K01</td>
<td>Enhancement of NAFLD risk by vinyl chloride:</td>
<td>PI</td>
<td>Beier</td>
<td>04/01/13-03/31/18</td>
<td>$89,593</td>
</tr>
<tr>
<td>01DK09604</td>
<td>interaction of gut-liver-adipose axis</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-01 A1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NIAID/7R01</td>
<td>Development of new bivalent cross-protective</td>
<td>Co-I</td>
<td>Lukashevich</td>
<td>09/01/11-3/31/16</td>
<td>$495,534</td>
</tr>
<tr>
<td>1A093450-02</td>
<td>arenaviral vaccines</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NCI/R25-CA</td>
<td>University of Louisville Cancer Education Program</td>
<td>Mentor</td>
<td>Hein</td>
<td>09/01/13-08/31/14</td>
<td>$66,344</td>
</tr>
<tr>
<td>134283</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NIEHS/R13</td>
<td>Environmental Chemicals and Liver Disease (R13</td>
<td>Co-I</td>
<td>Cave</td>
<td>07/01/14-06/30/15</td>
<td>$15,430</td>
</tr>
<tr>
<td><strong>Brian P. Ceresa:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NIH/NIGMS</td>
<td>Endocytic Regulation of EGFR Signaling</td>
<td>PI</td>
<td>Ceresa</td>
<td>09/01/10-08/31/14 (NCE)</td>
<td>$200,000</td>
</tr>
<tr>
<td>R01GM0922</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>874</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NIH/NEI/R01EY</td>
<td>Modulation of EGFR Signaling to promote Corneal</td>
<td>PI</td>
<td>Ceresa</td>
<td>01/01/12 –12/31/14 (NCE)</td>
<td>$375,000</td>
</tr>
<tr>
<td>Y021497</td>
<td>Wound Healing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PanOptica, LLC</td>
<td>The Effect of PAN-90806 on EGFR-mediated</td>
<td>PI</td>
<td>Ceresa</td>
<td>7/15/14-3/14/15</td>
<td>$105,000</td>
</tr>
<tr>
<td>LLC</td>
<td>Corneal Epithelial Homeostasis</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Shao-yu Chen:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NIAAA/RO1</td>
<td>Role of microRNA in ethanol-induced apoptosis and</td>
<td>PI</td>
<td>Shao-yu Chen</td>
<td>07/2013 –06/2018</td>
<td>$225,000 (direct cost)</td>
</tr>
<tr>
<td>AA021434</td>
<td>teratogenesis</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NIAAA/RO1</td>
<td>Role of Siah1 in ethanol-induced apoptosis and</td>
<td>PI</td>
<td>Shao-yu Chen</td>
<td>07/2012 –06/2017</td>
<td>$225,000 (direct cost)</td>
</tr>
<tr>
<td>AA020265</td>
<td>teratogenesis</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NIAAA/RO1</td>
<td>Role of Nrf2 signaling in modulating ethanol-induced</td>
<td>PI</td>
<td>Shao-yu Chen</td>
<td>07/2008 –06/2014</td>
<td>$200,000 (direct cost)</td>
</tr>
<tr>
<td>AA017446</td>
<td>teratogenesis</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NIAMS/RO1</td>
<td>Coordinated cytoskeletal dynamics in skin somatic</td>
<td>Subco</td>
<td>Xiaoyang</td>
<td>09/2013 –08/2018</td>
<td>$225,000 (direct cost)</td>
</tr>
<tr>
<td>AR063630</td>
<td>stem cells</td>
<td>Contract</td>
<td>Wu</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Geoffrey J. Clark:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NCI/R01 CA133171-01A2</td>
<td>The Role of the Ras effector Nore1a in tumor suppression</td>
<td>PI</td>
<td>2010-2015</td>
<td>$180,000</td>
<td></td>
</tr>
<tr>
<td>NIH Eureka Award/1R01CA153132-01</td>
<td>Oncopigs as a better model for human cancer</td>
<td>PI</td>
<td>2010-2014</td>
<td>$200,000</td>
<td></td>
</tr>
<tr>
<td>NIH COBRE Pilot Award</td>
<td>The development of Novel Ras antagonists to inhibit cancer</td>
<td>PI</td>
<td>2013-2015</td>
<td>$75,000</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Ramesh Gupta:</strong></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>NCI CA-125152</td>
<td>Breast Cancer Chemoprevention Potential of Common Spices</td>
<td>PI</td>
<td>Gupta</td>
</tr>
<tr>
<td>R43-CA-162417</td>
<td>Sustained, Target Delivery for Treatment of Cervical Pathologies</td>
<td>Multi-PIs</td>
<td>Gupta Spencer</td>
</tr>
<tr>
<td>U.S. Highbush Blueberry Council</td>
<td>Therapeutic Activity of Blueberry Against Lung Cancer</td>
<td>PI</td>
<td>Gupta</td>
</tr>
<tr>
<td>KY Matching</td>
<td>This grant is a supplement to the SBIR Phase I grant listed above</td>
<td>PI</td>
<td>Gupta</td>
</tr>
<tr>
<td>Coulter Foundation</td>
<td>Treatment of Cervical Pathologies by Curcumin Delivered Locally by a Polymeric Device – Phase I (Year 1)</td>
<td>Multi-PIs</td>
<td>Gupta Parker O’Toole</td>
</tr>
<tr>
<td>Helmsley Trust Fund</td>
<td>Plant-based cancer therapeutics</td>
<td>PI</td>
<td>Gupta</td>
</tr>
<tr>
<td>Coulter Foundation</td>
<td>Treatment of Cervical Pathologies by Curcumin Delivered Locally by a Polymeric Device – Phase I (Year 2)</td>
<td>Multi-PIs</td>
<td>Gupta Parker O’Toole</td>
</tr>
<tr>
<td>Dept of Defense</td>
<td>Prevention &amp; Treatment of Breast Cancer by Blueberry</td>
<td>PI</td>
<td>Gupta</td>
</tr>
<tr>
<td>STTR Phase 1</td>
<td>Exosomal Drug Formulation</td>
<td>PI</td>
<td>Gupta</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>David W. Hein:</strong></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>NIH/NIEHS (T32-ES011564)</td>
<td>UofL Environmental Health Sciences Training Program</td>
<td>PI</td>
<td>Hein</td>
</tr>
<tr>
<td>NIH/NCI (R25-CA134283)</td>
<td>University of Louisville Cancer Education Program</td>
<td>PI</td>
<td>Hein</td>
</tr>
<tr>
<td>NIEHS (T35-ES014559)</td>
<td>Summer Environmental Health Sciences Training Program</td>
<td>Mentor</td>
<td>Prough, McClain, Srivastava</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>LaCreis Renee Kidd:</strong></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>NIH, NIEHS</td>
<td>UofL Environmental Health Science Training Program</td>
<td>Mentor</td>
<td>Hein</td>
</tr>
<tr>
<td>Grant ID</td>
<td>Principal Investigator</td>
<td>Project Title</td>
<td>Role</td>
</tr>
<tr>
<td>-------------</td>
<td>----------------------------------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>T32-ES011564</td>
<td>University of Louisville Cancer</td>
<td>Education Program</td>
<td>Co-I, Ca Educ Coord, Mentor</td>
</tr>
<tr>
<td>R25-CA134283-01A1</td>
<td>Igor S. Lukashevich</td>
<td>Development of New Bivalent Cross Protective Arenaviral Vaccines</td>
<td>PI</td>
</tr>
<tr>
<td>NIH/R43 AI094863 (SBIR)</td>
<td>Nobuyuki Matoba</td>
<td>Novel DNA-launched Attenuated Vaccine for VEE Virus</td>
<td>PI on sub</td>
</tr>
<tr>
<td>NIH/R03 AI094159</td>
<td>Nobuyuki Matoba</td>
<td>A Novel DNA-launched Live Attenuated Chikungunya Vaccine</td>
<td>PI on sub</td>
</tr>
<tr>
<td>NIH NIAID Microbicide Innovation Program V/R21/R33 AI088585</td>
<td>Keneth E. Palmer</td>
<td>Plant-produced Actinohivin as a Candidate HIV Microbicide</td>
<td>PI</td>
</tr>
<tr>
<td>DoD/USAM RMC/W81X WH-10-2-0082-CLIN 2</td>
<td>Keneth E. Palmer</td>
<td>Plant-Based Expression Systems for New Vaccines and Therapeutics</td>
<td>Sub-project PI</td>
</tr>
<tr>
<td>Brown Cancer Center Helmsley Trust Program /G2142</td>
<td>Keneth E. Palmer</td>
<td>Subproject Title: Immunotherapeutic potential of plant-made CTB against colitis and colon cancer</td>
<td>Sub-project PI</td>
</tr>
<tr>
<td>NIH NIAID/ U19 AI 103458-01</td>
<td>Keneth E. Palmer</td>
<td>Griffithsin-based Rectal Microbicides for PREvention of Viral ENTRY (PREVENT)</td>
<td>Core C Leader</td>
</tr>
</tbody>
</table>

**Kenneth E. Palmer:**

- NIH/NIAID U19 AI 113182-01 | Griffithsin-based rectal microbicides for prevention of viral entry (PREVENT)  | PD/PI | Palmer | 07/01/2014 – 06/30/2019 | $2,968,626 **
- NIH/NIAID U19 AI 113182-661 | PREVENT Program Administrative Core | PI | Palmer | 07/01/2014 – 06/30/2019 | ** see parent award above
- NIH/NIAID U19 AI 113182-666 | Project 2: PREVENT program preclinical studies | PI | Palmer | 07/01/2014 – 06/30/2019 | ** see parent award above
- Leona M and Harry B Helmsley | Advancing the discovery and development of plant-made pharmaceuticals | Sub-proj. PI | Miller | 01/01/2014 – 12/31/2017 | $1,833,333
<table>
<thead>
<tr>
<th>Agency/ Number</th>
<th>Title</th>
<th>Role</th>
<th>PI</th>
<th>Project Period (requested)</th>
<th>Award Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>NIAAA</td>
<td>University of Louisville Alcohol Research Center</td>
<td>Pilot Core Director, Project Co-I; Education Co-director</td>
<td>McClain</td>
<td>12/01/15-11/30/20</td>
<td>$9,000,000</td>
</tr>
<tr>
<td>Agency</td>
<td>Project Title</td>
<td>PI/Co-I</td>
<td>Span</td>
<td>Budget</td>
<td></td>
</tr>
<tr>
<td>-----------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>--------------------------</td>
<td>-----------------------</td>
<td>--------------</td>
<td></td>
</tr>
<tr>
<td>NIEHS</td>
<td>UoFL Environmental Health Sciences Training Program</td>
<td>Arteel</td>
<td>07/01/15-06/30/20</td>
<td>$3,011,196</td>
<td></td>
</tr>
<tr>
<td>NIGMS</td>
<td>Hepatobiology and Toxicology COBRE</td>
<td>Core McClain</td>
<td>12/01/14-11/30/19</td>
<td>$11,250,000</td>
<td></td>
</tr>
<tr>
<td>NIAAA</td>
<td>Gestational alcohol exposure: impact of bacteria community on the neonate</td>
<td>Neal</td>
<td>07/01/14-06/30/16</td>
<td>$412,500</td>
<td></td>
</tr>
<tr>
<td>NICHDF</td>
<td>CSE: gut microbiome modulation of hepatic gluconeogenesis</td>
<td>Neal</td>
<td>07/01/14-06/30/16</td>
<td>$412,500</td>
<td></td>
</tr>
<tr>
<td>NIAAA</td>
<td>FAS: Impact of gut microbiome on hepatic lipid function</td>
<td>Neal</td>
<td>07/01/14-06/30/19</td>
<td>$1,875,000</td>
<td></td>
</tr>
<tr>
<td>NIDDK</td>
<td>Therapeutics development for hepatic fibrosis</td>
<td>Subcontractor Maitra</td>
<td>09/01/14-08/31/19</td>
<td>$1,875,000</td>
<td>($504,656 sub)</td>
</tr>
</tbody>
</table>

**Arteel, Juliane:**

<table>
<thead>
<tr>
<th>Agency</th>
<th>Project Title</th>
<th>PI/Co-I</th>
<th>Span</th>
<th>Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>COBRE</td>
<td>Hepatobiology and Toxicology COBRE</td>
<td>Pilot McClain</td>
<td>12/01/15-11/30/20</td>
<td>$11,550,000</td>
</tr>
</tbody>
</table>

**Ceresa, Brian:**

<table>
<thead>
<tr>
<th>Agency</th>
<th>Project Title</th>
<th>PI/Co-I</th>
<th>Span</th>
<th>Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>NIH/NIGMS</td>
<td>Modulating EGFR Activity via the Endocytic Pathway</td>
<td>Ceresa</td>
<td>4/1/15 -3/31/20</td>
<td>$1,862,500</td>
</tr>
<tr>
<td>NIH/NEI</td>
<td>Regulation of Corneal Epithelial Homeostasis by the EGFR</td>
<td>Ceresa</td>
<td>7/1/15 – 6/30/20</td>
<td>$1,862,500</td>
</tr>
<tr>
<td>DoD</td>
<td>Neural mechanisms of, and development of topical treatments for, chronic non-dry corneal pain (corneal euralgia) arising from repeated corneal injury</td>
<td>Petruska</td>
<td>7/1/14 -6/30/16</td>
<td>$375,000</td>
</tr>
<tr>
<td>NIH/NCI</td>
<td>Autophagic Cell Death in Pancreatic Cancer</td>
<td>McNally</td>
<td>4/1/15 -3/31/20</td>
<td>$1,862,500</td>
</tr>
<tr>
<td>NIH/NCI</td>
<td>Ubiquilin1 regulates EMT and metastasis of human lung adenocarcinoma</td>
<td>Beverly</td>
<td>4/1/15 -3/31/20</td>
<td>$1,862,500</td>
</tr>
<tr>
<td>DoD</td>
<td>Enhancement of corneal wound healing through a novel EGFR-mediated nanotherapy</td>
<td>Neves</td>
<td>7/1/14-6/30/17</td>
<td>$523,763</td>
</tr>
<tr>
<td>JDRF</td>
<td>Enhancement of corneal wound healing through a novel EGFR-mediated nanotherapy</td>
<td>Neves</td>
<td>1/1/15-12/30/17</td>
<td>$152,856</td>
</tr>
</tbody>
</table>

**Chen, Shao-yu:**

<table>
<thead>
<tr>
<th>Agency</th>
<th>Project Title</th>
<th>PI/Co-I</th>
<th>Span</th>
<th>Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>NIAAA/P50 Alcohol center grant</td>
<td>The role of nutrition in the development/progression of alcohol-induced organ injury. Project 3 title: Sulforaphanemediated epigenetic modulation of ethanol-induced apoptosis and teratogenesis</td>
<td>Project 3 McClain</td>
<td>12/1/2015 –11/30/2020</td>
<td>$9,000,000.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Project 3 budget: $1,207,000.00 (Total budget)</td>
</tr>
</tbody>
</table>

**Clark, Geoffrey:**

<table>
<thead>
<tr>
<th>Agency</th>
<th>Project Title</th>
<th>PI/Co-I</th>
<th>Span</th>
<th>Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>NIH R01</td>
<td>The Role and Relevance of RASSF1A inactivation in Ras driven cancer</td>
<td>PI</td>
<td>2015-2020</td>
<td>Direct:: 250K/annum</td>
</tr>
<tr>
<td>NIH U01</td>
<td>Identification of physiologically relevant K-Ras synthetic lethal components</td>
<td>PI</td>
<td>2015-2019</td>
<td>~ Av 400K/annum</td>
</tr>
<tr>
<td>KSEF</td>
<td>Novel Inhibitors of Ras Driven Lung Cancer</td>
<td>PI</td>
<td>2015-2016</td>
<td>30K/Annum</td>
</tr>
<tr>
<td>DOD</td>
<td>The development of RalGDS inhibitors to treat MPNST</td>
<td>PI</td>
<td>2015-2018</td>
<td>150K/Annum</td>
</tr>
<tr>
<td>DOD</td>
<td>Radiation Induced Cancer and the RASSF1A A(133)S SNP</td>
<td>PI</td>
<td>2015-2017</td>
<td>120K/Annum</td>
</tr>
<tr>
<td>DOD</td>
<td>Novel RalGDS inhibitors to antagonize breast cancer metastasis</td>
<td>PI</td>
<td>2015-2018</td>
<td>120K/Annum</td>
</tr>
</tbody>
</table>

**Gupta, Ramesh:**

| NCI STTR | New Technology for Isolation of Anthocyanidins and Efficacy against Human Cancers | PI | Gupta | 4/15-3/16 | $300,000 |
| NCI R33 | Exosomal Drug Deliver in Cancer Therapy | PI | Gupta | 2/15-1/18 | $1,350,000 |
| NCI R01 | Strategies for Lung Cancer Prevention and Treatment | PI | Gupta | 7/15-6/20 | $2,608,582 |

**Hein, David W.:**

| NCI R25-CA134283 (non-competing renewal) | University of Louisville Cancer Education Program | PI | Hein | 09/01/2014-08/31/2015 | $295,337 |
| NIEHS T32-ES011564 (NCE) | UofL Environmental Health Sciences Training Program | PI | Hein | 07/01/14-06/30/15 | $186,349 |
| NIGMS P20-113226 | Hepatobiology and Toxicology COBRE | PI | McClain | 12/01/14-11/30/19 | $11,550,000 |
| NIGMS 1U54GM115452 | University of Louisville’s Clinical & Translational Sciences Institute | PI | McClain | 07/01/15-06/30/20 | $20,000,000 |
| NIEHS T32-ES011564 (renewal) | UofL Environmental Health Sciences Training Program | PI | Arteel | 04/01/15-03/31/20 | $3,011,196 |

**Kang, Y. James:**

| NIH-NIAAA, 1R01AA023190 | Mechanisms of Probiotics in Alcoholic Liver Disease | Co-PI | Wenke Feng | 07/01/14-06/30/19 | $1,500,000 |

**Lukashevich, Igor:**

<p>| NIH/NIAID 1R01 AI116712-01 | Genetically Re-Designed Cross-Protective Lassa Virus Vaccine (percentile: 20) | PI | 04/01/2015-03/31/2020 | $2,958,331 |</p>
<table>
<thead>
<tr>
<th>Agency</th>
<th>PI/Co-PI</th>
<th>Project Title</th>
<th>Role</th>
<th>Start Date</th>
<th>End Date</th>
<th>Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>NIH/NIAID 2R43AI094 863-01</td>
<td>Matoba, Nobuyuki</td>
<td>Novel DNA-Launched Attenuated Vaccine for VEE Virus (score: 30, in re-submission)</td>
<td>PI on sub</td>
<td>04/01/2015-03/30/2017</td>
<td>$600,000</td>
<td></td>
</tr>
<tr>
<td>NIH/NIAID R01 AI117742-01</td>
<td>Steinbach</td>
<td>Design and Development of a Virus Trap and Safety Net Approach for STI Prevention.</td>
<td>Co-I</td>
<td>7/01/14 – 6/30/18</td>
<td>$2,374,552</td>
<td></td>
</tr>
<tr>
<td>Kentucky Lung Cancer Foundation</td>
<td>Matoba</td>
<td>Investigation of AvFc as a Candidate Lung Cancer Immunotherapeutic</td>
<td>PI</td>
<td>3/1/15 – 2/28/17</td>
<td>$150,000</td>
<td></td>
</tr>
<tr>
<td>CONRAD</td>
<td>Steinbach</td>
<td>Design and Development of Multipurpose Polymeric Nanoparticles and Electrospun Fibers for Prolonged Antiretroviral (EVTG and CMX157) Delivery</td>
<td>Collaborator</td>
<td></td>
<td>$100,000</td>
<td></td>
</tr>
<tr>
<td>NIH/NIHLB U01 HL127518-01</td>
<td>Bates, Miller, Krentzel</td>
<td>The EXCITE Program: Expediting Commercialization, Innovation, Translation and Entrepreneurship</td>
<td>Co-PI</td>
<td>04/01/2015 – 03/31/2018</td>
<td>$2,998,200</td>
<td></td>
</tr>
<tr>
<td>Siskind, Leah</td>
<td>Siskind, Schnellmann</td>
<td>The role of glycosphingolipids in diabetic nephropathy</td>
<td>Co-PI</td>
<td>04/01/2015-03/31/2019</td>
<td>$2,318,225</td>
<td></td>
</tr>
<tr>
<td>1R21CA191 681-01</td>
<td>Siskind, Beverly, Siskind</td>
<td>Sphingolipid metabolic regulators as drivers and therapeutic targets of AML</td>
<td>Co-PI</td>
<td>12/1/2014-11/30/2016</td>
<td>$412,500</td>
<td></td>
</tr>
<tr>
<td>1R21CA191 681-01A1</td>
<td>Siskind, Beverly, Siskind</td>
<td>Sphingolipid metabolic regulators as drivers and therapeutic targets of AML</td>
<td>Co-PI</td>
<td>7/01/2015-6/30/2017</td>
<td>$412,500</td>
<td></td>
</tr>
<tr>
<td>1U01CA199 214-01</td>
<td>Clark, Beverly, Siskind</td>
<td>Identifying physiologically relevant RAS synthetic lethal components</td>
<td>Co-PI</td>
<td>7/1/2015-6/30/2019</td>
<td>$2,532,119</td>
<td></td>
</tr>
<tr>
<td>Song, Zhao-Hui</td>
<td>Reggio</td>
<td>Molecular Determinants of Cannabinoid Activity</td>
<td>PI, U of L subcontract</td>
<td>4/1/2015-3/31/2020</td>
<td>$375,000</td>
<td></td>
</tr>
<tr>
<td>P30GM1035 07 Pilot Grant</td>
<td>Whittemore</td>
<td>The Potential Therapeutic Effects of Cannabidiol on Spinal Cord Injury</td>
<td>PI for Pilot Grant</td>
<td>8/1/2014-7/30/2015</td>
<td>$22,500</td>
<td></td>
</tr>
<tr>
<td>OICB15009 5 Vida Cannabis Corp</td>
<td>ZH Song</td>
<td>The Effects of Cannabigerol and Cannabidiol on CB2 Cannabinoid Receptor</td>
<td>PI</td>
<td>9/1/2014-8/31/2015</td>
<td>$100,000</td>
<td></td>
</tr>
<tr>
<td>States, J. Christopher</td>
<td>States</td>
<td>Differential miRNA expression in arsenic-induced skin carcinogenesis</td>
<td>PI</td>
<td>04/01/2015 - 03/31/2020</td>
<td>$2,681,681.</td>
<td></td>
</tr>
<tr>
<td>NIH-NIEHS 1R01ES025 400-01</td>
<td>States</td>
<td>Differential miRNA expression &amp; progression of arsenic induced skin cancers</td>
<td>PI</td>
<td>07/01/2015 - 06/30/2017</td>
<td>$412,500</td>
<td></td>
</tr>
<tr>
<td>NIH-NCI 1R03CA198785-01</td>
<td>Targeting the Anaphase Promoting Complex</td>
<td>PI</td>
<td>States</td>
<td>07/01/2015 - 06/30/2017</td>
<td>$150,000</td>
<td></td>
</tr>
<tr>
<td>--------------------------</td>
<td>------------------------------------------</td>
<td>----</td>
<td>--------</td>
<td>--------------------------</td>
<td>----------</td>
<td></td>
</tr>
<tr>
<td>KLCRP</td>
<td>Targeting the anaphase promoting complex as lung cancer chemotherapy</td>
<td>PI</td>
<td>States</td>
<td>01/01/2015 - 12/31/2016</td>
<td>$150,000</td>
<td></td>
</tr>
<tr>
<td>KSEF-RDE-018</td>
<td>Novel Cancer Chemotherapeutics Targeting Mitosis</td>
<td>PI</td>
<td>States</td>
<td>07/01/2015 - 06/30/2016</td>
<td>$30,000</td>
<td></td>
</tr>
<tr>
<td>Marsha Rivkin Foundation for Cancer Research</td>
<td>Enhancing Platinum Treatment of Epithelial Ovarian Cancer</td>
<td>PI</td>
<td>States</td>
<td>07/01/2015 - 06/30/2016</td>
<td>$75,000</td>
<td></td>
</tr>
<tr>
<td>NIH-NIGMS 1U54GM115452-01</td>
<td>University of Louisville's Clinical and Translational Sciences Institute Pilot Project Core Director</td>
<td>McClain</td>
<td>07/01/2015-06/30/2020</td>
<td>$20,000,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NIH-NIGMS 1P20GM113226-01</td>
<td>Hepatobiology and Toxicology COBRE Faculty Mentor</td>
<td>McClain</td>
<td>12/01/2014-11/30/2019</td>
<td>$11,500,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NIH-NIEHS 1R01ES025189-01</td>
<td>Effect of environmental arsenic on HNF4a in non-alcoholic fatty liver disease Co-Inv</td>
<td>Watson</td>
<td>04/01/15 - 03/31/20</td>
<td>$1,250,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NIH-NIEHS 1R21ES025886-01</td>
<td>Arsenic inhibits repair of folate-dependent DNA damage through a ribonucleotide-initiated mechanism Collaborator</td>
<td>Cabelof</td>
<td>07/01/2015 - 06/30/2017</td>
<td>$418,000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**INVITED SCIENTIFIC PRESENTATIONS**  
**Faculty with Primary Appointments**

**Arteel, Gavin:**
1. Plenary lecture, 07/14 “Fibrin ECM and the balance between (hepatic) life and death,” International Society of Fibrinolysis and Proteolysis, Marseille, France.
2. Research symposium, 09/14 “Hepatic ECM homeostasis and liver disease,” NIEHS Tamburro Symposium on Environmental Chemicals and Liver Disease, Louisville, KY.
3. Seminar, 10/14 “Fibrosis Overview.” University of Louisville School of Medicine, GI Fellows seminar Program, Louisville, KY.

**Arteel, Juliane:**
2. Research seminar, 06/02/14. Vinyl Chloride and its Metabolites Predispose The Liver To Injury. University of Louisville, Liver Research Group, University of Louisville, Louisville, KY.

Ceresa, Brian:
1. December 3, 2014: Department of Ophthalmology and Vision Sciences, University of Louisville
2. November 20, 2014: Department of Cell Biology, University of Oklahoma HSC
3. April 10, 2014: Department of Anatomy and Neurobiology, University of Louisville “Modulating EGFR trafficking to promote corneal epithelial wound healing”

Chen, Shao-yu:
1. Transcriptional and epigenetic mechanisms underlying ethanol-induced birth defects. University of Illinois, College of Medicine at Rockford, Rockford, IL, September, 24, 2014
2. Epigenetic and transcriptional mechanisms in the pathogenesis of Fetal Alcohol Spectrum Disorders. University of Illinois, College of Medicine at Peoria, Peoria, IL, August, 15, 2014
3. Transcriptional and epigenetic mechanisms underlying Fetal Alcohol Spectrum Disorders. University of Louisville, Louisville, KY, July 7, 2014

Clark, Geoffrey:
1. JGBCC Cancer colloquia
2. AACR Ras meeting Invited Poster
3. Swine in Biomedical research international research conference, invited Poster

Hein, David:
1. Liver Phase 2 Drug and Xenobiotic Metabolism. NIEHS Tamburro Symposium on Environmental Chemicals and Liver Disease, University of Louisville, Louisville, Kentucky, September 2014.

Kang, Y. James:
2. Invited Lectures: 4 lectures on Angiogenesis and clinical implication at University Catania, Catania, Italy, Oct 28-30, 2014.
   - “Angiogenesis – Basic Understanding”;
   - “Angiogenesis in Tumors”
   - “Angiogenesis and Ischemic Diseases”
   - “Copper Promotion of Angiogenesis”


5. Invited Speaker, GuanDong Medical College, Zhanjiang, China, Aug 12, 2014. “Tissue injury signaling and stem cell therapy for ischemic heart disease”.

6. Invited Speaker, Harbin Medical University Second Hospital, Harbin, China, Jul 31, 2014. “Stem cells and myocardial regeneration”.

**Lukashevich, Igor:**


**Matoba, Nobuyuki:**


**Palmer, Kenneth:**
1. Palmer KE Invited Seminar in the Department of Microbiology and Immunology, University of Louisville School of Medicine. Targeting the Glycan Shield for HIV Prevention. October 2nd, 2014


**Siskind, Leah:**
2. Siskind LJ (2014) It’s a bird, it’s a plane, it’s a resubmission! James Graham Brown Cancer Colloquia on Cancer Biology and Therapeutics. 10/1/2014

Song, Zhao-Hui:

2. Song ZH, Kumar P. Tamoxifen is an allosteric modulator of the CB2 cannabinoid receptor International Cannabinoid Research Society Conference, Baveno, Italy, June, 2014.

States, J Christopher:
1. ‘Disruption of Mitotic Progression by Arsenic’, Nelson Institute of Environmental Medicine, New York University, 11/21/2014

INVENTIONS, DISCLOSURES, LICENSE/OPTION AGREEMENTS, PATENT AWARDS, AND BUSINESS STARTUPS
Faculty with Primary Appointments

Gupta, Ramesh:
Patents:

Lukashevich, Igor:
Patents:

Matoba, Nobuyuki:
Patent Award:
- U.S. Patent Number: 8802822 (award date: 8/12/2014)
  Title: Polypeptides having antiviral activity and methods for use thereof

Patent Application:
- International Patent Application No. PCT/US14/15861
  Title: Methods for producing antibodies
Palmer, Kenneth:
Invention Disclosure:
- Palmer KE and Fuqua J. Novel Oxidation-Resistant Griffithsin Variants.

Patent Application:

DEPARTMENTAL COURSES

- Medical Pharmacology course to second year medical students. Dr. Steve Myers served as course director.
- Pharmacology and Dental Therapeutics course to dental students. Dr. David Hein served as course director.
- Pharmacology course to second year students in the Dental Hygiene Program. Dr. Steve Myers served as course director.
- Basic Pharmacology course for undergraduate students. Dr. Steven Myers served as course director.
- The Department team taught several courses for graduate students. The individual courses and course directors included:
  - PhTx 660 – Principles of Drug and Chemical Action (Dr. Ceresa)
  - PhTx 606 – Pharmacology Seminar (Drs. Clark and Nerland)
  - PhTx 661 – Molecular Toxicology (Drs. Prough and Gavin Arteel)
  - PhTx 625 – Scientific Writing (Dr. Gavin Arteel)
  - PhTx 655 – Neuropharmacology (Dr. Song)
  - PhTx 656 – Cardiovascular and Renal Pharmacology (Dr. Kang)
  - PhTx 657 – Endocrine and Metabolic Pharmacology (Dr. Gavin Arteel)
  - PhTx 658 – Selective Toxicity and Chemotherapy (Drs. Nerland and Siskind)
  - PhTx 672 – Research Methods in Pharmacology & Toxicology I (Drs. Song and States)
  - PhTx 673 – Research Methods in Pharmacology & Toxicology II (Drs. Song and States)
  - PhTx 674 – Research Methods in Pharmacology & Toxicology III (Drs. Song and States)
  - PhTx 675 – Research Methods in Pharmacology & Toxicology IV (Drs. Song and States)
  - PhTx 618 – Biostatistics (Dr. Kidd)
STANDING COMMITTEES

Graduate Student Affairs and Curriculum Committee
Dr. Chris States (Chair)
Dr. Brian Ceresa (ex officio)
Dr. Geoff Clark (2014)
Dr. Gavin Arteel (2015)
Dr. Leah Siskind (2016)
Student rep: Pritesh Kumar
Student rep: Veronica Massey

Graduate Student Admissions and Recruitment Committee
Dr. Brian Ceresa (Chair)
Dr. Chris States (ex officio)
Dr. La Creis Kidd (2014)
Dr. Ramesh Gupta (2015)
Dr. Steve Myers (2016)

SIBUP/Grievance Committee
Nobuyuki Matoba (Chair)
Dr. Ramesh Gupta (2014)
Dr. Joe Song (2015)
Dr. Michael Merchant (2016)

Teaching Evaluation Committee
Dr. Steve Myers (Chair)
Dr. Don Nerland (2014)
Dr. Juliane Arteel (2015)
Dr. Gavin Arteel (2016)

Seminar Committee
Dr. Don Nerland (Chair)
Dr. Igor Lukaschevich (2014)
Dr. Gavin Arteel (2015)
Dr. Geoff Clark (2014; Chair 2015)

Events Committee
Dr. La Creis Kidd (Chair)
Dr. Nobuyuki Matoba (2014)
Dr. Juliane Arteel (2015)
DEPARTMENTAL EVENTS AND RECOGNITION

A retirement reception for all retiring/departing faculty and staff members was held June 10th at the Peterson-Dumesnil House in Louisville.

The Department new faculty and student welcome was held August 14 at Captain Quarters in Prospect.

NIEHS Tamburro Symposium on Environmental Chemicals and Liver Disease was hosted at the University of Louisville in September. The speakers included Professor Jim Swenberg from the University of North Carolina who presented the annual William Waddell Seminar.

The annual Department of Pharmacology and Toxicology holiday party was held at the Melwood Arts Center in Louisville on December 9.

Inaugural Department Halloween Party
Inaugural Department Thanksgiving Celebration (with ugly sweater contest).

The Department of Pharmacology and Toxicology received first place in the first SMART – Deck the Doors Contest

2014 University of Louisville Cancer Education Program Class

**Aditya Barve**
University of Louisville graduate
Faculty Mentor: David W. Hein, PhD
Research Project: Hepatocarcinogenic effects of 4,4 methylenedianiline (MDA) and obesogenic dietary components

**Addison Bray**
University of Louisville undergraduate
Faculty Mentor: Sham Kakar, PhD
Research Project: Combination of withaferin A and cisplatin eliminates ovarian cancer stem cells
Danielle C. Berea  
University of Louisville medical student  
Faculty Mentor: Carrie Lenneman, MD  
Research Project: PACE: Examination of physical activity during chemotherapy

Thomas Brenzel  
University of Louisville undergraduate  
Faculty Mentor: Robert C.G. Martin, MD, PhD  
Research Project: A proposed treatment algorithm for locally advanced unresectable pancreatic adenocarcinoma

Adrienne M. Bushau  
University of Louisville undergraduate  
Faculty Mentor: Juliane I. Arteel, PhD  
Research Project: Mechanistic insight into cinyl chloride-induced liver injury

Christine Dolin  
University of Louisville undergraduate  
Faculty Mentor: Gavin E. Arteel, PhD  
Research Project: The hepatic “matrisome” responds dynamically to stress: Novel characterization of the ECM proteosome
Cameron S. Conway
University of Louisville undergraduate
Faculty Mentor: Leah Siskind, PhD
Research Project: Development of a shRNA library for high-throughput screening of sphingolipids in tumorigenesis

Harry Gao
University of Chicago undergraduate
Faculty Mentor: Sam Zhou, PhD
Research Project: Variability of Losartan as a combination therapy with oncolytic adenovirus

Harold B. Ghooray
University of Louisville graduate
Faculty Mentor: Shirish Barve, PhD
Research Project: Inhibition of S-adenosylhomocysteine hydrolase (SAHH) induces Fas ligand gene expression and apoptotic dean in leukemic T lymphocytes

Kendall Huddleston
University of Kentucky undergraduate
Faculty Mentor: Ramesh Gupta, PhD
Research Project: Biomarker significance of exosomes in the initiation and progression of breast cancer
Mary E. Hatch
University of Louisville medical student
Faculty Mentor: Nichola Garbett, PhD
Research Project: Calorimetry of the plasma proteome in patients with ovarian cancer

Jaison John
University of Louisville graduate
Faculty mentor: Chi Li, PhD
Research Project: The role of carcon chain and carbonyl group in AHL-induced caspace-9-dependent apoptosis

Alyssa Laun
University of Louisville graduate
Faculty Mentor: Zhao-hui Song, PhD
Research Project: Cannabigerol modulates the efficacy of cannabinoids on CB2 receptor

Sarah Mudra
Wheaton College undergraduate
Faculty Mentor: Elizabeth Riley, MD
Research Project: Breast cancer diagnosed through the mobile mammography van in Jefferson County, KY
Michael Mannen
University of Louisville undergraduate
Faculty Mentor: Geoffrey Clark, PhD
Research Project: Interaction of RIT and NORE1A in lung cancer

Alex Myers
University of Louisville undergraduate
Faculty Mentor: Susan Galandiuk, MD
Research Project: Identification of internal reference microRNA from the plasma of multiple cancer types

Bailey A. Nelson
Centre College graduate
Faculty mentor: Nobuyuki Matoba, PhD
Research Project: An investigation of therapeutic potential of plant-made cholera toxin B subunit, an orally active anti-inflammatory protein in a mouse model of acute cholitis

Thomas A. Packer, Jr.
University of Louisville graduate
Faculty Mentor: Sandra Sephton, PhD
Research Project: Circadian disruption: distress and sleep quality in breast cancer patients
Conor O’Neill
University of Kentucky undergraduate
Faculty Mentor: Jason Chesney, MD, PhD
Research Project: Inhibition of PFKFB3 and BRAFV600E may be an effective treatment for metastatic melanoma

Deepa P. Patel
University of Louisville medical student
Faculty Mentor: Kelly McMasters, MD, PhD
Research Project: Inhibition of melanoma metastases by targeting regulator of G protein signaling 2 (RGS2)

David R. Patterson
University of Louisville medical student
Faculty Mentor: Carolyn Klinge, PhD
Research Project: Isolating miRNAs and their mRNA targets in lung adenocarcinoma tumors versus normal adjacent lung tissue

Eric C. Riedinger
University of Louisville medical student
Faculty Mentor: Jorge Gomez Gutierrez, PhD
Research Project: Developing an immunocompetent mouse lung cancer model for the evaluation of virotherapy effectiveness
Dillon S. Pender  
University of Louisville medical student  
Faculty Mentor: Lacey McNally, PhD  
Research Project: Development of theranostic mesoporous silica nanoparticles for pancreatic cancer

Henry L. Roberts  
University of Louisville undergraduate  
Faculty Mentor: Susan Galandiuk, MD  
Research Project: Plasma-based microRNA panel specific for colorectal neoplasia

Angelica Ronke-Hervey  
Indiana University undergraduate  
Faculty Mentor: La Creis R. Kidd, PhD  
Research Project: Impact of quercetin on miR-25 and cellular behavior in prostate cancer cell lines

Lee B. Sims  
University of Louisville undergraduate  
Faculty Mentor: Jill Steinbach, PhD  
Research Project: Effects of nanoparticle morphology and surface modification on tumor penetration and distribution
Tejas Sangoi
Saint Louis University undergraduate
Faculty Mentor: Brian Ceresa, PhD
Research Project: Analysis of mutant epidermal growth factor receptor trafficking and signaling in lung cancer cells

Amy Song
Drexel University undergraduate
Faculty Mentor: Levi Beverly, PhD
Research Project: The role of the BH-4 domain in dictating the oncogenic potency of BCLxL.

Travis P. Spaulding
University of Louisville medical student
Faculty Mentor: Robert C.G. Martin, MD, PhD
Research Project: Predicting adverse events in patients undergoing hepatectomy – validation of preoperative nomogram and risk score

Christopher J. Ullum
University of Kentucky undergraduate
Faculty Mentor: Lacey McNally, PhD
Research Project: Evaluation of coated gold nanoparticles targeted with Syndecan-1 for detection of pancreatic adenocarcinoma
James Stewart  
Western Kentucky University undergraduate  
Faculty Mentor: J. Christopher States, PhD  
Research Project: Recombinant expression of codon-optimized ANAPC2 and ANAPC11

Adrienne Voelker  
University of Notre Dame undergraduate  
Faculty Mentor: Brian Ceresa, PhD  
Research Project: Modulating epidermal growth factor receptors via small targeting peptides

Govind Warrier  
University of Louisville medical student  
Faculty Mentor: Jason Chesney, MD, PhD  
Research Project: Targeting cytosolic aspartate aminotransferase in human pancreatic and lung carcinoma using a novel inhibitor in vitro

Lindsey Wattley  
Massachusetts Institute of Technology undergraduate  
Faculty Mentor: Sucheta Telang, MD  
Research Project: Examination of the effects of small molecular inhibition of PKFFB4 on the cell cycle
Ariel Washington
University of Louisville graduate
Faculty Mentor: Karen Kayser, PhD
Research Project: Is there a relationship between patient worry and preferences for follow-up care after curative treatment for lung cancer?

Dexter W. Weeks
University of Louisville medical student
Faculty Mentor: Levi Beverly, PhD
Research Project: Expression and analysis of GST-tagged UBAR5 protein