

CURRICULUM VITAE

**Blake Robert Peterson**

**Business Address**     The Ohio State University, College of Pharmacy  
Division of Medicinal Chemistry and Pharmacognosy  
500 W. 12th Ave, Columbus, OH 43210  
*Email:* peterson.1119@osu.edu; *Office:* (614) 247-7729  
<https://www.linkedin.com/in/blake-r-peterson-3428b616/>  
<https://scholar.google.com/citations?user=dhiOh60AAAAJ&hl=en>

**Educational Background**

**Damon Runyon - Walter Winchell Cancer Research Foundation Postdoctoral Fellow  
Harvard University (1995 – 1998)**

**Ph.D. in Chemistry, University of California, Los Angeles (1994)**

**B.S. in Chemistry (with distinction), University of Nevada, Reno (1990)**

**Professional Experience**

**The Ohio State University, Division of Medicinal Chemistry and Pharmacognosy**

Professor of Medicinal Chemistry with Tenure (2019 – Present)  
Chair of the Division of Medicinal Chemistry and Pharmacognosy (2019 – Present)  
Co-Leader, Translational Therapeutics, OSU Comprehensive Cancer Center (2019 – Present)  
Co-Director, Medicinal Chemistry Shared Resource, OSUCCC (2019–Present)

**The University of Kansas, Department of Medicinal Chemistry**

Regents Distinguished Professor of Medicinal Chemistry with Tenure (2008 – 2019)  
Adjunct Professor of Medicinal Chemistry (2019 – Present)  
Co-Leader, Synthetic Chemical Biology Core Facility (2012-2019)

**Indigo Biosciences Inc., State College, PA**

Co-Founder (2005); Member of the Board of Directors (2005 – 2014)

**The Pennsylvania State University, Department of Chemistry**

Assistant (1998 – 2004) and Associate (2004 – 2007, with Tenure) Professor of Chemistry

**Harvard University, Department of Chemistry and Chemical Biology**

Damon Runyon-Walter Winchell Cancer Research Postdoctoral Fellow (1995 – 1998)

**Swiss Federal Institute of Technology (ETH - Zürich), Department of Chemistry**

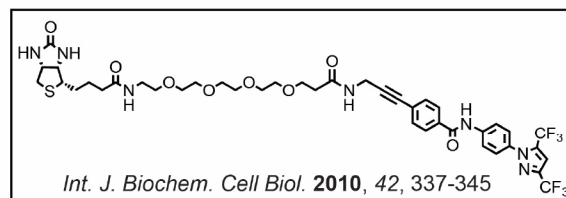
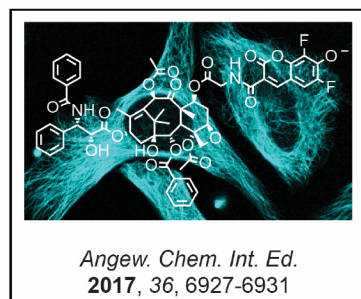
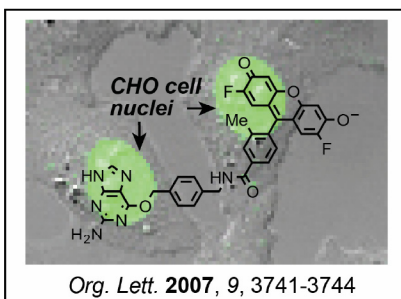
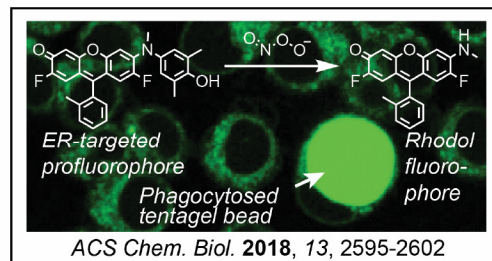
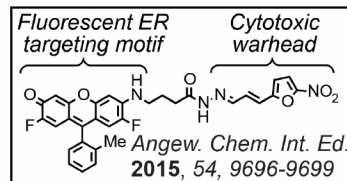
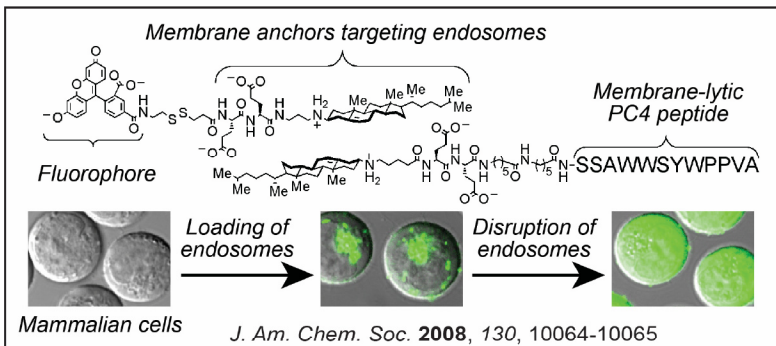
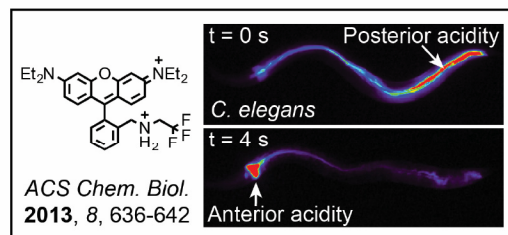
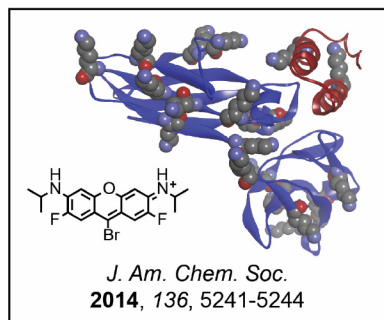
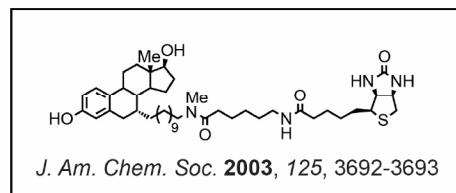
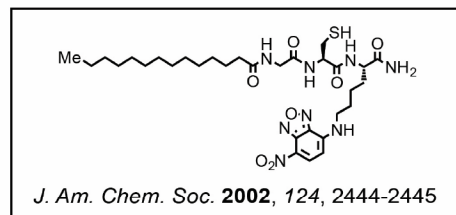
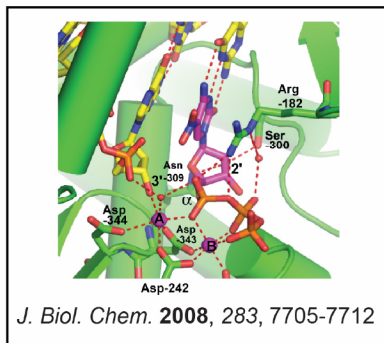
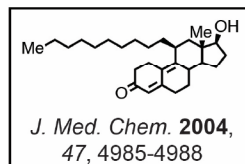
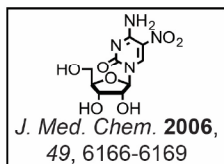
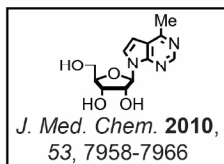
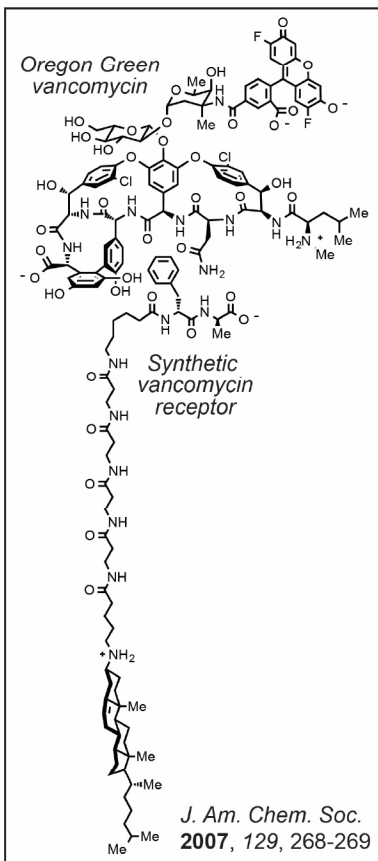
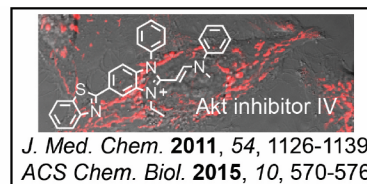
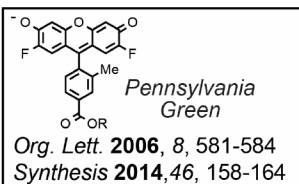
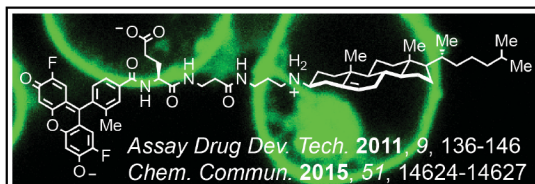
Research Assistant (1992 – 1994)

**University of California, Los Angeles, Department of Chemistry and Biochemistry**

Research Assistant (1991 – 1992); Teaching Assistant (1990 – 1991)

**Research Interests**

*My research group creates chemical tools for the study of cancer biology and other biological systems. By conducting interdisciplinary research in the fields of bioorganic / medicinal chemistry and chemical biology, we investigate anticancer agents, molecular probes, methods for therapeutic targeting, and tools for target identification. Our expertise includes the synthesis of steroids, lipids, nucleosides, peptides, heterocycles, fluorophores, and protein conjugates, and the evaluation of these compounds in biochemical assays, whole cell assays, and model organisms. Our goal is to identify new therapeutic approaches and mechanisms. Representative published compounds are shown on page 2.*





## **Honors and Awards**

Named the John W. Wolfe Chair in Cancer Research by the OSUCCC (2020)  
Elected Fellow of The American Association for the Advancement of Science (AAAS, 2013)  
*For distinguished contributions to the field of bioorganic chemistry, particularly the development of synthetic mimics of cell surface receptors and fluorescent probes of biological systems*  
Leading Light Research Award, University of Kansas (2012)  
Named an Eminent Scholar by the Kansas Biosciences Authority (2008)  
Named a Regents Distinguished Professor by the Regents of the University of Kansas (2008)  
Elected Co-Chair of the 2007 Gordon Conference on Bioorganic Chemistry (Andover, NH)  
Elected to the Faculty of 1000 Biology (2004): Chemical Biology, Macromolecular Chemistry  
Camille Dreyfus Teacher Scholar Award (2004)  
Department of Defense Breast Cancer Research Concept Award (2004)  
Department of Defense Prostate Cancer Research Idea Award (2004)  
Invited Speaker at the Chemistry and Biology of Peptides Gordon Conference (Ventura, CA, 2004)  
Invited Speaker at the Gordon Conference on Bioorganic Chemistry (Andover, NH, 2003)  
Named an American Cancer Society Research Scholar (2003)  
Department of Defense Breast Cancer Research Concept Award (2003)  
Department of Defense Breast Cancer Research Concept Award (2001)  
Department of Defense Breast Cancer Research Concept Award (2000)  
Damon Runyon - Walter Winchell Cancer Research Postdoctoral Fellow (1995-1997)  
Phi Kappa Phi Honor Society (1990)  
American Institute of Chemists Outstanding Senior Student Award (1990)  
National Science Foundation Research Experience for Undergraduates Award (1990)  
Golden Key National Honor Society (1989)  
American Institute of Chemists Outstanding Senior Student Award (1989)  
Dean's List (1989)  
University of Nevada, Reno Undergraduate Teaching Fellowship (1989)  
University of California, Santa Cruz Summer Undergraduate Research Fellowship (1988)  
Charles F. Cutts Scholarship (1988)  
Mr. and Mrs. Murdock McCleod Scholarship (1988)  
Chemistry Faculty Scholarship (1987)  
Chemistry Alumni Scholarship (1987)  
R. C. Fuson Scholarship (1986)

## **Current Professional Memberships**

Member, American Chemical Society (ACS)  
Member and Elected Fellow, American Association for the Advancement of Science (AAAS)  
Member, The Ohio State University Comprehensive Cancer Center (OSUCCC)  
Member, American Association for Cancer Research (AACR)  
Member, Pelotonia Institute for Immuno-oncology (PIIO)  
Member, Center for Cancer Engineering (CCE-CURES)

## **Graduate Students, Postdoctoral Fellows, and Undergraduates**

### ***Current Graduate Students, Postdoctoral Fellows, and other Co-Workers***

*Dr. Erick Carlson* – Postdoctoral Fellow (8/19 – Present)  
*Ms. Lillian Cool* – Graduate Student in Medicinal Chemistry and Pharmacognosy (8/20 – Present)  
*Mr. Xiaojun Hu* – Graduate Student in Medicinal Chemistry and Pharmacognosy (8/19 – Present)  
*Mr. Szu (Sean) Lee* – Graduate Student in Medicinal Chemistry and Pharmacognosy (8/21 – Present)  
*Dr. Digamber Rane* – Senior Researcher (5/15 – Present)  
*Dr. Anver Shaik* – Postdoctoral Fellow (3/21 – Present)  
*Dr. Serena Zhao* – Research Specialist (10/20 – Present)

**Former Graduate Students and Postdoctoral Fellows (1998-Present)**

- Dr. Angelo Andres* – HHMI Gilliam Graduate Student in Medicinal Chemistry (1/17 – 2/22, Senior Scientist, AstraZeneca Pharmaceuticals)
- Dr. Sonalee Athavankar* – Graduate Student in Chemistry (11/99-1/06, Principal Scientist, Advinus Therapeutics)
- Kyle Bailey* – Graduate Student in Medicinal Chemistry (1/08-8/11, Research Assistant, The University of Pittsburgh)
- Dr. Aaron Bender* – Research Associate & Director of Molecular Probes Core (11/09-3/15, Instructor of Biological and Physical Sciences, Central Wyoming College)
- Zach Biddle* – Graduate Student in Chemistry (10/04-8/06, Senior Manager at Ernst & Young)
- Dr. Siwarutt Boonyarattanakalin* – Graduate Student in Chemistry (11/00-12/05, Associate Professor at SIIT, Thailand)
- Sutang Cai* – Graduate Student in Chemistry (10/05-12/09, Scientist, Exide Tech., Atlanta, GA)
- Dr. Daniel D. Clark* – Graduate Student in Chemistry (11/98-10/04, Associate Professor of Chemistry, Mathematics, and Physics at Clarion University, PA)
- Dr. Steffen P. Creaser* – Postdoctoral Fellow (2/00–10/02, Regulatory Affairs International Associate II, Genzyme, Cambridge, MA)
- Dr. Mike DeGrazia* – Graduate Student in Chemistry (11/01-10/07, Patent Attorney at McCarter & English, LLP)
- Dr. Jocelyn Edathil* – MD/PhD Graduate Student in Chemistry (8/03-8/08, Assistant Professor, Temple University)
- Robert Feltz* – Graduate Student in Chemistry (6/04-6/06, Supervisor of Analytical R&D, Lannett Co.)
- Dr. Safiyyah Forbes* – IRACDA Postdoctoral Fellow (8/11-7/13, Assistant Professor, Skyline College, CA)
- Dr. Liqiang Fu* – Postdoctoral Fellow (7/10-6/13, Senior Scientist, Johnson and Johnson, China)
- Dr. Zhe (Gavin) Gao* – Graduate Student in Medicinal Chemistry (10/12 – 6/19, Postdoctoral fellow at Texas A&M)
- Dr. Joseph Gargano* – Postdoctoral Fellow (10/03–5/04, Technical Director at Vedeqsa Inc.)
- Dr. Daniel A. Harki* – Graduate Student in Chemistry (11/99-6/05, Associate Professor of Medicinal Chemistry, U. Minnesota)
- Dr. Enfei He* – Postdoctoral Fellow (12/98-8/99, Global Strategic Purchasing Manager, Albemarle Corp.; Houston TX)
- Dr. Bart Heldreth* – Postdoctoral Fellow (1/05 – 10/06, Chemist at Cosmetic Ingredient Review, Washington DC)
- Dr. Rebecca Henkhaus* – Postdoctoral Fellow (5/08-8/09, Technical Supervisor, Clinical Reference Laboratory, Kansas City, KS)
- Dr. Abu Hossion* – IRACDA Postdoctoral Fellow (2/14 – 8/16, Instructor in Chemistry, Cloud County Community College)
- Dr. Stephen L. Hussey* – Graduate Student in Chemistry (11/98-4/03, Director at Anton Paar)
- Dr. David Hymel* – Graduate Student in Medicinal Chemistry (1/09-10/14, subsequently a Postdoc at NCI with Terry Burke; currently a Research Scientist at Novo Nordisk, Seattle)
- Prof. Guafeng (Gordon) Jia* – Visiting Associate Professor (5/15 – 9/15)
- Ms. Kelsey Knewtson* – Graduate Student in Medicinal Chemistry (1/13 – 5/19, currently a postdoctoral fellow with Jenny Robinson at the University of Kansas)
- Ms. Molly M. Lee* – Graduate Student in Medicinal Chemistry (1/12 – 12/16, subsequent postdoctoral fellow with Don Bottaro at NCI, currently a Chemist at CDER, FDA)
- Dr. Bailin Lei* – Postdoctoral Fellow (7/17 – 5/19)
- Dr. Ze Li* – Postdoctoral Fellow (5/09-7/10, Research Scientist at Covance, Indianapolis, IN)
- Dr. Megan M. MacBride* – Graduate Student in Chemistry (11/99-12/05, Senior Scientist at Taconic)
- Dr. Scott E. Martin* – Graduate Student in Chemistry (11/98-5/04, Group Leader at Genentech)
- Mr. Matt Meinig* – Graduate Student in Medicinal Chemistry (10/09 – 9/15, Pharmacologist, US Army Medical Research Institute of Infectious Diseases)
- Dr. Laurie F. Mottram* – Graduate Student in Chemistry (11/02-9/07, Senior Project Manager at Johnson Matthey)



*Dr. Smita M. Muddana* – Graduate Student in Chemistry (11/98-3/04, Research Scientist at Clorox)  
*Cameron Ng* – Graduate Student in Medicinal Chemistry (10/11-1/14, Senior Research Associate, Heron Therapeutics)

*Dr. Chamani Perera* – Research Associate (1/10 – 3/15, Director of the Synthetic Chemical Biology Core Facility, the University of Kansas (3/15-Present))

*Ms. Sahishna Phaniraj* – Graduate Student in Medicinal Chemistry (1/15 – 11/19, Regulatory Affairs Specialist III at Sanofi Pasteur)

*Aimee M. Price* – Graduate Student in Chemistry (11/98-5/01, Scientist at Novartis Pharmaceuticals)

*Dr. Sheryl A. Rummel* – Graduate Student in Chemistry (6/03-8/08, Director of Undergraduate Instrumentation at Penn State University)

*Dr. Kalai Selvi Shanmugam* – Postdoctoral Fellow (3/09-8/10)

*Dr. Krishna Sharma* – Postdoctoral Fellow (9/19 – 11/21, Researcher at Iowa State U.)

*Dr. Sangarappan Sivakumar* – Postdoctoral Fellow (10/02–10/03, Director at Vector Bio)

*Dr. Qi Sun* – Graduate Student (1/04-5/09, Professor, School of Chemistry and Chemical Engineering, Jiangxi Science and Technology Normal University, Nanchang, China)

*Mr. Tomas Smith* – Graduate Student in Medicinal Chemistry (1/18 – 7/19, Research Scientist II at Novartis Institutes for Biomedical Research)

*Kathleen M. Veety* – Graduate Student in IBIOS Chemical Biology (6/01-5/03, High school teacher in Baltimore, MD)

*Dr. Nicole Windmon* – IRACDA Postdoctoral Fellow (8/15 – 6/16, Upper School Chemistry Professor, The Webb Schools, Claremont, CA)

*Dr. Robert Winefield* – Postdoctoral Fellow (9/10-1/12, Field Service Engineer, Thermo Fisher)

*Dr. Zachary Woydziak* – IRACDA Postdoctoral Fellow (9/09-8/12, Associate Professor at Nevada State College)

*Dr. Runzhi Wu* – Graduate Student in Chemistry (Penn State, 10/05-8/10, Technology Specialist in China)

*Dr. Jun Xu* – Postdoctoral Fellow (7/10-12/11, Research Scientist at ABA Chemical)

*Ning Yang* – Graduate Student in Medicinal Chemistry (1/11-9/13)

*Ms. Yuwen (Alicia) Yin* – Graduate Student in Medicinal Chemistry (1/16 – 3/21, Postdoctoral Fellow with Jianzhu Chen at MIT)

### ***Theses and Dissertations Supervised***

2017-2022 Ph.D. Dissertation, Medicinal Chemistry (KU) “New Approaches for Quantification of Engagement and Modulation of Targets by Small Molecules in Living Cells” *Angelo E. Andres*

2016-2021 Ph.D. Dissertation, Medicinal Chemistry (KU) “Novel Small Molecule Probes and Methods to Quantify Binding to C1 Domains of Protein Kinase C in Living Cells” *Yuwen Yin*

2014-2019 Ph.D. Dissertation, Medicinal Chemistry (KU) “Studies of Interactions of Small Molecules with Membranes and Proteins” *Sahishna M. Phaniraj*

2017-2019 Master’s Thesis, Medicinal Chemistry (KU) “Discovery of Novel Inhibitors of Cellular Efflux by High-Content Screening with a Fluorescent Mimic of Taxol” *Tomas Smith*

2012-2019 Ph.D. Dissertation, Medicinal Chemistry (KU) “Synthesis and Evaluation of Fluorescent Tools for Studies of Cancer Biology” *Zhe Gao*

2012-2019 Ph.D. Dissertation, Medicinal Chemistry (KU) “Studies of Novel Targeted Drug Delivery Systems and Molecular Probes of Cancer Biology” *Kelsey E. Knewtson*

2012-2016 Ph.D. Dissertation, Medicinal Chemistry (KU) “An Improved Synthesis of the Pacific Blue Fluorophore and Fluorescence-Based Studies of Receptor-Ligand Interactions” *Molly M. Lee*

- 2009-2015 Ph.D. Dissertation, Medicinal Chemistry (KU) "Synthesis and Phenotypic Discovery of Molecular Probes of Biological Systems" *James (Matt) Meinig*
- 2008-2014 Ph.D. Dissertation, Medicinal Chemistry (KU) "Synthetic Molecular Probes of Endocytosis, Escape from Endosomes, and Protein-Protein Interactions" *David Hymel*
- 2011-2013 Master's Thesis, Medicinal Chemistry (KU) – "Synthetic Delivery Systems that Control Release of Anticancer Agents from Early Endosomes" *Ning Yang*
- 2008-2011 Master's Thesis, Medicinal Chemistry (KU) – "Improving the Yeast Three Hybrid System for High-Throughput Target Discovery" *Kyle Bailey*
- 2005-2010 Ph.D. Dissertation, Chemistry (Penn State) "Synthesis of Novel Antiviral Agents and Fluorescent Molecular Probes" *Runzhi Wu*
- 2004-2008 Ph.D. Dissertation, Integrative Biosciences (Penn State) "Advances in Synthesis and Applications of Artificial Cell Surface Receptors and Methodology for Preparation of Novel Antiviral Agents" *Qi Sun*
- 2005-2009 Master's Thesis, Chemistry (Penn State) – "Novel Artificial Cell Surface Receptors and Related Molecular Probes" *Sutang Cai*
- 2003-2008 Ph.D. Dissertation, Chemistry (Penn State) – "Design, Synthesis, and Evaluation of Synthetic Mimics of Cell Surface Receptors" *Sheryl A. Rummel*
- 2003-2008 Ph.D. Dissertation, Chemistry (Penn State) – "Design, Synthesis, Antiviral Evaluation and Metabolism of Nucleoside Analogs" *Jocelyn Edathil*
- 2001-2007 Ph.D. Dissertation, Chemistry (Penn State) – "Design, Synthesis, and Evaluation of Fluorescent Small Molecule Probes of Biological Systems" *Michael J. DeGrazia*
- 2002-2007 Ph.D. Dissertation, Chemistry (Penn State) – "Design, Synthesis and Biological Evaluation of Cell-Permeable Fluorescent Molecular Probes" *Laurie F. Mottram*
- 2005-2007 Undergraduate Honors Thesis (Penn State) – "Chlorinated Fluorophores" *Rebecca E. Kovel*
- 2004-2006 Master's Thesis, Chemistry (Penn State) – "Synthetic Cell Surface Receptors Designed for Internalization of Macromolecules" *Zach Biddle*
- 2004-2006 Master's Thesis, Chemistry (Penn State) – "Synthetic Ribonucleosides as Antiviral Agents and Improved Nucleoside Glycosylation Methodology" *Robert Feltz*
- 1999-2005 Ph.D. Dissertation, Chemistry (Penn State) – "Modulating Protein Function Through Small Molecule-Mediated Covalent and Non-Covalent Modifications" *Sonalee Athavankar*
- 2000-2005 Ph.D. Dissertation, Chemistry (Penn State) – "Synthetic Mimics of Mammalian Cell Surface Receptors" *Siwarutt Boonyarattanakalin*
- 1999-2005 Ph.D. Dissertation, Chemistry (Penn State) – "Nuclear Receptors as Drug Targets: Design and Biological Evaluation of Small Molecule Modulators of Nuclear Receptor Action" *Megan M. MacBride*
- 1999-2005 Ph.D. Dissertation, Chemistry (Penn State) – "Chemical Synthesis of Base-Modified Ribonucleosides as Novel Antiviral Agents" *Daniel A. Harki*



1998-2004 Ph.D. Dissertation, Chemistry (Penn State) – “Synthesis and Evaluation of Synthetic Cell Surface Receptors and Related Biological Probes” *Scott E. Martin*

1998-2004 Ph.D. Dissertation, Chemistry (Penn State) – “Evaluation and Identification of Oncogenic Protein Tyrosine Kinases with Yeast Genetic Systems” *Daniel D. Clark*

2003-2004 Undergraduate Honors Thesis, Chemistry (Penn State) - "Estrone Oximes as Metabolically Stable Estrogen Receptor Ligands" *Ruth Bringman*

2003-2004 Undergraduate Honors Thesis, Biochemistry and Molecular Biology (Penn State) - "Fluorescent Cellular Sensors of Antiestrogens" *Jonathan Belman*

1998-2004 Ph.D. Dissertation, Chemistry (Penn State) – “Synthesis and Evaluation of Nuclear Hormone Receptor Ligands” *Smita S. Muddana*

2001-2003 Master’s Thesis, IBIOS Chemical Biology (Penn State) – “Synthesis and Biological Evaluation of Peroxisome Proliferator-Activated Receptor Ligands” *Kathleen M. Veety*

1998-2003 Ph.D. Dissertation, Chemistry (Penn State) – “Synthesis and Analysis of Artificial Cellular Receptors and Molecular Probes” *Stephen L. Hussey*

1998-2001 Master’s Thesis, Chemistry (Penn State) – “Synthesis and Biological Evaluation of Novel 11 $\beta$ -Substituted Steroidal Androgen Receptor Ligands” *Aimee M. Price*

1998-2000 Undergraduate Honors Thesis, Premedicine (Penn State) - "Inhibition of Estrogen Receptor-Mediated Transcription Through Farnesylation and Palmitoylation" *Joshua A. Englert*

### **Invited Seminars**

123. *University of California Riverside*, Department of Chemistry (5/19/21) “Subcellular Targeting for Phenotypic Drug Discovery”
122. *Michigan Technological University*, Department of Chemistry (4/9/21) “Subcellular Targeting for Phenotypic Drug Discovery”
121. *Ohio State University*, Pharmacology Seminar Series (10/29/19) “Subcellular Targeting for Phenotypic Drug Discovery”
120. *Ohio State University*, Dean’s Corporate Council (10/25/19) “New Strategies for Early-Stage Drug Discovery at Ohio State”
119. *Ohio State University*, Comprehensive Cancer Center, Grand Rounds (9/6/19) “New Strategies for Early-Stage Drug Discovery at Ohio State”
118. *Gordon Research Conference on Bioorganic Chemistry – Andover, NH* (6/13/19) “Fluorescent Tools for Studies of Biological Systems”. Invited to present a seminar in place of Rami Hannoush.
117. *ETH-Zürich, Dept. of Organic Chemistry* (6/4/19) “Chemical Tools for Studies of Biological Systems”. François Diederich International Farewell Symposium.
116. *Ohio State University, Dept. of Medicinal Chemistry and Pharmacognosy* (12/18/18) “Chemical Tools for Studies of Cancer Biology”
115. *University of Kansas Medical Center, Dept. of Biochemistry and Molecular Biology* (11/2/18) “Chemical Tools for Studies of Biological Systems”

114. *Kansas State University, Dept. of Biochemistry and Molecular Biophysics (9/12/18)* “Chemical Tools for Studies of Cancer Biology”
113. *University of New Mexico, Cancer Center (4/2/18)* “Chemical Tools for Studies of Cancer Biology”
112. *Purdue University, Department of Medicinal Chemistry and Molecular Pharmacology (2/21/18)* “New Strategies for Controlling Signaling and Trafficking Pathways”
111. *Purdue University, Department of Medicinal Chemistry and Molecular Pharmacology (2/20/18)* “Chemical Tools for Studies of Biological Systems”
110. *University of Minnesota, Department of Medicinal Chemistry (2/6/18)* “Chemical Tools for Studies of Biological Systems”
109. *University of Nebraska, Lincoln, Department of Chemistry (1/19/18)* “Chemical Tools for Studies of Biological Systems”
108. *University of Arizona, Tucson, Department of Pharmacology and Toxicology (9/26/17)* “Academic Drug Discovery: A Chemical Biology Perspective”
107. *University of Arizona, Tucson, Department of Pharmacology and Toxicology (9/25/17)* “Chemical Tools for Studies of Biological Systems”
106. *University of Nevada, Reno, Department of Chemistry (3/17/17)* “Discovery of New Therapeutic Strategies Using Synthetic Molecular Probes”
105. *Wichita State University, Department of Biology (10/24/16)* “Discovery of New Therapeutic Strategies Using Synthetic Molecular Probes”
104. *Nevada State College, Research Day Keynote Speaker (4/15/16)* “Discovery of New Therapeutic Strategies Using Synthetic Molecular Probes”
103. *Washburn University, Chemistry Club (2/12/16)* “Discovery of New Therapeutic Strategies Using Synthetic Molecular Probes”
102. *University of Kansas, Dept. of Medicinal Chemistry (10/8/15)* “Discovery of New Therapeutic Strategies Using Synthetic Molecular Probes”
101. *University of Missouri, Kansas City, School of Pharmacy (10/6/15)* “Discovery of New Therapeutic Strategies Using Synthetic Molecular Probes”
100. *Kansas Area Life Sciences Institute (KCALSI, 4/6/15)* “How Synthetic Molecular Probes can be Used to Discover New Therapeutic Strategies”
99. *University of Kansas, Dept of Pharmaceutical Chemistry (12/2/14)* “Synthetic Lethal Targeting of Cell Surface Receptors”
98. *University of Kansas Cancer Center (6/17/14)* “Synthetic Lethal Delivery Systems for Targeting of Cancer”
97. *University of Kansas Medical Center, Dept. of Molecular and Integrative Physiology (10/21/13)* “Synthetic Cell Surface Receptors and Fluorescent Molecular Probes”
96. *University of Kansas Cancer Biology Group (7/11/13)* “How Studies of Fluorescent Molecular Probes Led to a New Strategy for Targeting Cancer Cells”



95. *Kansas State University, Dept. of Chemistry (2/28/13)* “Synthetic Mimics of Mammalian Cell Surface Receptors and Related Molecular Probes”
94. *Tecom Inc., Nanchang, China (10/13/11)* "Crafting Fluorescent Small Molecules to Probe Biological Systems"
93. *Jiangxi Science and Technology Normal University, Nanchang, China (10/12/11)* "Crafting Fluorescent Small Molecules to Probe Biological Systems"
92. *Tsinghua University, Beijing, China (10/11/11)* "Crafting Fluorescent Small Molecules to Probe Biological Systems"
91. *New Mexico State University, Dept. of Chemistry (2/24/11)* “Synthesis of Fluorescent Probes of Biological Systems”
90. *KU Higuchi Biosciences Center Science Talks, (12/3/10)* “Crafting Fluorescent Small Molecules to Probe Biological Systems”
89. *Merck Pharmaceuticals, Dept. of Medicinal Chemistry (6/2/10)* “Synthetic Mimics of Mammalian Cell Surface Receptors”
88. *University of Arkansas, Dept. of Chemistry (3/1/10)* “Synthetic Mimics of Mammalian Cell Surface Receptors”
87. *University of Arizona, Dept. of Chemistry (2/25/10)* “Synthetic Mimics of Mammalian Cell Surface Receptors”
86. *University of Kansas Analytical Chemistry Seminar (12/7/09)* “A New Strategy for Drug Delivery: Synthetic Molecules that Catch and Release a Specific Membrane Trafficking Pathway”
85. *University of Kansas Combinatorial Methodology and Library Development Center, Keynote Address (10/26/09)* “Synthetic Mimics of Mammalian Cell Surface Receptors”
84. *University of Iowa, Division of Medicinal and Natural Products Chemistry (10/5/09)* “Synthetic Mimics of Mammalian Cell Surface Receptors”
83. *St. Jude, Dept. of Chemical Biology and Therapeutics (9/30/09)* “A New Strategy for Drug Delivery: Synthetic Molecules that Catch and Release a Specific Membrane Trafficking Pathway”
82. *University of Nevada, Reno, Lightner Conference (8/15/09)* “Synthetic Mimics of Mammalian Cell Surface Receptors”
81. *University of Kansas Medical Center, Sullivan Conference (6/12/09)* “A New Strategy for Drug Delivery: Synthetic Molecules that Catch and Release a Specific Membrane Trafficking Pathway”
80. *Calvert Research, Cary NC (6/9/09)* “A New Strategy for Drug Delivery: Synthetic Molecules that Catch and Release a Specific Membrane Trafficking Pathway”
79. *University of Kansas, Inaugural Distinguished Professor Lecture (4/23/09)* “Molecular Tools that Integrate Chemistry with Biology”
78. *University of Kansas, Cancer Center Round Table (2/18/09)* “A New Strategy for Drug Delivery: Synthetic Molecules that Catch and Release a Specific Membrane Trafficking Pathway”
77. *University of Kansas, Dept. of Molecular Biosciences (2/9/09)* “Synthetic Mimics of Mammalian Cell Surface Receptors”

76. *Wichita State University, Department of Chemistry* (11/19/08) “Synthetic Mimics of Mammalian Cell Surface Receptors”
75. *Alnylam Pharmaceuticals* (11/13/08) “Synthetic Mimics of Mammalian Cell Surface Receptors”
74. *Rotary Club, Lawrence KS* (11/10/08) “University Research: A Key Link for Commercialization of Bioscience Discoveries”
73. *Boston College, Department of Chemistry* (4/22/08) “Synthetic Mimics of Mammalian Cell Surface Receptors”
72. *Tufts University, Department of Chemistry* (2/5/08) “Synthetic Mimics of Mammalian Cell Surface Receptors”
71. *University of Kansas, Department of Pharmaceutical Chemistry* (10/11/07) “Synthetic Mimics of Mammalian Cell Surface Receptors: New Tools for Drug Delivery and Probes of Cellular Biology”
70. *Novartis Institutes for Biomedical Research* (10/2/07) “Synthetic Mimics of Mammalian Cell Surface Receptors: New Tools for Drug Delivery”
69. *Syracuse University, Department of Chemistry* (5/1/07) “Synthetic Mimics of Mammalian Cell Surface Receptors”
68. *Mount Sinai School of Medicine, Department of Structural and Chemical Biology – New York, NY,* (4/26/07) “Synthetic Mimics of Mammalian Cell Surface Receptors”
67. *Virginia Tech, Department of Chemistry* (4/6/07) “Synthetic Mimics of Mammalian Cell Surface Receptors”
66. *Penn State University Hershey Medical School, Dept. of Pharmacology– Hershey, PA* (3/12/07) “Synthetic Mimics of Mammalian Cell Surface Receptors: A New Strategy for Drug Delivery”
65. *University of Kansas, Dept. of Medicinal Chemistry, Lawrence, KS* (1/12/07) “Synthetic Mimics of Mammalian Cell Surface Receptors”
64. *University of West Florida, Department of Chemistry* (12/1/06) “Synthetic Mimics of Mammalian Cell Surface Receptors”
63. *New York Academy of Sciences, Chemical Biology Discussion Group* (11/9/06) “Synthetic Mimics of Mammalian Cell Surface Receptors”
62. *University of California, Santa Barbara, Department of Chemistry* (11/3/06) “Synthetic Mimics of Mammalian Cell Surface Receptors”
61. *Brown University, Department of Chemistry* (10/6/06) “Synthetic Mimics of Mammalian Cell Surface Receptors”
60. *Penn State University, Hershey Medical School Dept. of Microbiology and Immunology* (3/30/06) “Synthetic Mimics of Mammalian Cell Surface Receptors: Prosthetic Molecules that Augment Living Cells”
59. *San Diego State University, Department of Chemistry* (3/10/06) “Synthetic Mimics of Mammalian Cell Surface Receptors”
58. *San Diego State University, Department of Biology* (3/9/06) “Chemical Biology of Nuclear Hormone Receptors ”



57. *University of Karlsruhe, Germany, Department of Chemistry (2/7/06)* “Synthetic Mimics of Mammalian Cell Surface Receptors”
56. *Swiss Federal Technical Institute (ETH-Zürich) Department of Chemistry (2/6/06)* “Synthetic Mimics of Mammalian Cell Surface Receptors”
55. *University of California, Riverside Department of Chemistry (1/25/06)* “Synthetic Mimics of Mammalian Cell Surface Receptors: Prosthetic Molecules that Augment Living Cells”
54. *University of Delaware, Department of Chemistry (11/11/05)* “Synthetic Mimics of Mammalian Cell Surface Receptors”
53. *Penn State University, Cancer Center (10/22/05)* “New Approaches to Small Molecule Anticancer Agents”
52. *Penn State University, Crossover 2005 Symposium (10/14/05)* “Synthetic Modulators of Estrogen and Androgen Receptors”
51. *Colorado State University, Department of Chemistry (10/3/05)* “Synthetic Mimics of Mammalian Cell Surface Receptors: Prosthetic Molecules that Augment Living Cells”
50. *University of Minnesota, NIH Training Grant Symposium – Chemical Biology: Unlocking Nature’s Secrets (6/1/05)* “Synthetic Mimics of Mammalian Cell Surface Receptors: Novel Tools for Targeting Cells and Ligands”
49. *University of Pittsburgh, Dept. of Chemistry –Pittsburgh, PA (3/31/05)* “Synthetic Mimics of Mammalian Cell Surface Receptors: Novel Tools for Targeting Cells and Ligands”
48. *Penn State University Hershey Medical School, Dept. of Pharmacology– Hershey, PA (11/22/04)* “Synthetic Mimics of Mammalian Cell Surface Receptors: Novel Tools for Targeting Cells and Ligands”
47. *Northeast Regional Discussion Group Annual Meeting of the American Association of Pharmaceutical Scientists – Rocky Hill, CT (4/26/04)* “Synthetic Mimics of Mammalian Cell Surface Receptors: Novel Tools for Targeting Cells and Ligands”
46. *Wyeth Research, Dept. of Chemical and Screening Sciences – Cambridge, MA (4/21/04)* “Synthetic Mimics of Mammalian Cell Surface Receptors: Novel Tools for Targeting Cells and Ligands”
45. *Purdue University, Dept. of Medicinal Chemistry & Molecular Pharmacology – West Lafayette, IN (4/8/04)* “Synthetic Mimics of Mammalian Cell Surface Receptors and Related Synthetic Cellular Probes”
44. *University of North Carolina, Dept. of Chemistry – Chapel Hill, NC (3/26/04)* “Synthetic Mimics of Mammalian Cell Surface Receptors and Related Molecular Probes”
43. *The Pennsylvania State University Hershey Medical School, Division of Endocrinology – Hershey, PA (3/4/04)* “Synthetic Mimics and Probes of Cellular Receptors”
42. *Gordon Research Conference on Chemistry and Biology of Peptides – Ventura, CA (2/17/04)* “Synthetic Mimics of Mammalian Cell Surface Receptors”
41. *The Pennsylvania State University, Dept. of Chemistry – University Park, PA (11/6/03)* “Nonnatural Cellular Receptors and Related Synthetic Cellular Probes”
40. *University of Illinois, Dept. of Chemistry – Urbana/Champaign, IL (10/30/03)* “Nonnatural Cellular Receptors and Related Synthetic Cellular Probes”

39. *Michigan State University, Dept. of Chemistry – East Lansing, MI (10/1/03) “Nonnatural Cellular Receptors and Related Synthetic Cellular Probes”*
38. *Gordon Research Conference on Bioorganic Chemistry – Andover, NH (6/15/03) “Construction of Nonnatural Cellular Receptors from Synthetic Molecules”*
37. *University of Minnesota Dept. of Medicinal Chemistry – Minneapolis, MN (4/1/03) “Construction of Nonnatural Cellular Receptors and Cellular Probes from Synthetic Small Molecules”*
36. *State University of New York, Stony Brook Dept. of Chemistry – Stony Brook, NY (2/6/03) “Construction of Nonnatural Cellular Receptors and Cellular Probes from Synthetic Small Molecules”*
35. *University of Chicago Dept. of Chemistry – Chicago, IL (11/21/02) “Construction of Nonnatural Cellular Receptors from Synthetic Small Molecules”*
34. *University of California, San Francisco Dept. of Pharmaceutical Chemistry – San Francisco, CA (11/14/02) “Construction of Nonnatural Cellular Receptors from Synthetic Small Molecules”*
33. *University of Nevada, Reno Dept. of Chemistry – Reno, NV (11/8/02) “Construction of Nonnatural Cellular Receptors from Synthetic Small Molecules”*
32. *University of California, Los Angeles Dept. of Chemistry – Los Angeles, CA (11/7/02) “Construction of Nonnatural Cellular Receptors from Synthetic Small Molecules”*
31. *Cornell University Dept. of Chemistry – Ithaca, NY (11/4/02) “Construction of Nonnatural Cellular Receptors from Synthetic Small Molecules”*
30. *University of Texas at Austin Dept. of Chemistry – Austin, TX (10/3/02) “Construction of Nonnatural Cellular Receptors from Synthetic Small Molecules”*
29. *Texas A&M University Dept. of Chemistry – College Station, TX (10/2/02) “Construction of Nonnatural Cellular Receptors from Synthetic Small Molecules”*
28. *University of Texas, Southwestern Medical School Dept. of Biochemistry – Dallas, TX (10/1/02) “Construction of Nonnatural Cellular Receptors from Synthetic Small Molecules”*
27. *University of Maryland Dept. of Chemistry – College Park, MD (9/12/02) “Construction of Nonnatural Cellular Receptors from Synthetic Small Molecules”*
26. *Penn State University Super “Friday” Forum on Structure and Mechanism in Biological Pathways – University Park, PA (10/20/01) “New Strategies for Controlling Gene Expression with Synthetic Small Molecules”*
25. *Penn State University Hershey Medical School Experimental Therapeutics Group – Hershey, PA (9/27/01) “New Strategies for Controlling Gene Expression with Synthetic Small Molecules”*
24. *Penn State University LSC Slice of Science – University Park, PA (6/5/01) “New Strategies for Controlling Gene Expression with Synthetic Small Molecules”*
23. *Harvey Mudd, Claremont McKenna, Pitzer, Pomona, and Scripps Colleges – Claremont, CA (4/10/01) “New Strategies for the Design and Discovery of Anticancer Agents.”*
22. *Penn State University Toxicology Forum – University Park, PA (4/4/01) “New Strategies for Controlling Gene Expression with Synthetic Small Molecules”*

21. *Penn State University Hershey Medical Center Dept. of Pharmacology – Hershey, PA (5/15/2000)* “New Strategies for the Design and Discovery of Anticancer Agents.”
20. *Clarion University of Pennsylvania Dept. of Chemistry – Clarion, PA (3/15/2000)* “New Strategies for the Design and Discovery of Anticancer Agents.”
19. *University of Ohio at Dayton Dept. of Chemistry – Dayton, OH (3/31/2000)* “New Strategies for the Design and Discovery of Anticancer Agents.”
18. *American Chemical Society Susquehanna Valley Meeting, Lycoming College – Williamsport, PA (11/10/1999)* – "New Strategies for the Discovery of Anticancer Agents"
17. *Penn State University Center for Biomolecular Structure and Function – University Park, PA (7/31/98)* “Design and Discovery of Synthetic Ligands that Affect Protein Function”
16. *University of California San Francisco, Cancer Center – San Francisco, CA (2/4/98)* “Molecular Recognition in Synthetic and Biological Systems”
15. *University of Illinois Chicago, Dept. of Medicinal Chemistry – Chicago, IL (1/26/98)* “Molecular Recognition in Synthetic and Biological Systems”
14. *University of Notre Dame – Notre Dame, IN (1/26/98)* “Molecular Recognition in Synthetic and Biological Systems”
13. *University of Chicago, Dept. of Chemistry – Chicago, IL (1/16/98)* “Molecular Recognition in Synthetic and Biological Systems”
12. *The Pennsylvania State University, Dept. of Chemistry – University Park, PA (1/14/98)* “Molecular Recognition in Synthetic and Biological Systems”
11. *University of Iowa, Dept. of Chemistry – Iowa City, IA (12/16/97)* “Molecular Recognition in Synthetic and Biological Systems”
10. *Northwestern University, Dept. of Chemistry – Evanston, IL (12/9/97)* “Molecular Recognition in Synthetic and Biological Systems”
9. *University of Texas, Southwestern Medical School, Dept. of Biochemistry – Dallas, TX (12/8/97)* “Molecular Recognition in Synthetic and Biological Systems”
8. *Stanford University, Dept. of Chemistry – Palo Alto, CA (11/24/97)* “Molecular Recognition in Synthetic and Biological Systems”
7. *University of Southern California, Cancer Center – Los Angeles, CA (11/13/97)* “Molecular Recognition in Synthetic and Biological Systems”
6. *Harvard University School of Medicine, Dana Farber Cancer Institute – Boston, MA (6/4/97)* “Molecular Recognition in Synthetic and Biological Systems”
5. *University of Colorado, Denver, Cancer Center – Denver, CO (5/22/97)* “Molecular Recognition in Synthetic and Biological Systems”
4. *Stanford University School of Medicine, Dept. of Pharmacology – Palo Alto, CA (5/16/97)* “Molecular Recognition in Synthetic and Biological Systems”
3. *Columbia University School of Medicine, Dept. of Biochemistry – New York, NY (2/6/97)* “Molecular Recognition at the Interface of Chemistry and Biology”



2. *Tufts University, Dept. of Chemistry – Boston, MA (5/96) “Molecular Recognition at the Interface of Chemistry and Biology”*
1. *Bowdoin College, Dept. of Chemistry – Brunswick, ME (10/95) “Molecular Recognition at the Interface of Chemistry and Biology”*

#### ***Other Non-Academic Seminars, Presented***

2. *Nittany Lion Venture Capital - The Garber Fund of Penn State University – State College, PA (10/2/06) “Indigo Biosciences LLC”*; This presentation led to a commitment of investment by the Garber Fund of \$250,000 in Indigo Biosciences LLC, a start-up company co-founded by Blake R. Peterson and Jack Vanden Heuvel.
1. *Ben Franklin Technology Partners – State College, PA (7/24/06) “Indigo Biosciences LLC”*

#### **Presentations at Professional Meetings**

<sup>a</sup>Presenter; <sup>b</sup>Supervisor of Presenter; <sup>c</sup>Collaborator of Presenter; <sup>p</sup>Poster; <sup>o</sup>Oral Presentation; <sup>+</sup>Invited; <sup>‡</sup>Plenary speaker

#### ***Meetings, Contributed***

- 138.<sup>a,o</sup> **Peterson, B. R.** "The Developing MCSR High Throughput Screening Core (MCSR-HTSC)" OSUCCC MCSR User Committee Meeting – Columbus, OH, United States (11/10/21).
- 137.<sup>a,o</sup> Wu, M.; **Peterson, B. R.** "The Developing MCSR High Throughput Screening Core (MCSR-HTSC)" OSU COP Deans Corporate Council – Columbus, OH, United States (10/29/21).
- 136.<sup>a,o</sup> Wu, M.; **Peterson, B. R.** "The Developing MCSR High Throughput Screening Core (MCSR-HTSC)" OSUCCC Leukemia Research Program Meeting – Columbus, OH, United States (10/22/21).
- 135.<sup>p</sup> Lapurga, G.; Sun, S.; Savardekar, S. Carlson, E. J.; **Peterson, B. R.** Carson, W. E. "Characterization of a Novel Compound that Inhibits Peroxynitrite Generation by Myeloid Derived Suppressor Cells" 22<sup>nd</sup> OSUCCC Annual Scientific Meeting – Columbus, OH, United States (10/14/21).
- 134.<sup>p</sup> Bennett, C.; **Peterson, B. R.** "Medicinal Chemistry Shared Resource Synthetic Team" 22<sup>nd</sup> OSUCCC Annual Scientific Meeting – Columbus, OH, United States (10/14/21).
- 133.<sup>p</sup> Andres, A.; Rane, D; Peterson, B. R. "Quantification of engagement of the Taxol binding site of tubulin by small molecules in living cells" 58<sup>th</sup> MIKIW Meeting – Madison, WI, United States (04/23/21-04/25/21). Presented Angelo Andres.
- 132.<sup>p</sup> Yin, Y; Rane, D; Phaniraj, S.; Harvey, S.; Wysocki, V. H.; Peterson, B. R. "Studies of Pore-Forming Peptides in SpyDiscs by TEM/CryoEM and Native Mass Spectrometry" 58<sup>th</sup> MIKIW Meeting – Madison, WI, United States (04/23/21-04/25/21). Presented by Yuwen Yin.
- 133.<sup>a,o</sup> **Peterson, B. R.** "The Developing MCSR High Throughput Screening Core (MCSR-HTSC)" Pelotonia Research Acceleration Roundtable – Columbus, OH, United States (8/6/21).
- 131.<sup>a,p</sup> Wu, M.; **Peterson, B. R.** "The Developing Medicinal Chemistry Shared Resource High Throughput Screening Core" 22<sup>nd</sup> OSUCCC Annual Scientific Meeting – Columbus, OH, United States (10/14/21).

- 130.<sup>c,p</sup> Lapurga, G.; Sun, S.; Savardekar, H.; Carlson, E. J.; **Peterson, B. R.**; Carson, W. E.; "Characterization of a Novel Compound that Inhibits Peroxynitrite Generation by Myeloid Derived Suppressor Cells" 22<sup>nd</sup> OSUCCC Annual Scientific Meeting – Columbus, OH, United States (10/14/20).
- 129.<sup>a,o</sup> **Peterson, B. R.** "Phenotypic Drug Discovery and Identification of Protein Targets of Small Molecules" 21<sup>st</sup> OSUCCC Annual Scientific Meeting – Columbus, OH, United States (10/13/20).
- 128.<sup>a,o</sup> **Peterson, B. R.** "Subcellular Targeting for Phenotypic Drug Discovery" OSUCCC Translational Therapeutics Annual Retreat – Columbus, OH, United States (1/31/20).
- 127.<sup>a</sup> **Peterson, B. R.** "A Chemical Biology Approach to Academic Drug Discovery" 20<sup>th</sup> OSUCCC Annual Scientific Meeting – Columbus, OH, United States (05/08/19).
- 126.<sup>b,p</sup> Lei, B.; **Peterson, B. R.** "Synthesis of Coumarin-Derived Fluorophores that Target Small Molecules to the Endoplasmic Reticulum of Mammalian Cells" 57<sup>th</sup> MIKIW Meeting – Lawrence, KS, United States (04/12/19-04/14/19). Presented by Bailin Lei.
- 125.<sup>b,p</sup> Phaniraj, S.; **Peterson, B. R.** "Nanodisc Technology for Studies of Small Molecule-Membrane Interactions" 57<sup>th</sup> MIKIW Meeting – Lawrence, KS, United States (04/12/19-04/14/19). Presented by Sahishna Phaniraj.
- 124.<sup>b,p</sup> Andres, A.; **Peterson, B. R.** "A Novel Approach for Studying Cellular Signal Transduction Using Artificial Cell Surface Receptors" 57<sup>th</sup> MIKIW Meeting – Lawrence, KS, United States (04/12/19-04/14/19). Presented by Angelo Andres.
- 123.<sup>b,p</sup> Smith, T. J.; Gao, Z.; **Peterson, B. R.** "Discovery of Small Molecule Inhibitors of P-Glycoprotein by High Content Screening with a Fluorescent Mimic of Taxol" 57<sup>th</sup> MIKIW Meeting – Lawrence, KS, United States (04/12/19-04/14/19). Presented by Tomas Smith.
- 122.<sup>b,p</sup> Gao, Z.; Walls, B.; Boumelhem, F.; Woydziak, Z. R.; **Peterson, B. R.** "Identification of a Fluorinated Pyronin Fluorophore that Enables Visible Blue Light to Rapidly Depolarize Mitochondria" 57<sup>th</sup> MIKIW Meeting – Lawrence, KS, United States (04/12/19-04/14/19). Presented by Zhe (Gavin) Gao.
- 121.<sup>b,p</sup> Knewton, K.; Rane, D.; **Peterson, B. R.** "Targeting Fluorescent Sensors to Endoplasmic Reticulum Membranes Enables Detection of Peroxynitrite During Phagocytosis" 57<sup>th</sup> MIKIW Meeting – Lawrence, KS, United States (04/12/19-04/14/19). Presented by Kelsey Knewton.
- 120.<sup>b,o</sup> Yin, Y.; **Peterson, B. R.** "Phorbol Carbamates as Novel Tools for Controlling Cellular Signal Transduction" 57<sup>th</sup> MIKIW Meeting – Lawrence, KS, United States (04/12/19-04/14/19). Presented by Yuwen Yin.
- 119.<sup>o,b</sup> Gao, Z.; Woydziak, Z. R.; **Peterson, B. R.** "Identification of a Fluorophore that Enables Blue Light to Rapidly Depolarize Mitochondria" 34<sup>th</sup> Mossberg Honors Symposium – Lawrence, KS (1/16/19). Presented by Zhe "Gavin" Gao.
- 118.<sup>b,o</sup> Knewton, K. E.; **Peterson B. R.** "Synergistic cytotoxicity of a HER2-targeted antibody-colchicinol methyl ether conjugate and an endosome disruptive peptide" Midwest Drug Development Conference – Omaha, NE, United States (10/1/18). Presented by Kelsey Knewton.



- 117.<sup>b,p</sup> Yin, Y.; Andres, A.; Phaniraj, S.; **Peterson, B. R.** "Towards Synthetic Cell Surface Receptors that Activate PKC-Mediated Signal Transduction" Biomedical Sciences Symposium – Lawrence, KS, United States (04/12/18). Presented by Yuwen Yin.
- 116.<sup>b,o</sup> Perera, C. T.; **Peterson, B. R.**; Prisinzano, T. E. "The Synthetic Chemical Biology Core (SCB): A Resource for Research in Chemical Biology" Biomedical Sciences Symposium – Lawrence, KS, United States (04/12/18). Presented by Chamani Perera.
- 115.<sup>b,o</sup> Pahattuge, T. N.; Jackson, J. M.; Conner, J. D.; Shavaliier, A.; Perera, C.; Givens, R. S.; **Peterson, B. R.**; Soper, S. A. "Photocleavable Linker for the Reagent-Less Release of Rare Cancer Biomarkers Purified by Microfluidic Affinity Selection" Biomedical Sciences Symposium – Lawrence, KS, United States (04/12/18). Presented by Thilanga Pahattuge.
- 114.<sup>b,o</sup> Andres, A.; **Peterson, B. R.** "A Novel Approach for Studying Cellular Signal Transduction Using Artificial Cell Surface Receptors" Biomedical Sciences Symposium – Lawrence, KS, United States (04/12/18). Presented by Angelo Andres.
- 113.<sup>b,p</sup> Andres, A.; **Peterson, B. R.** "Synthetic Mimics of Cytochrome b5 as Cell Surface Receptors" 56<sup>th</sup> MIKI Meeting – Chicago, IL, United States (04/06/18-04/8/18). Presented by Angelo Andres.
- 112.<sup>b,p</sup> Yin, Y.; Andres, A.; Phaniraj, S.; **Peterson, B. R.** "Towards Synthetic Cell Surface Receptors that Activate PKC-Mediated Signal Transduction" 56<sup>th</sup> MIKI Meeting – Chicago, IL, United States (04/06/18-04/8/18). Presented by Yuwen Yin.
- 111.<sup>b,o</sup> Phaniraj, S.; **Peterson, B. R.** "Nanodisc technology for detection of small molecule - membrane interactions" 56<sup>th</sup> MIKI Meeting – Chicago, IL, United States (04/06/18-04/8/18). Presented by Sahishna Phaniraj.
- 110.<sup>b,o</sup> Knewton, K.; Rane, D.; Perera, C.; **Peterson, B. R.** "Detection of endogenous cellular peroxynitrite by targeting fluorescent sensors to the endoplasmic reticulum" 56<sup>th</sup> MIKI Meeting – Chicago, IL, United States (04/06/18-04/8/18). Presented by Kelsey Knewton.
- 109.<sup>o,b</sup> Gao, Z.; Lee, M.; **Peterson, B. R.** "Pacific Blue Taxoids: New Fluorescent Probes of the Anticancer Properties of Taxol" 33<sup>rd</sup> Graduate Honors Symposium – Lawrence, KS (1/10/18). Presented by Zhe "Gavin" Gao.
- 108.<sup>p,b</sup> Love, N.; Rane, D.; Asedi, S; **Peterson, B. R.** "Synthesis of Analogues of Calcofluor White as Antifungal Agents" *Midwest Regional American Chemical Society Meeting – Lawrence, KS (10/19/17)*. Presented by Nick Love.
- 107.<sup>o,b</sup> Gao, G.; Lee, M.; **Peterson, B. R.** "Pacific Blue Taxoids: New Fluorescent Probes of the Anticancer Properties of Taxol" *Midwest Regional American Chemical Society Meeting – Lawrence, KS (10/19/17)*. Presented by Gavin Gao.
106. <sup>o,b</sup> Phaniraj, S.; Gao, G.; Rane, D.; **Peterson, B. R.** "Resorufamines as fluorescent probes of the endoplasmic reticulum" *Midwest Regional American Chemical Society Meeting – Lawrence, KS (10/19/17)*. Presented by Sahishna Phaniraj.



- 105.<sup>p,b</sup> Knewtson, K. E.; Perera, C.; Gao, Z.; Lee, M.; Hymel, D.; **Peterson, B. R.** "Synthetic Lethal Targeting of Growth Factor Receptors" *Midwest Regional American Chemical Society Meeting – Lawrence, KS (10/19/17)*. Presented by Kelsey Knewtson.
- 104.<sup>p,b</sup> Andres, A.; **Peterson, B. R.** "Synthetic Mimics of Cytochrome b5 as Cell Surface Receptors" *Midwest Regional American Chemical Society Meeting – Lawrence, KS (10/19/17)*. Presented by Angelo Andres.
- 103.<sup>p,b</sup> Yin, Y.; Perera, C.; Hymel, D.; **Peterson, B. R.** "Towards Synthetic Cell Surface Receptors that Control Cellular Signal Transduction" *Midwest Regional American Chemical Society Meeting – Lawrence, KS (10/19/17)*. Presented by Yuwen Yin.
- 102.<sup>o,a+</sup> **Peterson, B. R.** "Fluorescent Probes of Cancer Biology" Lightner Conference, *University of Nevada, Reno (8/5/17)*
- 101.<sup>b,p</sup> Knewtson, K. E.; Perera, C.; Gao, Z.; Lee, M.; Hymel, D.; **Peterson, B. R.** "Synthetic Lethal Targeting of Growth Factor Receptors" *Gordon Conference on Bioorganic Chemistry – Andover, NH (6/12/17-6/16/17)*. Presented by Kelsey Knewtson.
- 100.<sup>o,a+</sup> **Peterson, B. R.** "Discovery of New Therapeutic Strategies Using Fluorescent Molecular Probes" *Chemical Tools for Complex Biological Systems, Janelia Conference, Janelia (HHMI) Research Campus, Ashburn VA (4/26/17)*.
- 99.<sup>b,o</sup> Gao, G.; Lee, M.; **Peterson, B. R.** "Pacific Blue Taxoids" 55<sup>th</sup> MIKI Meeting – Minneapolis, MN, United States (04/07/17-04/9/17). Presented by Gavin Gao.
- 98.<sup>b,p</sup> Yin, Y.; **Peterson, B. R.** "Towards Synthetic Cell Surface Receptors that Control Cellular Signal Transduction" 55<sup>th</sup> MIKI Meeting – Minneapolis, MN, United States (04/07/17-04/9/17). Presented by Yuwen Yin.
- 97.<sup>b,p</sup> Phaniraj, S.; Gao, G.; Rane, D.; **Peterson, B. R.** "Resorufamines as fluorescent probes of the endoplasmic reticulum" 55<sup>th</sup> MIKI Meeting – Minneapolis, MN, United States (04/07/17-04/9/17). Presented by Sahishna Phaniraj.
- 96.<sup>a,o,+,‡</sup> **Peterson, B. R.** "Discovery of New Therapeutic Strategies Using Fluorescent Molecular Probes" Plenary lecture at the 2<sup>nd</sup> International Caparica Conference on Chromogenic and Emissive Materials, *Caparica (Lisbon) Portugal (9/6/16)*.
- 95.<sup>b,p</sup> Phaniraj, S.; Perera, C.; Hymel, D.; Douglas, J. T.; **Peterson, B. R.** "Functional and Structural Studies of Peptidomimetics that Disrupt Endosomes of Mammalian Cells" 54<sup>th</sup> MIKI Meeting – Iowa City, IA, United States (04/08/16-04/10/16). Presented by Sahishna Phaniraj.
- 94.<sup>b,p</sup> Lee, M.M.; **Peterson, B. R.** "Quantification of Small Molecule-Protein Interactions By FRET Between Endogenous Tryptophan Residues and the Pacific Blue Fluorophore" 54<sup>th</sup> MIKI Meeting – Iowa City, IA, United States (04/08/16-04/10/16). Presented by Molly Lee.
- 93.<sup>b,p</sup> Gao, Z.; Lee, M. M.; **Peterson, B. R.** "Pacific Blue-Taxoids: New Fluorescent Probes of the Anticancer Properties of Taxol" 54<sup>th</sup> MIKI Meeting - Iowa, IA, United States (04/08/16-04/10/16). Presented by Zhe Gao.

- 92.<sup>b,o</sup> Knewton, K. E.; Perera, C.; Gao, Z.; Hymel, D.; Lee, M.; **Peterson, B. R.** "Synthetic lethal targeting: a new anticancer strategy" 54<sup>th</sup> MIKI Meeting - Iowa City, IA, United States (04/08/16-04/10/16). Presented by Kelsey E. Knewton
- 91.<sup>b,p</sup> Henderson, C. L.; Hymel, D.; **Peterson, B. R.** "A New Approach for Synthesis of the Fluo-4 Fluorescent Calcium Sensor and Applications for Studies of Endosome Disruption" 54<sup>th</sup> MIKI Meeting – Iowa City, IA, United States (04/08/16-04/10/16). Presented by Casey Henderson.
- 90.<sup>b,p</sup> Knewton K.; Henderson, C.; Bender, A.; **Peterson, B. R.** "Phenotypic Screening of Small Molecules Against Danio Rerio (Zebrafish) Embryos" 53<sup>rd</sup> MIKI Meeting – Lawrence, KS, United States (04/10/15-04/12/15). Presented by Kelsey Knewton.
- 89.<sup>b,p</sup> Gao, Z.; Perera, C.; **Peterson, B. R.** "Synthesis and Preliminary Evaluation of Fluorescent Ligands of Prostate Specific Membrane Antigen (PSMA)" 53<sup>rd</sup> MIKI Meeting – Lawrence, KS, United State (04/10/15- 04/12/15). Presented by Zhe Gao.
88. <sup>a,o,+</sup> **Peterson, B. R.** "Design and Synthesis of Fluorescent Molecular Probes Based on Principles of Medicinal Chemistry" 1<sup>st</sup> International Caparica Conference on Chromogenic and Emissive Materials, *Caparica (Lisbon) Portugal (9/9/14)*.
- 87.<sup>b,p</sup> Lee M.; **Peterson, B. R.** "Synthetic probes of mechanical forces involved in receptor-ligand interactions" 248<sup>th</sup> ACS Meeting – San Francisco, CA, United States (8/10/14-8/14/14). Presented by Molly Lee.
- 86.<sup>b,p</sup> Gao, Z.; **Peterson, B. R.** "Synthesis and Preliminary Evaluation of Fluorescent Ligands of Prostate Specific Membrane Antigen (PSMA)" 52<sup>nd</sup> MIKI Meeting – Chicago, IL, United State (04/11/14-04/13/14). Presented by Zhe Gao.
- 85.<sup>b,p</sup> Lee M.; **Peterson, B. R.** "Practical Syntheses of Fluorinated Fluorophores Enables Construction of Diverse Biosensors" 52<sup>nd</sup> MIKI Meeting – Chicago, IL, United States (04/11/14-04/13/14). Presented by Molly Lee.
- 84.<sup>b,p</sup> Gao, Z.; **Peterson, B. R.** "Synthesis and preliminary evaluation of fluorescent ligands of prostate specific membrane antigen (PSMA)" 52<sup>nd</sup> MIKI Meeting – Chicago, IL, United States (04/11/14-04/13/14). Presented by Gavin Gao.
- 83.<sup>b,p</sup> Knewton, K.; Perera, C.; Hymel, D.; **Peterson, B. R.** "Exploring the mechanism of release of small molecules from endosomes triggered by endosome disruptive peptides" 52<sup>nd</sup> MIKI Meeting – Chicago, IL, United States. (04/11/14-04/13/14). Presented by Kelsey Knewton.
82. <sup>a,o,+</sup> **Peterson, B. R.** "Synthetic cell surface receptors for delivery of therapeutics and probes" 48<sup>th</sup> *Midwest Regional American Chemical Society Meeting (10/17/13)*.
- 81.<sup>b,p</sup> Hymel, D. H.; Woydziak, Z.; **Peterson, B. R.** "Detection of Protein-Protein Interactions and Inhibitors Thereof by Proximity-Driven Nucleophilic Aromatic Substitution of a Lysine-Linked Fluorophore" 51<sup>st</sup> MIKI Meeting – Minneapolis, MN, United States. (04/12/13-04/14/13). Presented by David Hymel.
- 80.<sup>b,p</sup> Fu, L.; Meinig, J. M.; **Peterson, B. R.** "Novel Fluorophores Enable Delivery of a Cytotoxic Warhead to the Endoplasmic Reticulum" 51<sup>st</sup> MIKI Meeting – Minneapolis, MN, United States. (04/12/13-04/14/13). Presented by Matt Meinig.
- 79.<sup>b,p</sup> Lee, M.; Hymel, D. H.; Perera, C.; **Peterson, B. R.** "Förster Resonance Energy Transfer from Pacific Blue to Pennsylvania Green: a New Tool for Chemical Biology" 51<sup>st</sup> MIKI Meeting – Minneapolis, MN, United States. (04/12/13-04/14/13). Presented by Molly Lee.

- 78.<sup>o†</sup> **Peterson, B. R.** “Synthetic Compounds that Enable Uptake and Escape of Cargo from Endosomes of Living Mammalian Cells” *47<sup>th</sup> Midwest Regional American Chemical Society Meeting* (10/26/12)
- 77.<sup>o†</sup> **Peterson, B. R.** “Conformationally-Constrained Kinked Peptides Potently Mediate Escape of Cargo from Early Endosomes” *Oligonucleotide Delivery: Biology, Engineering and Development Conference, Vienna, Austria* (10/9/12)
- 76.<sup>o†</sup> **Peterson, B. R.** “Synthesis of fluorophores that reveal dynamic aspects of physiology in vivo in *C. elegans*” *46<sup>th</sup> Midwest, 39<sup>th</sup> Great Lakes, Joint Regional American Chemical Society Meeting* (10/19/11)
- 75.<sup>p</sup> Hymel, D.; Cai, S.; Henkhaus, R.; **Peterson, B. R.** “Synthetic Mimics of Free Cholesterol that Avidly Bind Living Mammalian Cells” *45<sup>th</sup> American Chemical Society Midwest Regional Meeting* (10/27/10-10/29/10). Presented by David Hymel.
- 74.<sup>o,a,+</sup> **Peterson, B. R.** “Synthetic Mimics of Free Cholesterol: New Tools for Delivery of Therapeutics and Probes” *45<sup>th</sup> American Chemical Society Midwest Regional Meeting* (10/29/10)
- 73.<sup>b,o</sup> Heppert, J. K.; Bender, A. M.; Woydziak, Z.; Hudson, M. L.; **Peterson, B. R.**; Ackley, B. D. “Tuning the pKa of Fluorophores to Monitor pH-Dependent Events in vivo” *Neuronal Development, Synaptic Function and Behavior, Madison, WI* (2010).
- 72.<sup>b,p</sup> Woydziak, Z. R.; Hymel, D. H.; **Peterson, B. R.** "A practical synthesis of 4-Carboxy-Pennsylvania Green and labeling of microtubules of mammalian cells with fluorescent Paclitaxel derivatives." *25<sup>th</sup> Graduate Honors Symposia – Lawrence, Kansas, United States.* (04/15/10). Presented by Zachary. R. Woydziak.
- 71.<sup>b,p</sup> Woydziak, Z. R.; Hymel, D. H.; **Peterson, B. R.** "A practical synthesis of 4-Carboxy-Pennsylvania Green and labeling of microtubules of mammalian cells with fluorescent Paclitaxel derivatives." *48<sup>th</sup> MIKI Meeting – Chicago, Illinois, United States.* (04/09/10-04/11/10). Presented by Zachary. R. Woydziak.
- 70.<sup>o,a,+</sup> **Peterson, B. R.** "Yeast Three Hybrid Systems for Identification of Protein Targets of Small Molecules" *NIH MLPCN Meeting – Boston, MA, United States,* (11/9/09-11/10/09).
- 69.<sup>b,o</sup> Wu, R.; Mottram, L. F.; Shanmugam, K. S.; Maddox, E.; **Peterson, B. R.** "Novel rhodamines for imaging of targeted biomolecules in living mammalian cells." *238<sup>th</sup> ACS National Meeting - Washington, DC, United States,* (08/16/09-08/20/09). Oral ORGN 070. Presented by Runzhi Wu.
- 68.<sup>a,o,+</sup> **Peterson, B. R.** “Synthetic Mimics of Mammalian Cell Surface Receptors” *9<sup>th</sup> Winter Conference on Medicinal and Bioorganic Chemistry – Steamboat Springs, CO,* (1/25/09-1/29/09).
- 67.<sup>a,o,+</sup> **Peterson, B. R.** “Chemical Disruptors of Early/Recycling Endosomes” *Eli Lilly Symposium – University of Kansas,* (10/01/08-10/02/08).
- 66.<sup>a,p,+</sup> **Peterson, B. R.** “11 $\beta$ -Alkyl- $\Delta^9$ -19-Nortestosterone Derivatives: High-Affinity Ligands and Potent Partial Agonists of the Androgen Receptor” *Department of Defense IMPACT Prostate Cancer Meeting - Atlanta, GA,* (9/5/07-9/8/07).
65. **Peterson, B. R.**; Thompson, D. A.; Co-organizers “Drug Delivery Symposium” *234<sup>th</sup> ACS National Meeting - Boston, MA,* (8/19/07-8/23/07).
- 64.<sup>a,o,+</sup> **Peterson, B. R.** “Synthetic Mimics of Mammalian Cell Surface Receptors: New Tools for Drug Delivery” *234<sup>th</sup> ACS National Meeting - Boston, MA,* (8/19/07-8/23/07).
- 63.<sup>b,p</sup> Sun, Q.; Edathil, J.; Wu, R.; Cameron, C. E.; **Peterson, B. R.** “A One-Pot Method for the



Synthesis of Nucleoside Triphosphates from Nucleoside H-Phosphonate Monoesters” 234<sup>th</sup> ACS National Meeting - Boston, MA, (8/19/07-8/23/07). Poster ORGN 147. Presented by Qi Sun and Jocelyn Edathil.

- 62.<sup>b,o</sup> Sun, Q.; Athavankar, S.; **Peterson, B. R.** “Mimicry of exposed phosphocholine on damaged cells: Synthetic cell surface receptors that bind C-reactive protein promote apoptosis of lymphocytes” 234<sup>th</sup> ACS National Meeting - Boston, MA, (8/19/07-8/23/07). Oral ORGN 966. Presented by Qi Sun.
- 61.<sup>b,o</sup> Edathil, J. P.; Graci, J. D.; Cameron, C. E.; **Peterson, B. R.** " Lethal mutagenesis of RNA viruses: Design of artificial nucleosides as antiviral agents" 234<sup>th</sup> ACS National Meeting - Boston, MA, (8/19/07-8/23/07). Oral Presentation ORGN 965. Presented by J.P. Edathil.
- 60.<sup>b,p</sup> Edathil, J. P.; Graci, J.D.; Cameron, C.E.; **Peterson, B. R.** Synthetic ribonucleoside analogs as mutagenic antiviral agents " 234<sup>th</sup> ACS National Meeting - Boston, MA, (8/19/07-8/23/07). Poster ORGN 170. Presented by J. P. Edathil.
- 59.<sup>b,p</sup> Mottram L. F.; Boonyarattanakalin, S.; Kovel, R. E.; **Peterson, B. R.** “The Pennsylvania Green Fluorophore: A Hybrid of Oregon Green and Tokyo Green for the Construction of Hydrophobic and pH-Insensitive Molecular Probes” *Huck Institutes of the Life Sciences Crossover Symposium*, Penn State University - University Park, PA (10/12/06). Poster 15. Presented by L. F. Mottram.
- 58.<sup>b,p</sup> Edathil, J. P.; Graci, J. D.; Cameron, C. E.; **Peterson, B. R.** “Synthetic Ribonucleosides as Mutagenic Antiviral Agents” *Huck Institutes of the Life Sciences Crossover Symposium*, Penn State University - University Park, PA (10/12/06). Poster 46. Presented by J. Edathil.
- 57.<sup>b,p</sup> Mottram, L. F.; Boonyaratanakalin, S.; Kovel, R; **Peterson, B. R.** "The Pennsylvania Green Fluorophore: A hybrid of Oregon Green and Tokyo Green for the Construction of Hydrophobic and pH-Insensitive Molecular Probes” 232<sup>nd</sup> ACS National Meeting - San Francisco, CA, (9/10/06-9/14/06). Poster ORGN 586. Presented by L. F. Mottram.
- 56.<sup>b,o</sup> Mottram, L. F.; MacBride, M. M.; **Peterson, B. R.** "Chimeric ligands that heterodimerize Hsp90 and estrogen receptor proteins" 232<sup>nd</sup> ACS National Meeting - San Francisco, CA, (9/10/06-9/14/06). ORGN 678. Presented by L. F. Mottram.
- 55.<sup>b,p</sup> Edathil, J. P.; Graci, J. P.; Cameron, C. E.; **Peterson, B. R.** “Synthetic Ribonucleosides as Mutagenic Antiviral Agents” 25<sup>th</sup> Summer Symposium in Molecular Biology: Frontiers in Metallobiochemistry - University Park, PA (6/7/06-6/10/06). Poster 18. Presented by J. Edathil.
- 54.<sup>b,p</sup> Mottram, L. F.; Boonyaratanakalin, S.; Kovel, R; **Peterson, B. R.** "The Pennsylvania Green Fluorophore: A Hybrid of Oregon Green and Tokyo Green for the Construction of Hydrophobic and pH-Insensitive Molecular Probes” *Mid-Atlantic Regional American Chemical Society Meeting (MARM)- Hershey, PA* (6/4/06-6/7/06). Poster 313. Presented by L. Mottram
- 53.<sup>a,o,+</sup> **Peterson, B. R.** “Synthetic Mimics of Mammalian Cell Surface Receptors” *Pacificchem 2005, Honolulu, HI* (12/17/05).
- 52.<sup>b,p</sup> Heldreth, B.; **Peterson, B. R.** “Synthetic Antiandrogens as Anticancer Agents” *Crossover 2005-The Pennsylvania State University, University Park, PA* (10/13/05-10/14/05). Presented by B. Heldreth.
- 51.<sup>c,p</sup> Sambhy, V.; MacBride, M.M.; **Peterson, B. R.**; Sen, A. "Novel AgBr Nanoparticle Containing Antibacterial Composites" 230<sup>th</sup> American Chemical Society National Meeting – Washington, DC (8/28/05-9/1/05). Presented by V. Sambhy.
- 50.<sup>c,p</sup> Tandukar, S.; Belz, M. T.; MacBride, M. M.; **Peterson, B. R.**; Sen, A. "Synthesis and structure – activity relation in polyallylamine with pendant quaternary imidazolium groups as antibacterial

agents" 230<sup>th</sup> American Chemical Society National Meeting – Washington, DC (8/28/05-9/1/05). Presented by S. Tandukar.

- 49.<sup>b,p</sup> Edathil, J. P.; Harki, D. A.; Graci, J. P.; Cameron, C. E.; **Peterson, B. R.** “Synthetic Ribonucleosides as Mutagenic Antiviral Agents” *American Society for Virology, 24<sup>th</sup> Annual Meeting – University Park, PA* (6/18/05-6/22/05). Poster PI-6. Presented by J. Edathil.
- 48.<sup>b,p</sup> Feltz, R. J.; Harki, D. A.; Graci, J. D.; Cameron, C. E.; **Peterson, B. R.** “Universal Ribonucleosides as Antiviral Agents” *American Society for Virology, 24<sup>th</sup> Annual Meeting – University Park, PA* (6/18/05-6/22/05). Poster PI-5. Presented by R. Feltz.
- 47.<sup>c,p</sup> Graci, J. D.; Harki, D. A.; Castro, C.; Cameron, C. E.; **Peterson, B. R.** “Synthesis of a Universal 5-Nitroindole Ribonucleoside that Has Antiviral Activity Due to Polymerase Inhibition” *American Society for Virology, 24<sup>th</sup> Annual Meeting – University Park, PA* (6/18/05-6/22/05). Poster PI-4. Presented by J. Graci.
- 46.<sup>a,p</sup> Mottram, L. F.; MacBride M. M.; **Peterson, B. R.** “Novel Anticancer Agents that Block Dissociation of Hsp90 from Estrogen Receptors in Breast Cancers” *Era of Hope, Department of Defense Breast Cancer Research Meeting - Philadelphia, PA* (6/8/05-6/11/05).
- 45.<sup>c,p</sup> Cheng, J.; Xu, J. Y.; Martin, S. E.; Dykstra, S.; **Peterson, B. R.**; Winograd N. "Characterizing peptides on beads by ToF-SIMS with C60" 228<sup>th</sup> American Chemical Society National Meeting - Philadelphia, PA (8/22/04-8/26/04). Presented by J. Cheng.
- 44.<sup>a,p</sup> Boonyarattanakalin, S.; Martin, S. E.; Dykstra, S.; **Peterson, B. R.** “Synthetic Mimics of Small Mammalian Cell Surface Receptors” *Gordon Conference on Bioorganic Chemistry – Andover, NH* (6/13/04-6/18/04).
- 43.<sup>b,p</sup> Tamosauskas, E.; Mottram, L.; **Peterson, B. R.** "Synthesis of a Small Molecule Designed to Heterodimerize Streptavidin ad p38 MAP Kinase" 229<sup>th</sup> American Chemical Society National Meeting - San Diego, CA (3/13/05-3/17/05). Poster CHED 561. Presented by E. Tamosauskas.
- 42.<sup>b,o</sup> Boonyarattanakalin, S.; **Peterson, B. R.** “Endocytic Drug Delivery by a Synthetic Receptor: Enabling Vancomycin to Eliminate Bacterial Pathogens within Mammalian Cells” 229<sup>th</sup> American Chemical Society National Meeting – San Diego, CA (3/13/05-3/17/05). ORGN 919. Presented by S. Boonyarattanakalin.
- 41.<sup>b,p</sup> Boonyarattanakalin, S.; Martin, S. E.; Dykstra, S. A.; **Peterson, B. R.** “Synthetic Mimics of Mammalian Cell Surface Receptors” 229<sup>th</sup> American Chemical Society National Meeting – San Diego, CA (3/13/05-3/17/05). Poster ORGN 703. Presented by S. Boonyarattanakalin.
- 40.<sup>a,+</sup> **Peterson, B. R.** *Crossover 2004, Penn State University* (10/20/04-10/21/04); Invited Chair of Session IV – Drug Discovery.
- 39.<sup>c,p</sup> Cheng, J.; Xu, J.; Martin, S. E.; Dykstra, S.; **Peterson, B. R.**; Winograd, N. “Developing Combinatorial on-bead Assay with Imaging TOF-SIMS and a C60 Ion” *Crossover 2004, Penn State University* (10/20/04-10/21/04).
- 38.<sup>c,p</sup> Cameron, C. E.; Graci, J. D.; Harki, D. A.; Edathil, J.; Barr, E. W.; Bollinger, J. M.; **Peterson, B. R.** “Lethal Mutagens: A Promising New Class of Antiviral Agents” *Crossover 2004, Penn State University* (10/20/04-10/21/04).
- 37.<sup>b,p</sup> MacBride, M. M.; Belman, J.; **Peterson, B. R.** “Discovery of Novel Antiestrogens with Fluorescent Cellular Sensors” *Crossover 2004, Penn State University* (10/20/04-10/21/04).
- 36.<sup>b,p</sup> Edathil, J.; Harki, D.A.; Graci, J.D.; Cameron, C. E.; **Peterson, B. R.** “Synthetic Ribonucleosides as Mutagenic Antiviral Agents” *Crossover 2004, Penn State University* (10/20/04-10/21/04).



- 35.<sup>a,p</sup> DeGrazia, M. J.; Thompson J.; Vanden Heuvel, J. P.; **Peterson, B. R.** “Synthesis of a high-affinity PPARgamma ligand for high-throughput fluorescence polarization assays” *Crossover 2004, Penn State University* (10/20/04-10/21/04).
- 34.<sup>c,p</sup> Hu, J.; Martin, S. E.; **Peterson, B. R.**; August, A. “Characterization of the Signaling Properties of a Novel Nonnatural Synthetic Fc Receptor for IgG” *Hematopoiesis and Immune Cell Function, Penn State University 23<sup>rd</sup> Summer Symposium in Molecular Biology – University Park, PA* (7/24/02-7/27/02); Presented by J. Hu.
- 33.<sup>a,p</sup> Boonyarattanakalin, S.; Martin, S. E.; Dykstra, S.; **Peterson, B. R.** “Synthetic Mimics of Small Mammalian Cell Surface Receptors” *Gordon Conference on Bioorganic Chemistry – Andover, NH* (6/13/04-6/18/04).
- 32.<sup>c,p</sup> Mercer, J. C.; Mottram, L. F.; **Peterson, B. R.**; August, A. “Identification of a New Member of the NFAT Activation Pathway Using Affinity Purification of Binding Partners for a Novel NFAT Inhibitor” *Hematopoiesis and Immune Cell Function, Penn State University 23<sup>rd</sup> Summer Symposium in Molecular Biology – University Park, PA* (7/24/02-7/27/02); Presented by J. Mercer.
- 31.<sup>b,o</sup> Harki, D. A.; Cameron, C. E.; **Peterson, B. R.** “Synthetic Ribonucleosides that Promote Lethal Mutagenesis: New Avenues to Combat RNA Virus Infection” *227<sup>th</sup> American Chemical Society National Meeting – Anaheim, CA* (3/28/04-4/1/04). Presented by D. Harki.
- 30.<sup>b,p</sup> Harki, D.A.; Cameron, C. E.; **Peterson, B. R.** “Synthetic ribonucleosides that promote lethal mutagenesis: Synthesis and antiviral evaluation of indole and cytidine derivatives” *227<sup>th</sup> American Chemical Society National Meeting – Anaheim, CA* (3/28/04-4/1/04). Presented by D. Harki.
- 29.<sup>b,p</sup> Bringman, R.; Muddana, S. S.; **Peterson, B. R.** “Estrone oximes as metabolically stable estrogen receptor ligands” *227<sup>th</sup> American Chemical Society National Meeting – Anaheim, CA* (3/28/04-4/1/04). Presented by R. Bringman.
- 28.<sup>c</sup> Ismail, R.; Potts, C.; Roche, K; Briggs, M; **Peterson, B. R.** “Methodologies to Aid in the Automation of Cell Based Assays: Detection of Protein Palmitoylation on the IN Cell 300 Analyzer 3000” *Society for Biomolecular Screening Annual Conference – Portland, OR* (9/21/03-9/25/03). Poster P06001. Presented by R. Ismail.
- 27.<sup>a,o</sup> **Peterson, B. R.** “Tools for the Display of Small Molecules to Target Proteins: Estrogen Receptor-Based Yeast Three Hybrid Systems” *226<sup>th</sup> American Chemical Society National Meeting – New York, NY* (9/7/03-9/11/03). Presentation ORGN 697.
- 26.<sup>b,p</sup> Sivakumar, S.; Creaser, S. P and **Peterson, B. R.** “Solid phase synthesis of fluorescent Ras-mimetic lipopeptides: Novel cell-permeable substrates of protein palmitoyl acyltransferase” *226<sup>th</sup> American Chemical Society National Meeting – New York, NY* (9/7/03-9/11/03). Poster ORGN 61. Presented by S. Sivakumar.
- 25.<sup>b,p</sup> DeGrazia, M. J.; Thompson J.; Vanden Heuvel, J. P.; **Peterson, B. R.** “Synthesis of a high-affinity PPARgamma ligand for high-throughput fluorescence polarization assays” *226<sup>th</sup> American Chemical Society National Meeting – New York, NY* (9/7/03-9/11/03). Poster ORGN 531. Presented by M. DeGrazia.
- 24.<sup>b,p</sup> Boonyarattanakalin, S; **Peterson, B. R.** “Crosslinking of Nonnatural Cell Surface Receptors by Protein Ligands Triggers Endocytosis Mediated by Lipid Rafts” *226<sup>th</sup> American Chemical Society National Meeting – New York, NY* (9/7/03-9/11/03). Poster ORGN 544. Presented by S. Boonyarattanakalin.



- 23.<sup>b,p</sup> Athavankar, S; **Peterson, B. R.** "Regulation of Gene Expression with the Small Molecule Biotin: Covalent Biotinylation of an Artificial Transcription Factor" *226<sup>th</sup> American Chemical Society National Meeting – New York, NY (9/7/03-9/11/03)*. Poster BIOL 61. Presented by S. Athavankar.
- 22.<sup>b,p</sup> Bringman, R.; Hussey, S. L; **Peterson, B. R.** "Nonnatural Cell Surface Receptors as Tools for Drug Delivery". *225<sup>th</sup> American Chemical Society National Meeting - New Orleans, LA (3/23/03-3/27/03)*. Poster CHED 489. Presented by R. Bringman.
- 21.<sup>b,p</sup> Hussey, S. L; **Peterson, B. R.** "Delivery of Streptavidin-Linked Toxins to Cancer Cells with Streptaphage: Protein Uptake Regulated by a Membrane-Bound Synthetic Ligand" *Department of Defense Breast Cancer Research Meeting – Orlando, FL (9/25/02-9/28/02)*. Presented by S. Hussey.
- 20.<sup>a,o+</sup> **Peterson, B. R.** "Non-Covalent Modification of Proteins with Synthetic Lipids: Small Molecule Tools for Drug Delivery and Cancer Biology" *24<sup>th</sup> Gulf Coast Chemistry Conference – Pensacola, FL (9/19/02-9/21/02)*.
- 19.<sup>b,p</sup> Martin, S. E; **Peterson, B. R.** "Delivery of Peptide-Binding Proteins into Mammalian Cells with Synthetic Cholesterylamine-Terminated Peptides" *224<sup>th</sup> American Chemical Society National Meeting – Boston, MA (8/18/02-8/23/02)*. Poster BIOL 134. Presented by S. Martin.
- 18.<sup>b,p</sup> Muddana, S. S; **Peterson, B. R.** "Analysis of Small Molecule – Protein Interactions in Recombinant Yeast: Coupling Folding of Yellow Fluorescent Protein to the Stability of Estrogen Receptor Ligand Binding Domains" *224<sup>th</sup> American Chemical Society National Meeting – Boston, MA (8/18/02-8/23/02)*. Poster BIOL 123. Presented by S. Muddana.
- 17.<sup>b,p</sup> Creaser, S. P; **Peterson, B. R.** "Strategies for the Discovery of Inhibitors of Palmitoyl Acyltransferase: Assays Based on Fluorescent Substrate Mimics of Src Oncoproteins" *224<sup>th</sup> American Chemical Society National Meeting – Boston, MA (8/18/02-8/23/02)*. Poster BIOL 83. Presented by S. Creaser.
- 16.<sup>b,p</sup> Hussey, S. L; **Peterson, B. R.** "Delivery of Streptavidin-Linked Toxins to Cancer Cells with Streptaphage: Protein Uptake Regulated by a Membrane-Bound Synthetic Ligand" *224<sup>th</sup> American Chemical Society National Meeting – Boston, MA (8/18/02-8/23/02)*. Poster BIOL 37. Presented by S. Hussey.
- 15.<sup>b,p</sup> Clark, D. D; **Peterson, B. R.** "Analysis of Oncogenic Protein Tyrosine Kinases Expressed in Recombinant Yeast" *224<sup>th</sup> American Chemical Society National Meeting – Boston, MA (8/18/02-8/23/02)*. Poster BIOL 29. Presented by D. Clark.
- 14.<sup>b,p</sup> Harki, D.A; Graci, J. D.; Korneeva, V. S.; Ghosh, S. K. B.; Cameron, C. E.; **Peterson, B. R.** "Synthesis and Antiviral Evaluation of Novel Mutagenic Nucleosides" *224<sup>th</sup> American Chemical Society National Meeting – Boston, MA (8/18/02-8/23/02)*. Poster ORGN 125. Presented by D. Harki.
- 13.<sup>a,o</sup> **Peterson, B. R.** "Synthetic Cell Surface Receptors that Deliver Proteins into Mammalian Cells: Functional Mimicry of Cellular Penetration by Cholera Toxin" *224<sup>th</sup> American Chemical Society National Meeting – Boston, MA (8/18/02-8/23/02)*. Presentation ORGN 19.
- 12.<sup>b,p</sup> Muddana, S. S; **Peterson, B. R.** "Fluorescent Cellular Sensors of Cell-Permeable Ligands that Stabilize Folding of Steroid Hormone Receptors" *Xenobiotic Receptors in Toxicology and Carcinogenesis, Penn State University 21<sup>st</sup> Summer Symposium in Molecular Biology – University Park, PA (7/31/02-8/3/02)* Presented by S. Muddana.
- 11.<sup>b,p</sup> DeGrazia, M. J.; Veety, K.; Thompson J.; Vanden Heuvel, J. P.; **Peterson, B. R.** "Synthesis and Biological Evaluation of Fluorescent PPAR Ligands" *Xenobiotic Receptors in Toxicology and*

*Carcinogenesis, Penn State University 21<sup>st</sup> Summer Symposium in Molecular Biology – University Park, PA (7/31/02-8/3/02). Presented by M. DeGrazia and K. Veety.*

- 10.<sup>b,p</sup> Hussey, S. L.; MacBride, M. M.; **Peterson, B. R.** “Targeting Nuclear Estrogen Receptors to Plasma Membranes with Tubby Fusion Proteins” *Xenobiotic Receptors in Toxicology and Carcinogenesis, Penn State University 21<sup>st</sup> Summer Symposium in Molecular Biology – University Park, PA (7/31/02-8/3/02); Presented by S. Hussey and M. MacBride.*
- 9.<sup>a,+</sup> **Peterson, B. R.** *Xenobiotic Receptors in Toxicology and Carcinogenesis, Penn State University 21<sup>st</sup> Summer Symposium in Molecular Biology – University Park, PA (7/31/02-8/3/02); Invited Chair of Session IV – Estrogen Receptor.*
- 8.<sup>a,p</sup> Hussey, S. L.; Martin, S. E.; Boonyarattanakalin, S.; He, E.; **Peterson, B. R.** “Synthetic cell surface receptors that deliver proteins into mammalian cells: Functional mimicry of cellular penetration by cholera toxin”. *Gordon Research Conference on Bioorganic Chemistry, Andover, NH (6/9/02-6/13/02).*
- 7.<sup>b,p</sup> Creaser, S. P.; **Peterson, B. R.** “Targeting Tamoxifen-Refractory Breast Cancers By Altering The Subcellular Localization of The Estrogen Receptor” *5<sup>th</sup> Komen Foundation for Breast Cancer Research National Meeting – Washington DC (6/1/02-6/4/02).* Presented by S. P. Creaser.
- 6.<sup>c,p</sup> Varner, A. S.; Creaser, S. P.; **Peterson, B. R.**; Smith, C. D. “Development of an HPLC-based *in vitro* Palmitoylation Assay with an NBD-labeled Peptide Substrate for the Characterization of Palmitoyl Acyl Transferase Activity” *93<sup>rd</sup> Annual American Association for Cancer Research National Meeting – San Francisco, CA (4/6/02-4/10/02).* Presented by Amanda S. Varner.
- 5.<sup>b,p</sup> Creaser, S. P.; **Peterson, B. R.** “Solid-Phase Synthesis and Plasma Membrane Localization of Nonnatural Palmitoyl Acyltransferase Substrates: Strategies for Controlling Gene Expression by Altering Protein Subcellular Localization” *222<sup>nd</sup> American Chemical Society National Meeting – Chicago, IL (8/26/01-8/30/01).* Presented by S. P. Creaser.
- 4.<sup>a,b,p</sup> Creaser, S. P.; **Peterson, B. R.** “Strategies for Controlling Protein Subcellular Localization with Synthetic Palmitoyltransferase Substrates” *Gordon Research Conference on Bioorganic Chemistry – Andover, NH (6/17/01-6/21/01).*
- 3.<sup>b,p</sup> Harki, D. A.; Graci, J. D.; Korneeva, V. S.; Ghosh, S. K. B.; Cameron, C. E.; **Peterson, B. R.** “Chemical Synthesis and Biological Evaluation of Mutagenic Nucleosides as Antiviral Agents” *Emerging Viral Diseases, Penn State University 20<sup>th</sup> Summer Symposium in Molecular Biology – University Park, PA (6/13/01-6/16/01).* Presented by D. Harki.
- 2.<sup>a,p,o,+</sup> **Peterson, B. R.** “Generation of Dominant Negative Transcription Factors through C-Terminal Lipid Modification” *Gordon Research Conference on Bioorganic Chemistry – Andover, NH (6/18/00-6/22/00).*
- 1.<sup>a,p</sup> **Peterson, B. R.**; Diederich, F. “Inclusion Complexation of Steroids by a Novel Water-Soluble Macrotricyclophane” *207<sup>th</sup> American Chemical Society National Meeting – San Diego, CA (3/94); Poster ORGN 74.*

### ***Consulting and Corporate Outreach Activities***

Expert witness on pharmaceutical patents (2012-2013, 2021-2022)  
 Ad Hoc Scientific Consultant, Merck Pharmaceuticals (2010)  
 Ad Hoc Scientific Consultant, Alnylam Pharmaceuticals (2009)  
 Ad Hoc Scientific Consultant, Catalent Pharmaceuticals (2008)  
 Ad Hoc Scientific Consultant, TheraKem (2006)  
 Co-founder, Indigo Biosciences, Inc. (2005)  
 Member of the Board of Directors, Indigo Biosciences, Inc. (2005-2014)

Ad Hoc Scientific Consultant, Amersham Biosciences (2003)

**Teaching Assignments at The Ohio State University, Division of Medicinal Chemistry**  
*Courses and student evaluations (5=best, 1=worst)*

44. **Fall 2021 – Course: PHR 7601 – Integrative Pharmacotherapy 1b**  
 125 Students; Overall Teaching Effectiveness = 4.7 / 5.0

**Teaching Assignments at The University of Kansas, Department of Medicinal Chemistry**

*Courses and student evaluations (5=best, 1=worst; ND=not determined)*

43. **Spring 2019 – Course: MDCM 603 – Medicinal Biochemistry II**  
 146 Students; Overall Teaching Effectiveness = 4.5 / 5.0
42. **Fall 2018 – Course: MDCM 710 – Chemistry of Drug Action I**  
 6 Students; Overall Teaching Effectiveness = 5.0 / 5.0
41. **Fall 2018 – Course: MDCM 601 – Medicinal Biochemistry I**  
 150 Students; Overall Teaching Effectiveness = 4.4 / 5.0
40. **Spring 2018 – Course: MDCM 603 – Medicinal Biochemistry II**  
 150 Students; Overall Teaching Effectiveness = 4.6 / 5.0
39. **Fall 2017 – Course: MDCM 601 – Medicinal Biochemistry I**  
 146 Students; Overall Teaching Effectiveness = 4.8 / 5.0
38. **Fall 2017 – Course: MDCM 710 – Chemistry of Drug Action I**  
 5 Students; Overall Teaching Effectiveness = 4.5 / 5.0
37. **Spring 2017 – Course: MDCM 603 – Medicinal Biochemistry II**  
 148 Students; Overall Teaching Effectiveness = 4.6 / 5.0
36. **Fall 2016 – Course: MDCM 601 – Medicinal Biochemistry I**  
 151 Students; Overall Teaching Effectiveness = 4.6 / 5.0
35. **Fall 2016 – Course: MDCM 710 – Chemistry of Drug Action I**  
 6 Students; Overall Teaching Effectiveness = 4.7 / 5.0
34. **Spring 2016 – Course: MDCM 603 – Medicinal Biochemistry II**  
 150 Students; Overall Teaching Effectiveness = 4.4 / 5.0
33. **Fall 2015 – Course: MDCM 710 – Chemistry of Drug Action I**  
 4 Students; Overall Teaching Effectiveness = ND / 5.0
32. **Spring 2015 – Course: MDCM 603 – Medicinal Biochemistry II**  
 155 Students; Overall Teaching Effectiveness = 4.8 / 5.0
31. **Fall 2014 – Course: MDCM 795 – Principles of Drug Design II**  
 6 Students; Overall Teaching Effectiveness = 4.7 / 5.0
30. **Spring 2014 – Course: MDCM 603 – Medicinal Biochemistry II**  
 170 Students; Overall Teaching Effectiveness = 4.6 / 5.0
29. **Fall 2013 – Course: MDCM 795 – Principles of Drug Design II**  
 6 Students; Overall Teaching Effectiveness = 4.5 / 5.0
28. **Spring 2013 – Course: MDCM 603 – Medicinal Biochemistry II**



170 Students; Overall Teaching Effectiveness = 4.7 / 5.0

**27. Fall 2012 – Course: MDCM 795 – Principles of Drug Design II**

11 Students; Overall Teaching Effectiveness = ND / 5.0

**26. Spring 2012 – Course: MDCM 603 – Medicinal Biochemistry II**

170 Students; Overall Teaching Effectiveness = 4.6 / 5.0

**25. Fall 2011 – Course: MDCM 795 – Principles of Drug Design II**

(a new graduate-level course at KU created by Blake Peterson and Michael Rafferty)

4 Students; Overall Teaching Effectiveness = ND / 5.0

**24. Spring 2011 – Course: MDCM 790 – Principles of Drug Design**

7 Students; Overall Teaching Effectiveness = 3.8 / 5.0

**23. Spring 2011 – Course: MDCM 603 – Medicinal Biochemistry II**

155 Students; Overall Teaching Effectiveness = 4.0 / 5.0

**22. Fall 2010 – Course: MDCM 601 – Medicinal Biochemistry I**

155 Students; Overall Teaching Effectiveness = 4.3 / 5.0

**21. Spring 2010 – Course: MDCM 603 – Medicinal Biochemistry II**

105 Students; Overall Teaching Effectiveness = 4.9 / 5.0

**20. Spring 2010 – Course: MDCM 790 – Principles of Drug Design**

6 Students; Overall Teaching Effectiveness = ND / 5.0

**19. Fall 2009 – Course: MDCM 722 – Principles of Organic Medicinal Chemistry**

5 Students; Overall Teaching Effectiveness = 4.3 / 5.0

**18. Spring 2009 – Course: MDCM 603 – Medicinal Biochemistry II**

105 Students; Overall Teaching Effectiveness = 4.0 / 5.0

**17. Spring 2009 – Course: MDCM 790 – Principles of Drug Design**

8 Students; Overall Teaching Effectiveness = 5.0 / 5.0

**Teaching Assignments at The Pennsylvania State University, Department of Chemistry**

*Courses and student ratings of teaching effectiveness (PSU SRTE; 7=best, 1=worst)*

**16. Fall 2007 - Course: CHEM 212 – Organic Chemistry (2<sup>nd</sup> semester)**

183 Students; Instructor SRTE = 6.05 / 7.00; Course SRTE = 5.62 / 7.00

**15. Spring 2007 - Course: CHEM 39 – Organic Chemistry (2<sup>nd</sup> semester)**

211 Students; Instructor SRTE = 5.93 / 7.00; Course SRTE = 5.34 / 7.00

**14. Spring 2006 - Course: CHEM 597B – Medicinal Organic Chemistry (a new graduate-level course at Penn State created by Blake R. Peterson)**

13 Students; Instructor SRTE = 5.89 / 7.00; Course SRTE = 5.89 / 7.00

**13. Fall 2005 - Course: CHEM 39 – Organic Chemistry (2<sup>nd</sup> semester)**

142 Students; Instructor SRTE = 5.86 / 7.00; Course SRTE = 5.25 / 7.00

**12. Spring 2005 - Course: CHEM 39H – Honors Organic Chemistry**

23 Students; Instructor SRTE = 5.47 / 7.00; Course SRTE = 5.37 / 7.00

11. **Fall 2004 - Course: CHEM 39 - Organic Chemistry** (2<sup>nd</sup> semester)  
166 Students; Instructor SRTE = 5.63 / 7.00; Course SRTE = 5.10 / 7.00
10. **Spring 2004 - Course: CHEM 536 - Organic Reaction Mechanisms II** (graduate physical organic chemistry)  
12 Students; Instructor SRTE = 6.36 / 7.00; Overall SRTE = 5.90 / 7.00
9. **Fall 2003 - Course: CHEM 39 - Organic Chemistry** (2<sup>nd</sup> semester)  
166 Students; Instructor SRTE = 5.39 / 7.00; Course SRTE = 5.11 / 7.00
8. **Spring 2003 - Course: CHEM 536 - Organic Reaction Mechanisms II** (graduate physical organic chemistry)  
6 Students; Instructor SRTE = 6.17 / 7.00; Overall SRTE = 6.17 / 7.00
7. **Spring 2002 - Course: CHEM 536 - Organic Reaction Mechanisms II** (graduate physical organic chemistry)  
14 Students; Instructor SRTE = 5.23 / 7.00; Overall SRTE = 5.42 / 7.00
6. **Fall 2001 - Course: CHEM 39 - Organic Chemistry** (2<sup>nd</sup> semester)  
119 Students; Instructor SRTE = 6.06 / 7.00; Course SRTE = 5.49 / 7.00
5. **Spring 2001 - Course: CHEM 536 - Organic Reaction Mechanisms II** (graduate physical organic chemistry)  
16 Students; Instructor SRTE = 5.25 / 7.00; Overall SRTE = 5.08 / 7.00
4. **Fall 2000 - Course: CHEM 39 - Organic Chemistry** (2<sup>nd</sup> semester)  
138 Students; Instructor SRTE = 5.99 / 7.00; Course SRTE = 5.42 / 7.00
3. **Spring 2000 - Course: CHEM 536 - Organic Reaction Mechanisms II** (graduate physical organic chemistry)  
24 Students; Instructor SRTE = 4.90 / 7.00; Course SRTE = 5.10 / 7.00
2. **Fall 1999 – Course: CHEM 597A - Medicinal Chemistry** (a new special topics course at Penn State created by Blake R. Peterson)  
19 Students; Instructor SRTE = 5.44 / 7.00; Course SRTE = 5.56 / 7.00
1. **Spring 1999 - Course: CHEM 536 - Organic Reaction Mechanisms II** (graduate physical organic chemistry)  
14 Students; Instructor SRTE = 5.56 / 7.00; Course SRTE = 5.44 / 7.00

### **The Ohio State University Committee Assignments**

College of Pharmacy Faculty Executive Committee (2019 – Present)  
Ohio State Research Faculty Advisory Council (2020 – 2021)  
OSUMC Cancer Biology and Genetics Faculty Search Committee (2020 – 2021)  
OSU High Throughput Screening Search Committee (2020-2021)  
CAS Strategy Committee (2019 – 2021)  
PIIO Faculty Search Committee (2020 – 2021)

### ***Service on External Graduate Student Committees at The Ohio State University***

Brittney Mize (Fuchs Lab, Medicinal Chemistry)  
Oluwatosin Ayinde (Fuchs Lab, Medicinal Chemistry)  
Brenna Weadick (Govindarajan Lab, Pharmaceuticals)  
Ben Haines (Mitton-Fry Lab, Medicinal Chemistry)

### **University of Kansas Committee Assignments**

School of Pharmacy Building Committee (2008 – 2012)  
KU Med. Chem. Financial Aid/Awards Committee (2008 – 2016)  
Dept. of Medicinal Chemistry Graduate Admissions Committee (2008 – 2019)  
Member of the Faculty Senate (2009-2013)  
Member of the Faculty Rights Board (2010-2011)  
School of Pharmacy Faculty Executive Committee (2010-2013; Chair, 2012 – 2013, 2017)  
KU Med. Chem. Administrative Support Committee (2011-2013)  
Council of Distinguished Professors Steering Committee (2012-2015)  
KUMC Facilities Parental Oversight Committee (2012-2019)  
Self-Fellowship Graduate Selection Committee (2012-2014)  
Langston Hughes Visiting Professorship (LHVP) committee (2012-2018)  
KU School of Pharmacy Admissions Committee (2013-2016, 2018)  
University Committee on Promotion and Tenure (2013-2016)  
KU Med. Chem. Faculty Search Committee (2015 – 2017; Chair 2016, 2017)  
KU Med. Chem. Space Committee (2017 – 2019)  
KU School of Pharmacy Academic Standings Committee (2016 – 2019)

***Service on External Graduate Student Committees at the University of Kansas***

Kaitie Cartwright (Tunge Lab, Chemistry) Ph.D. 2019  
Jacob Sorrentino (Altman Lab, Medicinal Chemistry)  
Shrikant Londhe (Tunge Lab, Chemistry)  
Vladimir Maslivets (Rubin Lab, Chemistry) Ph.D. 2019  
Kevin Allegre (Tunge Lab, Chemistry) Ph.D. 2018  
Jordan Hunt (Forrest Lab, Medicinal Chemistry) M.S. 2018  
Wen Yan Wu (David Lab, Medicinal Chemistry) M.S. 2009  
Jennifer Poole (Aube Lab, Medicinal Chemistry) Ph.D. 2011  
Ruzhang Liu (Aube Lab, Medicinal Chemistry) Ph.D. 2012  
Solomon Gisemba (Aldrich Lab, Medicinal Chemistry) Ph.D. 2018  
Anand Joshi (Aldrich Lab, Medicinal Chemistry) Ph.D. 2013  
Hashim Motiwala (Aube Lab, Medicinal Chemistry) Ph.D. 2014  
Euna Yoo (David Lab, Medicinal Chemistry) Ph.D. 2015  
Elyse Petrunak (Scott Lab, Medicinal Chemistry) Ph.D. 2015  
Gurpreet Singh (Aube lab, Medicinal Chemistry) Ph.D. 2015  
Christianna Reedy (Aldrich Lab, KU) M.S. 2015  
Yan Wang (Rivera Lab, Chemistry) Ph.D. 2015  
Moon Young Hur (Hanson Lab, Chemistry) Ph.D. 2016  
Makoto Yoshida (Azuma Lab, Molecular Biosciences) Ph.D. 2016  
Stephanie Johnson (Prisinzano Lab, Medicinal Chemistry) M.S. 2017  
Tom Field (Johnson Lab, Chemistry) Ph.D. 2017  
Gaurav Garg (Blagg Lab, Medicinal Chemistry) M.S. 2015

***Penn State University Chemistry Department Committee Assignments***

Chair, Organic and Inorganic Seminar Series (1998 – 2000)  
Colloquium Committee (1999 – 2000, Chair 2004 – 2006, 2006 – 2007)  
Research Facilities Committee (1998 – 1999, 2003-2007)  
Space Allocation Committee (2000 – 2002)  
Faculty Search Committee (2000 – 2002, 2004 – 2007)  
Library Committee (2000 – 2002)  
Safety Committee (2002 – 2007)  
Freshman Testing, Counseling, and Advising Program (FTCAP, 1998 – 2002)  
Graduate Advising Committee (2004 – 2007)

***Other Penn State University Committee Assignments***



Huck Institute Center for Quantitative Cellular Analysis, Advisory Committee (2003 – 2007)  
Huck Institute X-ray Crystallography Core Facility, Advisory Committee (2004 – 2007)  
Huck Institute Mass Spectrometry Facility Search Committee (2004 – 2007)  
Eberly College of Science Strategic Vision Committee (2004 – 2006)  
Huck Institute Mass Spectrometry Advisory Committee (2005 – 2007)

***Service on External Graduate Student Committees at Penn State***

Pooja Aggarwal (Weinreb Lab, Chemistry) Ph.D. 2007  
Angelique Blackburn (Ewing Lab, Chemistry) M.S. 2005  
Daniela Boneva (Feldman Lab, Chemistry) Ph.D. 2004  
Kimberly Burns (Glass Lab, Chemistry) M.S. 2000  
Jason Camp (Weinreb Lab, Chemistry) Ph.D. 2007  
Ping Cao (Zhang Lab, Chemistry) Ph.D. 2001  
Erik Clepper (Perdew Lab, Vet. Sci.) M.S. 2006  
Juan Cheng (Winograd Lab, Chemistry) Ph.D. 2006  
Adiel Coca (Feldman Lab, Chemistry) Ph.D. 2007  
Alessandra Costanzo (Ng Lab, BMB) M.S. 2003  
Kyle Eastman (Feldman Lab, Chemistry) Ph.D. 2006  
Cheng Feng (Luscher Lab, Biology) Ph.D. 2007  
Ellen Feuster (Glass Lab, Chemistry) M.S. 2003  
Brian Gilmartin (Williams Lab, Chemistry) Ph.D. 2006  
Tom Greshock (Funk Lab, Chemistry) Ph.D. 2006  
Abhijit Gurjar (Bhushan Jayarao, Vet. Sci) Ph.D. 2007  
Carey Hancey (Benkovic Lab, Chemistry) M.S. 2002  
John Hanley (Glass Lab, Chemistry) M.S. 2004  
Jordan Irvin (Frank Pugh Lab, BMB) Ph.D. 2006  
David Iwig (Booker Lab, BMB) Ph.D. 2006  
Malliga Iyer (Feldman Lab, Chemistry) Ph.D. 2006  
Paul Jones (Glass Lab, Chemistry) Ph.D. 2003  
Andrew Karatjas (Felman Lab, Chemistry) Ph.D. 2006  
Karsten Korber (Zhang Lab, Chemistry) M.S. 2000  
Victoria Korneeva (Cameron Lab, BMB) Ph.D. 2007  
Joseph Kozole (Winograd Lab, Chemistry) Ph.D. 2007  
Matthew G. LaPorte (Weinreb Lab, Chemistry) Ph.D. 2000  
Walter R. Laredo (Allcock Lab, Chemistry) Ph.D. 2000  
Duan Liu (Zhang Lab, Chemistry) Ph.D. 2005  
Greg Long (Sen Lab, Chemistry) Ph.D. 2002  
James Longmire (Zhang Lab, Chemistry) Ph.D. 2000  
Xichen Lin (Weinreb Lab, Chemistry) Ph.D. 2002  
Kathrine Masters (Feldman Lab, Chemistry) Ph.D. 2001  
Tiffany Mathews (Andrews Lab, Chemistry) Ph.D. 2004  
Mandi McElwain (Feldman Lab, Chemistry) M. S. 2006  
Kenneth Meyers (Feldman Lab, Chemistry) M.S. 1999  
Philip Mosier (Jurs Lab, Chemistry) Ph.D. 2003  
Lisa Pantzar (Williams Lab, Chemistry) M.S. 2006  
Mike Pence (Glass Lab, Chemistry) M.S. 2000  
Angela Perkins (Feldman Lab, Chemistry) Ph.D. 2005  
Joe Raker (Glass Lab, Chemistry) Ph.D. 2002  
Varun Sambhy (Sen Lab, Chemistry) Ph.D. 2007  
Amanda Skoumbourdis (Feldman Lab, Chemistry) Ph.D. 2005  
Stephanie Shoaf (Vanden Heuvel Lab, Vet. Sci.) M.S. 2003  
Manisha Srivastava (Zhang Lab, Chemistry) Ph.D. 2002  
Cuixiang Sun (Weinreb Lab, Chemistry) Ph.D. 2005  
Danielle Sunseri (Koerner Lab, Chemistry) M.S. 2003  
Steve Tizio (Benkovic Lab, Chemistry) M.S. 2000  
Kanika Vats (Sheets Lab, Chemistry) Ph.D. 2007

Jason Waldkirch (Zhang Lab, Chemistry) Ph.D. 2003  
Jacob Waldmann (Weinreb Lab, Chemistry) M.S. 2003  
Sarah Wilson (Feldman Lab, Chemistry) M.S. 1999

**Referee Work**

***Ad Hoc Reviewer for the Following Journals***

ACS Chemical Biology  
ACS Chemical Neuroscience  
ACS Medicinal Chemistry Letters  
ACS Nano  
ACS Omega  
Acta Biomaterialia  
Advanced Materials  
Analytical Chemistry  
Angewandte Chemie Int. Ed.  
Applied and Environmental Microbiology  
Asian Journal of Organic Chemistry  
Beilstein Journal of Organic Chemistry  
Biochemica et Biophysica Acta - Biomembranes  
Biochemistry  
Bioconjugate Chemistry  
BioEssays  
Bioorganic and Medicinal Chemistry Letters  
Bioorganic and Medicinal Chemistry  
Biomacromolecules  
Biotechniques  
Biotechnology Progress  
BMC Biotechnology  
Cell Chemical Biology  
Chemistry and Biology  
ChemBioChem  
ChemMedChem  
ChemComm  
Chemical Biology and Drug Design  
Chemical Science  
Chemical Society Reviews  
Chemistry - An Asian Journal  
Collection of Czechoslovak Chemical Communications  
Current Organic Synthesis  
Journal of the American Chemical Society  
Journal of Experimental and Integrative Medicine  
Journal of Medicinal Chemistry  
Journal of Natural Products  
Journal of Organic Chemistry  
Langmuir  
Letters in Organic Chemistry  
Measurement  
Molecular Biosystems  
Molecular Pharmaceutics  
Molecular Therapy  
Nature Communications  
Nature Methods  
Nature Protocols  
Oncogene  
Organic Letters  
Organic and Biomolecular Chemistry

Photochemistry and Photobiology  
Plos One  
Preclinica  
Proceedings of the National Academy of Sciences USA  
Redox Biology  
RSC Advances  
Steroids  
Studies in Natural Products Chemistry  
Supramolecular Chemistry  
Synthesis  
Tetrahedron  
Tetrahedron Letters  
The Analyst  
Translational Research

***Ad Hoc Reviewer of Grant Applications for the Following Agencies***

American Chemical Society Petroleum Research Fund, 2000, 2002, 2006  
National Science Foundation, 2001, 2004, 2005, 2006  
University of Arizona Seed Grant Program, 2004  
Life Sciences Discovery Fund, 2008  
Research Corporation (RCSA), 2010, 2012, 2017  
University of Nebraska EPSCOR, 2012  
NIH New Methodologies for Natural Products Chemistry, 2005  
NIH Synthetic and Biological Chemistry-B (SBCB), 2007, 2009, 2012  
NIH Oncology, Special Emphasis Panel, 2009  
NIH Cell Biology, Special Emphasis Panel, 2008  
NIH Biol. Chemistry and Macromolecular Biophysics (BCMB), 2009  
NIH Program Projects Panel (P01), 2011  
NIH COBRE Panel, 2013, 2016  
NIH Fellowships Panel: Cell Biology, Developmental Biology, and Bioengineering, 2013, 2014  
NIH K99 Panel, 2014, 2015, 2018  
NIH R25 Panel, 2015  
NIH INBRE Panel, 2015  
NIH BCMB Special Emphasis Panel, 2016  
HHMI Gilliam Fellowships, 2020, 2021  
NIH BST-55 High Throughput Screening Panel, 2021 (3/2021 and Co-Chair, 6/2021)

***Other Professional Service***

Program Chair, Midwest Regional Meeting of the American Chemical Society (ACS), 2017

**Patents filed and issued**

14. Black, S. M.; Whitson, B. A.; **Peterson, B. R.**; Schenk, A. "Fluorescence-based assays and small molecule inhibitors of CD38 as immunosuppressants"; Provisional filed 2/10/21, PCT Filed February 8, 2022.
13. **Peterson, B. R.**; "Method to quantify affinity and selectivity of small molecules for proteins in living cells"; Provisional Filed November 1, 2021.
12. Soper, S.; **Peterson, B. R.**; Givens, R. "Photocleavable linker for catching and/or releasing of circulating tumor cells or extracellular vesicles"; PCT Filed December 20, 2019.
11. **Peterson, B. R.**; Rane, D. "Fluorescent sensors of peroxynitrite targeted to the endoplasmic reticulum"; US Patent application Filed March 22, 2019.



10. **Peterson, B. R.** “Coumarin-Linked Taxanes for Detection and Circumvention of Cellular Efflux”; US Patent application Filed March 29, 2018. US Patent No. 10,399,964 issued Sept. 3, 2019.
9. **Peterson, B. R.** “Targeted conformationally-constrained kinked endosomal disrupting peptides” US Patent App. 15/480,120. CIP filed April 5, 2017.
8. **Peterson, B. R.** “Conformationally-Constrained Kinked Endosomal Disruptive Peptides”; PCT filed October 5, 2013. US Patent No. 9,701,715 issued July 11, 2017.
7. **Peterson, B. R.;** Xu, L.; Levy, M. “Targeting Multiple Receptors on a Cell Surface for Specific Cell Targeting”; US Patent application Filed October 13, 2014. US Patent No. 9,636,419 issued May 2, 2017.
6. **Peterson, B. R.** “Synthetic Cholesterylamine-Linker Derivatives for Agent Delivery into Cells”. PCT (Serial No. PCT/US2010/045358) filed August 12, 2010. US Patent No. 8,673,468 issued January 28, 2014.
5. **Peterson, B. R.** “Disruptors of Early/Recycling Endosomes” Patent application filed August 18, 2009. US Patent No. 8,889,631 Issued Nov. 18, 2014.
4. **Peterson, B. R.** “Synthetic Mimics of Mammalian Cell Surface Receptors: Methods and Compositions” US Patent No. 8,198,230 B2 Issued June 12, 2012.
3. **Peterson, B. R.** “Synthetic Mimics of Mammalian Cell Surface Receptors: Methods and Compositions” US Patent No. 7,956,029 Issued June 7, 2011.
2. **Peterson, B. R.** “Synthetic Mimics of Mammalian Cell Surface Receptors: Methods and Compositions” US Patent No. 7,947,647 Issued May 24, 2011.
1. **Peterson, B. R.** “Synthetic Mimics of Mammalian Cell Surface Receptors: Methods and Compositions” US Patent No. 7,514,400 Issued April 7, 2009.

### Research Support

#### *Pending Research Support*

“Midwest Antiviral Research Center” NCI U19, Andrzej Joachimiak, PI, U. Chicago. Blake R. Peterson, Proposed Lead of the High Throughput Screening Core and Co-investigator of Research Project-4. Requested subcontract to OSU: \$6,030,250.

“Targeting neuronal transport to ameliorate vincristine neurotoxicity” NIH R01, Shuiying Hu, Sharyn Baker, Blake R. Peterson, MPI. Requested \$3,868,565.

#### *Current (Active or Approved) Research Support*

66. “Targeting the Membrane Trafficking Machinery to Treat Multiple Myeloma” OSUCCC Leukemia Research Program Seed Grant. Emanuele Cocucci PI, Blake R. Peterson and Francesca Cottini, Co-investigators. (1/1/22-6/30/22). **Approved and funded for \$25,000.**

65. “Targeting the Membrane Trafficking Machinery to Treat Multiple Myeloma” Pardee Foundation, Emanuele Cocucci PI, Blake R. Peterson, Co-investigator (01/01/22-12/31/22). **Approved and funded for \$175,293** (5% salary support).

64. “John W. Wolfe Chair in Cancer Research” OSCCCC and OSU College of Medicine (3/1/20-6/30/24). **Approved and funded for ~\$50,000/year.**

63. “Cancer Center Support Grant (CCSG)” NCI. Raphael Pollock, PI. (12/1/20-11/30/25). **Supports 15% effort of Blake R. Peterson** as Co-Leader of the Translational Therapeutics Program (5% salary support) and Co-Director of the Medicinal Chemistry Shared Resource (10% salary support).

**Former (Completed) Research Support**

62. “Synthetic Lethal Targeting of Growth Factor Receptors” National Institutes of Health – NCI R01, Blake R. Peterson, PI. William Carson, Charles Bell, Co-investigators. (2/1/17-1/31/22). **Approved and funded for \$1,639,960.**
61. “Structural Studies of Membrane-Disruptive Peptides in Covalently Crosslinked Nanodiscs” OSU CEMAS Seed Grant. Blake R. Peterson, PI. (12/1/20-11/30/21). **Approved and funded for \$10,000.**
60. “Creating Chemical Tools to Study Cellular Signal Transduction” Howard Hughes Medical Institute (HHMI) Gilliam Fellowship funding Angelo Andres of the Peterson Laboratory (9/1/18-8/31/21). **Approved and funded for \$150,000.**
59. “Targeting Cellular Production of Peroxynitrite to Inhibit Immune Suppression in Cancer” OSUCCC Translational Therapeutics Seed Grant. Blake R. Peterson, PI. William E. Carson, Co-investigator (2/27/20-9/30/20). **Approved and funded for \$25,000.**
58. “Chemical Tools for Perturbing Iron Homeostasis in *P. aeruginosa*” National Institutes of Health – NIGMS R01, Mario Rivera, PI. Blake R. Peterson, Co-investigator (07/01/16 – 06/30/20). **Approved and funded for \$1,479,787. Separated from this project on 8/1/19 to move to The Ohio State University.**
57. “Synthetic Cell Surface Receptors that Control Signal Transduction” G. Harold & Leila Y. Mathers Charitable Foundation, Blake R. Peterson, PI (9/1/16-8/30/19). **Approved and funded for \$499,024.**
56. “Molecular Analysis of Disease Pathways” National Institutes of Health – COBRE, Sue Lunte PI. Blake R. Peterson and Erik Lundquist Co-Investigators (7/15/17-6/30/22). **Approved and funded for \$10,833,601. Separated from this project on 8/1/19 as required to move to The Ohio State University.**
55. “Integra Liquid Handler for High-Content Screening” Frontiers: University of Kansas Clinical and Translational Science Institute via the National Center for Advancing Translational Science (NCATS) (12/1/18). **Approved and funded for \$22,175.**
54. NIH Dynamic Aspects of Chemical Biology NIH Training Grant Fellowship to Angelo Andres of the Peterson Laboratory (7/1/17-6/30/18). **Approved and funded for \$50,000 direct costs.**
53. “University of Kansas/Haskell Indian Nations University IRACDA Project-Supplement” National Institutes of Health – NIGMS K12 Postdoctoral Training Grant (8/1/17-7/31/18), Blake R. Peterson, PI. **Approved and funded for \$159,812.**
52. “Molecular Analysis of Disease Pathways” National Institutes of Health – NIGMS COBRE, Sue Lunte PI. Blake R. Peterson and Erik Lundquist, Co-Investigators (7/15/12-6/30/17). **Approved and funded for \$11,292,502 (\$1,472,855 to Blake Peterson as PI of Core C: *Synthetic Molecular Probes for In Vivo Imaging*).**
51. “University of Kansas/Haskell Indian Nations University IRACDA Project” National Institutes of Health – NIGMS K12 Postdoctoral Training Grant (9/1/12-7/31/17), Blake R. Peterson, PI. **Approved and funded for \$2,547,848.**
50. “IRACDA Plus” National Institutes of Health Supplement (7/1/16-6/30/17). Angela Wandinger Ness, PI (University of New Mexico). Subcontract to Blake R. Peterson. **Approved and funded for \$10,000.**

49. K-INBRE Translational Research Trainee Award funding Nicholas Love of the Peterson Laboratory, (5/1/16-4/30/17). **Approved and funded for \$4,000.**
48. “Synergistic Antibody Conjugates” K-INBRE Bridging Grant, Blake Peterson, PI (5/1/16-4/31/17). **Approved and funded for \$40,000 total direct costs.**
47. American Chemical Society Medicinal Chemistry Fellowship funding Kelsey Knewtson of the Peterson Laboratory (9/1/15-8/31/16). **Approved and funded for \$26,000.**
46. KU Cancer Center Summer Student Training Program funding Nicholas Love of the Peterson Laboratory, (6/1/16-7/31/16). **Approved and funded for \$3,000.**
45. NIH IRACDA Postdoctoral Fellowship funding Abu Hossion of the Peterson Laboratory (8/1/13-7/31/16). **Approved and funded for \$156,780.**
44. NIH IRACDA Postdoctoral Fellowship funding Nicole Windmon of the Peterson Laboratory (8/1/14-6/31/16). **Approved and funded for \$104,520.**
43. “IRACDA Plus” National Institutes of Health Supplement (7/1/15-6/30/16). Angela Wandinger Ness, PI (University of New Mexico). Subcontract to Blake R. Peterson. **Approved and funded for \$10,000.**
42. “Establishing a Multi - Disciplinary Data Science Research Team at The University of Kansas” Luke Huan PI, Jeff Aubé, Susan Lunte, Erik Lundquist, Blake Peterson, Co-investigators (1/1/14-12/31/15). **Approved and funded for \$282,000.**
41. NIH Pharmaceutical Aspects of Biotechnology Training Grant Fellowship to Kelsey Knewtson of the Peterson Laboratory (7/1/13-6/30/15). **Approved and funded for \$50,000.**
40. NIH Dynamic Aspects of Chemical Biology NIH Training Grant Fellowship to Molly Lee of the Peterson Laboratory (10/1/12-6/30/15). **Approved and funded for \$75,000.**
39. “University of Kansas Specialized Chemistry Center” National Institutes of Health-U54 (07/01/08 - 06/30/14) J. Aubé – PI; Blake R. Peterson, Chemistry Team Leader and Senior Investigator (one of six chemistry team leaders on the User-Driven component and one of four senior investigators on the Center-Driven Research Project component). **Approved and Funded for \$20,200,000 (\$209,031 to Blake R. Peterson).**
38. “Synthetic Cell Surface Receptors for Anticancer Drug Delivery” National Cancer Institute – R01 (5/15/09-4/30/14) Blake R. Peterson – PI. **Approved and funded for \$974,974 to Blake R. Peterson.**
37. NIH IRACDA Postdoctoral Fellowship funding Safiyyah Forbes of the Peterson Laboratory (8/1/11-7/31/13). **Approved and funded for \$156,780.**
36. NIH Dynamic Aspects of Chemical Biology Training Grant Fellowship to James “Matt” Meinig of the Peterson Laboratory (7/1/10-6/30/13). **Approved and funded for \$75,000.**
35. “Tissue-Specific Delivery of Probes by Control of Membrane Trafficking of Endoprotease Substrates” National Institutes of Health Challenge Grant (9/30/09-8/31/12) Blake R. Peterson - PI; Brian Ackley, Co-investigator. **Approved and funded for \$1,000,000.**
34. NIH IRACDA Postdoctoral Fellowship funding Zach Woydziak of the Peterson Laboratory (8/1/09-7/31/12). **Approved and funded for \$156,780.**
33. American Chemical Society Medicinal Chemistry Fellowship funding David Hymel of the Peterson Laboratory (9/1/11-8/31/12). **Approved and funded for \$26,000.**



32. "A New Approach for Systemic Delivery of siRNA: Cholesterylamine Conjugates that Target and Selectively Disrupt Early / Recycling Endosomes" Novartis Institutes for Biomedical Research (5/1/09-4/30/12). Blake R. Peterson, PI. **Approved and funded for \$571,804 to B. R. Peterson.**
31. "Development of Antiviral Therapeutics for Dengue" National Institutes of Health-U01 (10/1/09-9/30/10), R. Pad Padmanabhan, PI.; Blake R. Peterson, William Groutas, and David Ostrov, Co-investigators. **Approved and funded for \$120,000 to B. R. Peterson.**
30. "Synthesis and Evaluation of Fluorescent Derivatives of the Anticancer Drug Paclitaxel" University of Kansas Cancer Center Summer Research Training Program (SRTP, 6/10-8/10). **Approved and funded for \$3,000 to undergraduate Michael Perry working with B. R. Peterson.**
29. "Determinants of Tissue Estradiol Sensitivity" NIH-R01 Richard Santen, University of Virginia, PI. Subcontract to Blake R. Peterson (4/15/05-3/31/09). **Approved and Funded for \$300,887 to B. R. Peterson.**
28. "Synthetic Receptor Targeting as a Novel Tool for Drug Delivery" Camille Dreyfus Teacher Scholar Award (5/1/04-4/30/09), Blake R. Peterson, PI. **Approved and funded for \$60,000.**
27. "Cancer Therapeutics that Anchor Proteins to Membranes" National Cancer Institute – R01 Renewal (1/15/03-6/30/08) Blake R. Peterson, PI. **Approved and funded for \$1,205,242** (\$175,000 direct / year to B. R. Peterson).
26. "Synthesis of DNP and NBD-Labeled Lipids" NIH-R01 Subcontract (4/1/04-3/31/08), Paul Cremer, Texas A&M, PI. **Approved and funded for \$87,500 to B. R. Peterson.**
25. "Lethal Mutagenesis as an Antiviral Strategy" National Institutes of Health-U01 (2/1/03-1/31/08), Craig E. Cameron, PI. Blake R. Peterson, J. Martin Bollinger, Radhakrishnan Padmanabhan Co-investigators. **Approved and funded for \$3,113,003** (\$130,000 direct / year to B. R. Peterson).
24. "Lethal Mutagenesis of RNA Viruses: A Novel Therapeutic Approach to Viral Heart Disease" – American Heart Association Predoctoral Fellowship funding Jocelyn Edathil of the Peterson Laboratory (7/1/06-6/30/07). **Approved and funded for \$21,000.**
23. "Anticancer Inhibitors of AR-Mediated Gene Expression" DOD Prostate Cancer Research Idea Award (11/1/04 – 10/30/06), Blake R. Peterson, PI. **Approved and Funded for \$349,778.**
22. "Lethal Mutagenesis of RNA Viruses: A Novel Therapeutic Approach to Viral Heart Disease" – American Heart Association Predoctoral Fellowship funding Jocelyn Edathil of the Peterson Laboratory (7/1/04-6/30/06). **Approved and Funded for \$40,000.**
21. "Drug Discovery Core Facility" National Cancer Institute - R24 (3/1/01 – 2/28/06), Charles D. Smith, Penn State Hershey, Dept. of Pharmacology, PI; Waldemar Debinski, Kathleen Mulder, Anthony Pegg, Blake R. Peterson, and Daniel Welch - Project Leaders. **Approved and funded for \$1,543,360.**
20. "Novel Anticancer Agents that Block Dissociation of Hsp90 from Estrogen Receptors in Breast Cancers" Department of Defense Concept Award (9/1/04 – 8/30/05), Blake R. Peterson, PI. **Approved and funded for \$106,927.**
19. "Combating Cocksackievirus-Induced Heart Disease with Synthetic Ribonucleosides" – American Heart Association Predoctoral Fellowship requesting continued funding Dan Harki of the Peterson Laboratory (7/1/04-6/30/05). **Approved and Funded for \$20,000.**
18. "Cyclic Peptide Estrogens and Antiestrogens" – Department of Defense Predoctoral Fellowship funding Daniel D. Clark of the Peterson Laboratory (5/1/02-4/30/05). – **Approved and Funded for \$66,000.**

17. "Treatment of Metabolic Syndrome" Life Sciences Greenhouse of Central Pennsylvania (2/1/04-1/31/05), Jack Vanden Heuvel, Penn State Dept. of Veterinary Sciences, PI; Blake R. Peterson, Co-investigator. **Approved and funded for \$100,000.**
16. "Synthetic Inhibitors of ER-SRC interactions: Combating Tamoxifen Resistance" American Cancer Society Research Scholar Grant for Beginning Investigators (1/1/02-12/31/04), Blake R. Peterson, PI. **Approved and Funded for \$427,000** (\$98,000 direct / year to B. R. Peterson).
15. "Undergraduate Research on Anticancer Agents" – Penn State University President's Fund for Undergraduate Research (10/1/03-9/30/04), Blake R. Peterson, PI. **Approved and funded for \$3,000.**
14. "Synthetic Inhibitors of Ras Palmitoylation: Defining a Novel Class of Drugs Targeting Breast Cancers" Department of Defense Concept Award (10/1/03 – 9/30/04), Blake R. Peterson, PI. **Approved and funded for \$106,269.**
13. "The OGF/OGFR Axis for Biotherapy of Cancer" – Tobacco Settlement Formula Fund (6/4/02-6/30/04) Ian Zagon, Penn State Hershey Medical School, PI. Blake R. Peterson, Patricia McLaughlin, Co-investigators. **Approved and funded for \$280,000** (\$50,000 total direct to B. R. Peterson).
12. "Combating Cocksackievirus-Induced Heart Disease with Synthetic Ribonucleosides" – American Heart Association Predoctoral Fellowship funding Dan Harki of the Peterson Laboratory (7/1/02-6/30/04). **Approved and Funded for \$40,000.**
11. "Undergraduate Research on Anticancer Agents" – Penn State University President's Fund for Undergraduate Research (10/1/02-9/31/03), Blake R. Peterson, PI. **Approved and funded for \$3,000.**
10. "Novel Synthetic Antiestrogen Prodrugs Targeting Tamoxifen-Refractory Breast Cancers" Komen Foundation for Breast Cancer Research. Postdoctoral Fellowship Funding Dr. Steffen P. Creaser of the Peterson Laboratory (10/1/00-9/30/03). **Approved and Funded for \$105,000.**
9. "Novel Synthetic Antiestrogens that Block Nuclear Estrogen Receptor Function through Plasma Membrane Localization" – Department of Defense Predoctoral Fellowship funding Stephen L. Hussey of the Peterson Laboratory (5/1/00-4/1/03) – **Approved and Funded for \$66,000.**
8. "Receptor Membrane Anchoring with Synthetic Antiestrogens" National Cancer Institute – R01 (1/1/00-12/31/02), Blake R. Peterson, PI. **Approved and funded for \$524,959.**
7. "Undergraduate Research on Anticancer Agents" – Penn State University President's Fund for Undergraduate Research (10/1/01-9/31/02), Blake R. Peterson, PI. **Approved and funded for \$3,000.**
6. "Design, Synthesis, and Evaluation of Estrogen Sulfotransferase Inhibitors: Potential Enhancers of Tamoxifen-Mediated Apoptosis in ER Negative Breast Cancers" Department of Defense Concept Award (5/1/01 – 4/30/02), Blake R. Peterson, PI. **Approved and Funded for \$70,150.**
5. "Discovery of Peptidomimetic Antagonists of Estrogen Receptor – Coactivator Interactions: A Novel Strategy to Combat Tamoxifen Drug Resistance" Department of Defense Concept Award (10/1/00 – 9/30/01), Blake R. Peterson, PI. **Approved and Funded for \$70,150.**
4. "Undergraduate Research on Anticancer Agents" – Penn State University President's Fund for Undergraduate Research (10/1/00-9/31/01), Blake R. Peterson, PI. **Approved and funded for \$2,000.**
3. "Discovery of Cell-Permeable Protein Tyrosine Kinase Substrates by Combinatorial Chemical Methods" American Chemical Society Petroleum Research Fund Type G (9/1/99-9/1/01), Blake R. Peterson, PI. **Approved and funded for \$25,000.**
2. "Undergraduate Research on Anticancer Agents" – Penn State University President's Fund for Undergraduate Research (1/1/00-12/31/00), Blake R. Peterson, PI. **Approved and funded for \$2,000.**



1. "A Scaffolding Approach to Antisense Oligonucleotides" Damon Runyon-Walter Winchell Cancer Research Foundation Postdoctoral Fellowship (01/01/95-12/31/97). **Approved and funded for \$94,000.**

### ***Peer-Reviewed Probe Reports***

Chen, J.; Young, S.M.; Allen, C.; Waller, A.; Ursu, O.; Strouse, J.J.; Yao, T.; Golden, J.E.; **Peterson, B. R.**; Foutz, T.D.; Chavez, S.E.; Perez, D.; Evangelisti, A.M.; Garcia, M.J.; Bologna, C.G.; Carter, M.B.; Salas, V.M.; Oprea, T.I.; Edwards, B.S.; Panchaud, N.; De Virgilio, C.; Seeber, A.; Loewith, R.; Manzanilla, E.; Werner-Washburne, M.; Aube, J.; Sklar, L.A. Profiling a Selective Probe for RTG Branch of Yeast TORC1 Signaling Pathway. 2011 Apr 15. In: Probe Reports from the NIH Molecular Libraries Program [Internet]. Bethesda (MD): National Center for Biotechnology Information (US); <https://www.ncbi.nlm.nih.gov/books/NBK133439/>

### ***Publications*** (\*Corresponding author)

#### ***Manuscripts Submitted***

Andres, E. A.; Rane, D; **Peterson, B. R.**\* "Quantification of Engagement of the Taxol Binding Site of Tubulin by Small Molecules in Living Cells" ***Submitted***

Andres, E. A.; Rane, D; **Peterson, B. R.**\* "Pacific Blue-Taxoids as fluorescent molecular probes of microtubules" ***Submitted***

#### ***Manuscripts Accepted and Published***

85. Gao, G.; Sharma, K. K.; Andres, A. E.; Waals, B.; Boumelhem, F.; **Peterson, B. R.** "Synthesis of a Fluorinated Pyronin that Enables Blue Light to Rapidly Depolarize Mitochondria" *RSC Med. Chem.* **2022**, *in press*.
84. Caruso, G.\*; Benatti, C.; Musso, N.; Fresta, C. G.; Fidilio, A.; Spampinato G.; Brunello, N.; Bucolo C.; Drago, F.; Lunte, S. M.; **Peterson, B. R.**; Tascadda, F.; Caraci, F. "Carnosine Protects Macrophages against the Toxicity of A $\beta$ 1-42 Oligomers by Decreasing Oxidative Stress" *Biomedicines* **2021**, *9*, 477.
83. Rane, D.; Carlson, E.; Yin, Y. **Peterson, B. R.**\* "Fluorescent detection of peroxynitrite during antibody-dependent cellular phagocytosis" *Methods Enzymol.* **2020**, *640*, 1-35.
82. Pahattuge, T. N.; Jackson, J. M.; Rane, D.; Wijerathne, H.; Brown, V.; Perera, C.; Givens, R. S.; **Peterson, B. R.**; Soper, S. A.\* "Visible-Photorelease of Liquid Biopsy Markers following Microfluidic Affinity-Enrichment" *Chem. Commun.* **2020**, *56*, 4098-4101.
81. De Coen, R.; Perera, C.; Romero, M.; Risseeuw, M.; Freyn, A.; Nachbagauer, R.; Albertazzi, L.; Van Calenbergh, S.; Spiegel, D.; **Peterson, B. R.**; De Geest, B.\* "A synthetic rhamnose glycopolymer cell surface receptor for endogenous antibody recruitment" *Biomacromolecules*, **2020**, *21* (2), 793-802.
80. Benomar, S.; Lansdon, P; Bender, A. M.; **Peterson, B. R.**; Chandler, J. R.\*; Ackley B. D.\* "The C. Elegans CHP1 Homolog, PBO-1, Functions in Innate Immunity by Regulating the pH of the Intestinal Lumen" *Plos Pathogens*, **2020**, *16*(1), e1008134.
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- This work was highlighted by Dahlman, H. in "Anticancer/Antiviral Agent Wreaks Havoc in Mitochondria" *Chem. Res. Toxicol.*, **2015**, *28* (1), pp 2–3.
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