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Alexander (Leggy) Arnold, PhD

Curriculum Vitae

PERSONAL DETAILS

Date of Birth: 24/10/70

Nationality: German and American

EDUCATION

1998-2002 **Ph.D.**, *Organic Chemistry*, University of Groningen, Groningen, The Netherlands
1996-1998 **M.S.**, *Organic Chemistry*, University of Groningen, Groningen, The Netherlands
1995 **ERASMUS Scholarship** for Research Projects: *Organometallic Chemistry and Biotechnology*,
University of Groningen, Groningen, The Netherlands
1991-1994 **Vordiplom**, *Inorganic and Organic Chemistry*, Rheinische-Westfälische Technische Hochschule
Aachen, Aachen, Germany

WORK EXPERIENCE

2015- **Associate Professor**, *Chemistry and Biochemistry*, University of Wisconsin Milwaukee, Milwaukee, WI,
United States
2009-2015 **Assistant Professor**, *Chemistry and Biochemistry*, University of Wisconsin Milwaukee, Milwaukee, WI,
United States
2007-2009 **Staff Scientist**, *Chemical Biology & Therapeutics*, St. Jude Children's Research Hospital, Memphis, TN,
United States
2006-2007 **Research Laboratory Specialist**, *Chemical Biology & Therapeutics*, St. Jude Children's Research
Hospital, Memphis, TN, United States
2005-2006 **Senior Research Technologist**, *Chemical Biology & Therapeutics*, St. Jude Children's Research Hospital,
Memphis, TN, United States
2005 **Associate Specialist**, *Pharmaceutical Chemistry*, UC San Francisco, CA, United States
2002-2005 **Postdoctoral Researcher**, *Pharmaceutical Chemistry*, UC San Francisco, CA, United States

MEMBERSHIPS AND POSITIONS

2002-present Member of the American Chemical Society
2009-present Member of the Society for Laboratory Automation and Screening
2010-present Founding Member of the Advisory Board of the Milwaukee Institute of Drug Discovery
2011-present Member of the Clinical and Translational Science Institute at the Medical College of Wisconsin
2013-present Associate Editor of Nuclear Receptor Research
2013-present Associate Editor of Biomolecular Research & Therapeutics
2014-present Member of the Advisory Board of Bridges and Cures
2014-present PI Scientist of the Shimadzu Laboratory for Advanced & Applied Analytical Chemistry at
UWM
2017-present Chief Scientific Officer of Pantherics Incorporated

HONORS AND AWARDS

2018	Patent Award (UWM Research Foundation)
2017	Technology Licensing Award (UWM Research Foundation)
2017	Patent Award (UWM Research Foundation)
2014	UWM Foundation Research Award (UWM Office of Research)
2014	Technology Licensing Award (UWM Research Foundation)
2013	Young Investigator Award (16 th Workshop on Vitamin D)
2010	Graduate Research Fellow (GWSW/UWM)
2009	Travel award for NIH workshop “Chemical Approaches to Nuclear Receptor and Metabolism”
2006	Employee of the Quarter, St. Jude Children’s Research Hospital, Memphis, TN, United States
2001	Lecture Award NCCC II Leiden, The Netherlands
1998-2002	Ubbo Emmius Ph.D. Scholarship
1998-2002	EET-Grant (Economy, Ecology, Technology) from the Dutch Ministry of Economic Affairs.
1997	Nomination for the Organon prize for undergraduate research
1996-1997	ERASMUS Scholarship

TEACHING AND SUPERVISION

2009-present *University of Wisconsin-Milwaukee, Milwaukee, WI, United States*

Teaching Spring 2018

- CHEM 691, Senior Research; 2 enrolled, 5 credit hours, Undergraduate, Independent Study.
- CHEM 692, Senior Research; 1 enrolled, 2 credit hours, Undergraduate, Independent Study.
- CHEM 744, Medicinal Chemistry II; 17 enrolled, 51.0 credit hours, Upper Division, Graduate Lecture
- CHEM 912, Graduate Seminar; 69 enrolled, 69.0 credit hours, Graduate, Seminar.
- CHEM 931, Advanced Seminar in Analytical Chemistry; 2 enrolled, 1.0 credit hours, Graduate, Seminar.
- CHEM 932, Advanced Seminar in Biochemical Chemistry; 2 enrolled, 1.0 credit hours, Graduate, Seminar.
- CHEM 934, Advanced Seminar in Organic Chemistry; 2 enrolled, 1.0 credit hours, Graduate, Seminar.
- CHEM 990, Research Organic Chemistry; 2 enrolled, 10.0 credit hours, Graduate, Independent Study.
- CHEM 993, Research Analytical; 2 enrolled, 10.0 credit hours, Graduate, Independent Study.
- CHEM 996, Research Biochemistry; 2 enrolled, 10.0 credit hours, Graduate, Independent Study.

Teaching Fall 2017

- CHEM 691, Senior Research; 2 enrolled, 6 credit hours, Undergraduate, Independent Study.
- CHEM 748, Physical Organic Chemistry; 12 enrolled, 36.0 credit hours, Upper Division, Graduate Lecture.
- CHEM 912, Graduate Seminar; 69 enrolled, 69.0 credit hours, Graduate, Seminar.
- CHEM 931, Advanced Seminar in Analytical Chemistry; 3 enrolled, 1.0 credit hours, Graduate, Seminar.
- CHEM 932, Advanced Seminar in Biochemical Chemistry; 1 enrolled, 1.0 credit hours, Graduate, Seminar.
- CHEM 934, Advanced Seminar in Organic Chemistry; 2 enrolled, 1.0 credit hours, Graduate, Seminar.
- CHEM 990, Research Organic Chemistry; 2 enrolled, 10.0 credit hours, Graduate, Independent Study.
- CHEM 993, Research Analytical; 3 enrolled, 10.0 credit hours, Graduate, Independent Study.
- CHEM 996, Research Biochemistry; 2 enrolled, 10.0 credit hours, Graduate, Independent Study.

Teaching Summer 2017

- Workshop in IR spectroscopy for Senior Undergraduate students

Teaching Spring 2017

- CHEM 345, Organic Chemistry; 126 enrolled, 378.0 credit hours, Upper Division, Undergraduate, Lecture.
- CHEM 691, Senior Research; 2 enrolled, 6 credit hours, Undergraduate, Independent Study.
- CHEM 931, Advanced Seminar in Analytical Chemistry; 3 enrolled, 1.0 credit hours, Graduate, Seminar.
- CHEM 932, Advanced Seminar in Biochemical Chemistry; 2 enrolled, 1.0 credit hours, Graduate, Seminar.
- CHEM 934, Advanced Seminar in Organic Chemistry; 2 enrolled, 1.0 credit hours, Graduate, Seminar.
- CHEM 990, Research Organic Chemistry; 2 enrolled, 10.0 credit hours, Graduate, Independent Study.

- CHEM 993, Research Analytical; 3 enrolled, 10.0 credit hours, Graduate, Independent Study.
- CHEM 996, Research Biochemistry; 2 enrolled, 10.0 credit hours, Graduate, Independent Study.

Teaching Fall 2016

- CHEM 343, Organic Chemistry; 157 enrolled, 471.0 credit hours, Upper Division, Undergraduate, Lecture.
- CHEM 691, Senior Research; 2 enrolled, 4 credit hours, Undergraduate, Independent Study.
- CHEM 692, Senior Thesis; 1 enrolled, 3 credit hours, Undergraduate, Independent Study.
- CHEM 931, Advanced Seminar in Analytical Chemistry; 1 enrolled, 1.0 credit hours, Graduate, Seminar.
- CHEM 932, Advanced Seminar in Biochemical Chemistry; 1 enrolled, 1.0 credit hours, Graduate, Seminar.
- CHEM 934, Advanced Seminar in Organic Chemistry; 1 enrolled, 1.0 credit hours, Graduate, Seminar.
- CHEM 990, Research Organic Chemistry; 1 enrolled, 6.0 credit hours, Graduate, Independent Study.
- CHEM 993, Research Analytical; 1 enrolled, 2.0 credit hours, Graduate, Independent Study.
- CHEM 996, Research Biochemistry; 2 enrolled, 6.0 credit hours, Graduate, Independent Study.

Teaching Spring 2016

- CHEM 691, Senior Research; 3 enrolled, 4 credit hours, Undergraduate, Independent Study.
- CHEM 744, Medicinal Chemistry II; 9 enrolled, 27.0 credit hours, Upper Division, Graduate Lecture.
- CHEM 931, Advanced Seminar in Analytical Chemistry; 1 enrolled, 1.0 credit hours, Graduate, Seminar.
- CHEM 932, Advanced Seminar in Biochemical Chemistry; 2 enrolled, 2.0 credit hours, Graduate, Seminar.
- CHEM 934, Advanced Seminar in Organic Chemistry; 1 enrolled, 1.0 credit hours, Graduate, Seminar.
- CHEM 990, Research Organic Chemistry; 1 enrolled, 6.0 credit hours, Graduate, Independent Study.
- CHEM 993, Research Analytical; 1 enrolled, 9.0 credit hours, Graduate, Independent Study.
- CHEM 996, Research Biochemistry; 2 enrolled, 10.0 credit hours, Graduate, Independent Study.

Teaching Fall 2015

- CHEM 541, Bioprocess Chemical Engineering; 2 enrolled, 3.0 credit hours, Undergraduate, Lecture.
- CHEM 692, Senior Research; 2 enrolled, 2-5 credit hours, Undergraduate, Independent Study.
- CHEM 931, Advanced Seminar in Analytical Chemistry; 1 enrolled, 1.0 credit hours, Graduate, Seminar.
- CHEM 932, Advanced Seminar in Biochemical Chemistry; 2 enrolled, 2.0 credit hours, Graduate, Seminar.
- CHEM 934, Advanced Seminar in Organic Chemistry; 2 enrolled, 2.0 credit hours, Graduate, Seminar.
- CHEM 990, Research Organic Chemistry; 2 enrolled, 10.0 credit hours, Graduate, Independent Study.
- CHEM 993, Research Analytical; 1 enrolled, 9.0 credit hours, Graduate, Independent Study.
- CHEM 996, Research Biochemistry; 2 enrolled, 7.0 credit hours, Graduate, Independent Study.

Teaching Spring 2015

- CHEM 647, Physical Methods in Organic Chemistry; 16 enrolled, 48.0 credit hours, Undergrad/Graduate, Lecture.
- CHEM 691, Senior Research; 2 enrolled, 3 credit hours, Undergraduate, Independent Study.
- CHEM 931, Advanced Seminar in Analytical Chemistry; 1 enrolled, 1.0 credit hours, Graduate, Seminar.
- CHEM 932, Advanced Seminar in Biochemical Chemistry; 1 enrolled, 1.0 credit hours, Graduate, Seminar.
- CHEM 934, Advanced Seminar in Organic Chemistry; 2 enrolled, 2.0 credit hours, Graduate, Seminar.
- CHEM 990, Research Organic Chemistry; 2 enrolled, 5.0 credit hours, Graduate, Independent Study.
- CHEM 993, Research Analytical; 1 enrolled, 6.0 credit hours, Graduate, Independent Study.
- CHEM 996, Research Biochemistry; 1 enrolled, 2.0 credit hours, Graduate, Independent Study.

Teaching Fall 2014

- CHEM 345, Organic Chemistry; 109 enrolled, 327.0 credit hours, Upper Division, Undergraduate, Lecture.
- CHEM 691, Senior Research; 5 enrolled, 2-5 credit hours, Undergraduate, Independent Study.
- CHEM 931, Advanced Seminar in Analytical Chemistry; 1 enrolled, 1.0 credit hours, Graduate, Seminar.
- CHEM 932, Advanced Seminar in Biochemical Chemistry; 1 enrolled, 1.0 credit hours, Graduate, Seminar.
- CHEM 934, Advanced Seminar in Organic Chemistry; 2 enrolled, 2.0 credit hours, Graduate, Seminar.
- CHEM 990, Research Organic Chemistry; 2 enrolled, 5.0 credit hours, Graduate, Independent Study.
- CHEM 993, Research Analytical; 1 enrolled, 6.0 credit hours, Graduate, Independent Study.
- CHEM 996, Research Biochemistry; 1 enrolled, 2.0 credit hours, Graduate, Independent Study.

Teaching Spring 2014

- CHEM 343, Organic Chemistry; 173 enrolled, 465.0 credit hours, Upper Division, Undergraduate, Lecture.
- CHEM 741, Topics in Organic Chemistry; 8 enrolled, 16.0 credit hours, Graduate, Lecture
- CHEM 692, Senior Research; 1 enrolled, 2.0 credit hours, Undergraduate, Independent Study.
- CHEM 931, Advanced Seminar in Analytical Chemistry; 1 enrolled, 1.0 credit hours, Graduate, Seminar.
- CHEM 932, Advanced Seminar in Biochemical Chemistry; 1 enrolled, 1.0 credit hours, Graduate, Seminar.
- CHEM 934, Advanced Seminar in Organic Chemistry; 4 enrolled, 4.0 credit hours, Graduate, Seminar.
- CHEM 990, Research Organic Chemistry; 4 enrolled, 13.0 credit hours, Graduate, Independent Study.
- CHEM 993, Research Analytical; 1 enrolled, 3.0 credit hours, Graduate, Independent Study.
- CHEM 996, Research Biochemistry; 1 enrolled, 5.0 credit hours, Graduate, Independent Study.

Teaching Fall 2013

- CHEM 647, Physical Methods in Organic Chemistry; 16 enrolled, 48.0 credit hours, Undergrad/Graduate, Lecture.
- CHEM 932, Advanced Seminar in Biochemical Chemistry; 1 enrolled, 1.0 credit hours, Graduate, Seminar.
- CHEM 934, Advanced Seminar in Organic Chemistry; 2 enrolled, 2.0 credit hours, Graduate, Seminar.
- CHEM 990, Research Organic Chemistry; 2 enrolled, 8.0 credit hours, Graduate, Independent Study.
- CHEM 996, Research Biochemistry; 1 enrolled, 4.0 credit hours, Graduate, Independent Study.

Teaching Spring 2013

- CHEM 691, Senior Research; 1 enrolled, 2.0 credit hours, Undergraduate, Independent Study.
- CHEM 748, Physical Organic Chemistry; 12 enrolled, 36.0 credit hours, Upper Division, Graduate Lecture.
- CHEM 931, Advanced Seminar in Analytical Chemistry; 1 enrolled, 1.0 credit hours, Graduate, Seminar.
- CHEM 932, Advanced Seminar in Biochemical Chemistry; 1 enrolled, 1.0 credit hours, Graduate, Seminar.
- CHEM 934, Advanced Seminar in Organic Chemistry; 2 enrolled, 2.0 credit hours, Graduate, Seminar.
- CHEM 990, Research Organic Chemistry; 2 enrolled, 10.0 credit hours, Graduate, Independent Study.
- CHEM 993, Research Analytical; 1 enrolled, 2.0 credit hours, Graduate, Independent Study.
- CHEM 996, Research Biochemistry; 2 enrolled, 6.0 credit hours, Graduate, Independent Study.

Teaching Fall 2012

- CHEM 343, Organic Chemistry; 161 enrolled, 483.0 credit hours, Upper Division, Undergraduate, Lecture.
- CHEM 691, Senior Research; 2 enrolled, 7.0 credit hours, Undergraduate, Independent Study.
- CHEM 931, Advanced Seminar in Analytical Chemistry; 1 enrolled, 1.0 credit hours, Graduate, Seminar.
- CHEM 932, Advanced Seminar in Biochemical Chemistry; 1 enrolled, 1.0 credit hours, Graduate, Seminar.
- CHEM 934, Advanced Seminar in Organic Chemistry; 2 enrolled, 2.0 credit hours, Graduate, Seminar.
- CHEM 990, Research Organic Chemistry; 2 enrolled, 6.0 credit hours, Graduate, Independent Study.
- CHEM 993, Research Analytical; 1 enrolled, 2.0 credit hours, Graduate, Independent Study.
- CHEM 996, Research Biochemistry; 2 enrolled, 5.0 credit hours, Graduate, Independent Study.

Teaching Summer 2012

- CHEM 691, Senior Research; 2 enrolled, 5.0 credit hours, Undergraduate, Independent Study.

Teaching Spring 2012

- CHEM 599, Special Projects in Chemistry; 1 enrolled, 5.0 credit hours, Upper Division, Undergraduate, Independent Study.
- CHEM 691, Senior Research; 1 enrolled, 3.0 credit hours, Undergraduate, Independent Study.
- CHEM 741, Topics in Organic Chemistry; 9 enrolled, 18.0 credit hours, Graduate, Lecture
- CHEM 932, Advanced Seminar in Biochemical Chemistry; 2 enrolled, 2.0 credit hours, Graduate, Seminar.
- CHEM 934, Advanced Seminar in Organic Chemistry; 2 enrolled, 2.0 credit hours, Graduate, Seminar.
- CHEM 990, Research Organic Chemistry; 2 enrolled, 7.0 credit hours, Graduate, Independent Study.
- CHEM 993, Research Analytical; 1 enrolled, 3.0 credit hours, Graduate, Independent Study.
- CHEM 996, Research Biochemistry; 2 enrolled, 11.0 credit hours, Graduate, Independent Study.

Teaching Fall 2011

- CHEM 343, Organic Chemistry; 155 enrolled, 465.0 credit hours, Upper Division, Undergraduate, Lecture.
- CHEM 647, Physical Methods in Organic Chemistry; 13 enrolled, 39.0 credit hours, Undergrad/Graduate, Lecture.
- CHEM 691, Senior Research; 1 enrolled, 4.0 credit hours, Undergraduate, Independent Study.
- CHEM 931, Advanced Seminar in Analytical Chemistry; 1 enrolled, 1.0 credit hours, Graduate, Seminar.
- CHEM 932, Advanced Seminar in Biochemical Chemistry; 2 enrolled, 2.0 credit hours, Graduate, Seminar.
- CHEM 934, Advanced Seminar in Organic Chemistry; 1 enrolled, 1.0 credit hours, Graduate, Seminar.
- CHEM 990, Research Organic Chemistry; 1 enrolled, 4.0 credit hours, Graduate, Independent Study.
- CHEM 993, Research Analytical; 1 enrolled, 3.0 credit hours, Graduate, Independent Study.
- CHEM 996, Research Biochemistry; 2 enrolled, 10.0 credit hours, Graduate, Independent Study.

Teaching Summer 2011

- CHEM 993, Research Analytical; 1 enrolled, 6.0 credit hours, Graduate, Independent Study.
- CHEM 996, Research Biochemistry; 1 enrolled, 3.0 credit hours, Graduate, Independent Study.

Teaching Spring 2011

- CHEM 748, Physical Organic Chemistry; 10 enrolled, 30.0 credit hours, Upper Division, Graduate Lecture.
- CHEM 912, Graduate Seminar; 45 enrolled, 45.0 credit hours, Graduate, Seminar.
- CHEM 931, Advanced Seminar in Analytical Chemistry; 1 enrolled, 1.0 credit hours, Graduate, Seminar.
- CHEM 932, Advanced Seminar in Biochemical Chemistry; 2 enrolled, 2.0 credit hours, Graduate, Seminar.
- CHEM 934, Advanced Seminar in Organic Chemistry; 1 enrolled, 1.0 credit hours, Graduate, Seminar.
- CHEM 990, Research Organic Chemistry; 1 enrolled, 4.0 credit hours, Graduate, Independent Study.
- CHEM 993, Research Analytical; 1 enrolled, 8.0 credit hours, Graduate, Independent Study.
- CHEM 996, Research Biochemistry; 2 enrolled, 11.0 credit hours, Graduate, Independent Study.

Teaching Fall 2010

- CHEM 691, Senior Research; 1 enrolled, 3.0 credit hours, Upper Division, Undergraduate, Independent Studies.
- CHEM 912, Graduate Seminar; 56 enrolled, 56.0 credit hours, Graduate, Seminar.
- CHEM 931, Advanced Seminar in Analytical Chemistry; 1 enrolled, 1.0 credit hours, Graduate, Seminar.
- CHEM 932, Advanced Seminar in Biochemical Chemistry; 2 enrolled, 2.0 credit hours, Graduate, Seminar.
- CHEM 993, Research Analytical; 1 enrolled, 5.0 credit hours, Graduate, Independent Study.
- CHEM 996, Research Biochemistry; 2 enrolled, 10.0 credit hours, Graduate, Independent Study.

Teaching Summer 2010

- CHEM 691, Senior Research; 2 enrolled, 5.0 credit hours, Upper Division, Undergraduate, Independent Studies.

Teaching Spring 2010

- CHEM 691, Senior Research; 1 enrolled, 4.0 credit hours, Upper Division, Undergraduate, Independent Studies.
- CHEM 931, Advanced Seminar in Analytical Chemistry; 1 enrolled, 1.0 credit hours, Graduate, Seminar.
- CHEM 932, Advanced Seminar in Biochemical Chemistry; 2 enrolled, 2.0 credit hours, Graduate, Seminar.
- CHEM 993, Research Analytical; 1 enrolled, 5.0 credit hours, Graduate, Independent Study.
- CHEM 996, Research Biochemistry; 2 enrolled, 10.0 credit hours, Graduate, Independent Study.

Teaching Fall 2009

- CHEM 647, Physical Methods of Organic Chemistry; 11 enrolled, 33.0 credit hours, Upper Division, Undergrad/Graduate, Lecture.
- CHEM 691, Senior Research; 2 enrolled, 4.0 credit hours, Upper Division, Undergraduate, Independent Studies.

Supervision

1. Mae Stepanski, Undergraduate Student, "Effect of novel imidazobenzodiazepine to reduce airway hyperresponsiveness in ova s/c mice" **January 2017**

2. Brandon Mikulsky, Undergraduate Student, "Investigating anti-inflammatory properties of novel imidazobenzodiazepines" **January 2017-**
3. Nicholas Zahn, Graduate Student, **January 2018** - "Investigation of new treatment for pain, asthma and epilepsy"
4. Porta Montgomery, Undergraduate Student, "Using rotarod studies to determine sedation of new drug candidates" **January 2017- May 2017.**
5. Melissa Schussman, Undergraduate Student, "Analysis of behavioral changes of imidazobenzodiazepine treated mice" **September 2017- May 2017.**
6. Anthony Garcia, Undergraduate Student, "Immunohistochemistry of GABA_AR α 5 subunit in mouse lung and brain" **September 2017- December 2017.**
7. Labina Petrovska "Undergraduate Student, **June 2017- December 2017** "Development of inhibitors for ExoU- a type III secretion system of Pseudomonas aeruginosa"
8. Jon Gould, "Undergraduate Student, **June 2017 – December 2017** "Synthesis of new pepsin inhibitors"
9. Alec Huber, Undergraduate Student, **January 2017-** "Investigation of CNS effects of novel imidazobenzodiazepines"
10. Alessandra Ebben, Undergraduate Student, **January 2017- August 2017** "Synthesis of calcitroic acid"
11. Ted Harris, Graduate Student, **January 2017 – September 2017** "Asthma and Inflammation".
12. Tania Mutchie, Graduate Student, **January 2017** - "Synthesis of VDR ligands and inhibitor of VDR-coregulator interactions".
13. Rashid Roni Graduate Student, **January 2017** - "Preclinical evaluation using LCMS/MS"
14. Elliot DeMilo Graduate Student, **January 2017** - "Biological investigation of calcitroic acid and its metabolites in vitro and in vivo".
15. Zakari Saad Agherrabi, Undergraduate Student, **January 2017 – April 2017** "Identification of Novel Pepsin Inhibitors for Target Drugs to Treat Laryngopharyngeal Reflux Disease"
16. Erica Lutz Undergraduate Student, **January 2017 – April 2017** "Investigation of new drug candidates for asthma"
17. Victoriia Senych, Undergraduate Student, **June 2016-June 2017** "Synthesis of calcitroic acid"
18. Rodrigo Rafael Ramos Hernandez, Graduate Student from the University of Veracruzana, **January 2016- January 2017** "Synthesis of a new intrinsic fluorescent VDR ligand".
19. Ramos Morales Fernando Rafael visiting scholar from the University of Veracruzana, **January 2016- January 2017** "Synthesis of a new intrinsic fluorescent VDR ligand".
20. Ivette Bravo, graduate student for the University of Veracruzana, **May 2016- December 2016** "Evaluation of new asthma compounds using microsomal stability studies and rotarod".
21. Rodrigo Rafael Ramos Hernandez (University of Veracruzana), **January 2016- January 2017** "Synthesis of a new intrinsic fluorescent VDR ligand".
22. Owen Philip John Dinauer, Undergraduate Student, **January 2016- April 2016** "Synthesis of new VDR modulators"
23. Leah Marie Radde, Undergraduate Student, **January 2016 – December 2016** "Identification of new pepsin inhibitors as new treatment for laryngopharyngeal reflux disease (LPRD)"
24. Benjamin Hartzler, Undergraduate Student, **September 2015 – December 2016** "Determination of GABA(A) receptor subunit in the mouse lung"
25. Dana Shannon, Undergraduate Student, **September 2015 – December 2016** "Evaluation of small molecule microsomal stability using mass spectrometry"
26. Nicholas Zahn, Research Intern, **June 2015 – December 2017** "Evaluation of small molecule microsomal stability using mass spectrometry".
27. Dr. Gloria Forkuo, Postdoctoral Associate, **March 2015- October 2017**"Development of new drugs for asthma by targeting GABA(A) receptors in the lung".
28. Charles Strangl, Undergraduate Student, **January 2015-December 2015** "Synthesis of VDR-Coregulator Inhibitors"
29. Amanda Nieman, Graduate Student, **January 2015** - "Asthma and Inflammation".
30. Olivia Yu, Graduate Student, **January 2015** - "Modulators of the vitamin D receptor and mucous production in asthma".
31. Nicholas Zahn, Undergraduate Student, **January 2015 – June 2015** "Pharmacokinetics of novel asthma drugs".
32. Revathi Kodali, Research Associate, **January 2015-** "Evaluation of small molecule microsomal stability using mass spectrometry"
33. DeMarco Dejuan Jones, Undergraduate Student, **January 2015 – May 2015** "The most common superbug: MRSA".

34. Marina Sidorko, Undergraduate Student, **September 2014 – May 2015** “Quantification of drug candidates in different mouse tissue”.
35. Alexandra Dzubinski, Undergraduate Student, **September 2014 – Summer 2015**, "Development of an in vivo model for laryngopharyngeal reflux disease (LPRD)".
36. Gino Scuncio, Undergraduate Student, **September 2014 – May 2016**, "Development of new assays to characterize pepsin inhibitors as new treatment for laryngopharyngeal reflux disease (LPRD)".
37. Chris Goetz, Undergraduate Student, **May 2014 – September 2015**, "Identification of novel therapeutics for laryngopharyngeal reflux disease (LPRD)".
38. Skylar Gabel-Eissens, Undergraduate Student, **May 2014 – August 2014** “Synthesis of VDR-Coregulator inhibitors”.
39. Revathi Kodali, Research Intern, **January 2014- December 2014**“Evaluation of small molecule microsomal stability using mass spectrometry”
40. Kodjo Amedome, Undergraduate Student, **January 2014 – May 2014**, “Recent examples of the Buchwald- Hartwig reactions”.
41. Nishita Yvas, Graduate Student, **January 2013 – May 2014**, “Development of vitamin D receptor-corepressor inhibitors as novel vitamin D receptor agonists.”
42. Grant Fernstrum, Graduate Student, **January 2014 – June 2016** “Development of reversible vitamin D receptor-coactivator inhibitors.”
43. Luis Sanchez, Undergraduate Student, **January 2014 – May 2015**, “Synthesis of non-secosteroidal vitamin D receptor antagonists.”
44. Joshua Victor Preston, Undergraduate Student, **June 2013 – January 2015**, “Sequencing of nuclear receptor vectors to establish a plasmid data base.”
45. Jonathan Bogart, Undergraduate Student, **June 2013 – June 2014**, “Synthesis of VDR-coactivator inhibitors based on the GW0742 scaffold.”
46. Margaret Guthrie, Graduate Student, **January 2013 – December 2017**, “Development of pre-clinical high throughput screening assays.
47. Nicholas Nassif, Undergraduate Student, **September 2012 – Spring 2013**, “Expression and Purification of vitamin D receptor and determination of inhibitor binding modes.”
48. Dr. Preetpal Singh Sidhu, Postdoctoral Researcher, **August 2012 – May 2014**, “Development of selective vitamin D receptor-coregulator inhibitors”.
49. Belaynesh Feleke, Graduate Student, **May 2012 – August 2014**, “Development of non-secosteroidal ligands for the vitamin D receptor.
50. Jonathan Temmer, Undergraduate Student, **May 2012 – December 2012**, “Synthesis of a fluorescent probe for the detection of promiscuous inhibitors.”
51. Nicholas Talerico, Undergraduate Student, **May 2012 – August 2012**, “Synthesis of Imines for the parallel synthesis of vitamin D receptor-coactivator inhibitors.”
52. Cynthia Henderson, Undergraduate Student, **May 2012 – August 2012**, “Expression and Purification of vitamin D receptor protein.”
53. Robin Goy, Undergraduate Student, **May 2012 – May 2014**, “Expression and Purification of retinoid X receptor protein.”
54. Angela Zivkovic, Undergraduate Student, **January 2012 –May 2012**, “Synthesis of a Novel Non-secosteroidal Vitamin D Receptor Agonist.”
55. Nina Yina Yuan, Graduate Student, **December 2011 – August 2016**, “Development of a high throughput screening assay for GABA_A receptor modulator”.
56. Chinedum Kevin, Undergraduate Student, **August 2011 – May 2012**, Binding mode identification of small molecule inhibitors of the vitamin D receptor-coactivator interaction”.
57. Nina Yina Yuan, Undergraduate Student, **May 2011 – August 2011**, “Development of an automated patch-clamp assay for GABA_A receptor subtype-selective modulators”.
58. Nicholas Talerico, Undergraduate Student, **May 2011 – August 2011**, Synthesis of Coregulator Binding Inhibitors for the Vitamin D Receptor
59. Nina Yina Yuan, Undergraduate Student, **January 2011 –June 2011**, “An automated subtype-selective GABA_A receptor patch-clamp assay using transient transfected HEK293T cells”.
60. Kelly Teske, Graduate Student, **December 2010 – August 2015**, "Development of selective vitamin D receptor-coregulator inhibitors".

61. Dana Pearson, Undergraduate Student, **August 2010 – December 2010**, “Large scale expression of the vitamin D receptor ligand binding domain”.
62. Dr. Premchendar Nandhikonda, Postdoctoral Researcher, **August 2010 – June 2013**, “Development of a dual vitamin D receptor fluorescence polarization assay and the development of selective vitamin D receptor-coregulator inhibitors”.
63. Travis Russell Dove, Undergraduate Student, **May 2010 – August 2010**, “Development of a fluorescently labeled ligand for the vitamin D receptor”.
64. Nina Yina Yuan, Undergraduate Student, **May 2010 – August 2010**, “Identification of binding modes of vitamin D receptor-coactivator inhibitors”.
65. Travis Russell Dove, Undergraduate Student, **January 2010 – May 2010**, “Determination of cytotoxicity of vitamin D receptor-coactivator inhibitors”.
66. Dr. Wen Zhang, Postdoctoral Researcher, **January 2010 – August 2010**, “Development of selective vitamin D receptor-coregulator inhibitors”.
67. Tahniyath Ara, Graduate Student, **January 2010 – April 2013**, "Expression, Purification and Crystallization of the vitamin D receptor ligand binding domain".
68. Athena Baranowski, Graduate Student, **January 2010 – August 2013**, "Evaluation of vitamin D receptor-coactivator inhibitors using cell based assays".
69. Mikola Zhmendak, Undergraduate Student, **August 2009 – December 2010**, “Establishment of a chemical inventory system for the Department of Chemistry and Biochemistry”.
70. Nickolas Eric Tadeo, Undergraduate Student, **August 2009 – December 2010**, “Theoretical concepts of measuring toxicity in cells”.
71. Megan McCallum, Graduate Student, **August 2009 – May 2013**, “Miniaturization of biophysical assays for drug candidates”.

2005-2009 *St. Jude Children’s Research Hospital, Memphis, TN, United States*

Supervision

1. Priya Velusamy, Research Technologist, **2008-2009**, “Synthesis of ATM kinase inhibitors as chemotherapeutic reagents”.
2. Thiaz Rivera Vargas, Student, University Denis Diderot Paris, **2008**, “Identification of natural promoters for T3 regulated genes mediated by thyroid receptors”
3. Cindy Choy, Research Technologist, **2007-2009**, “Parallel synthesis of acridine based anti-malaria drugs”
4. Richard Miskimins, Student, Brigham Young University of Idaho, **2007**, “Assembly of a FDA approved drugs library for HST purpose and HTS screening for glucocorticoid receptor agonists using a specific bioactive compound library” (Second best POE 2007 Basic Science Papers)
5. Florent Ubelmann, Student, University Denis Diderot Paris, **2007**, “Development of a thyroid cancer cell line that stably expressed an T3 responsive luciferase reporter”
6. Min Lu, Senior Research Technologist, **2007-2008**, “Synthesis of small molecule libraries”
7. Patricia Ranaivo, Research Technologist, **2006-2007**, “Synthesis of BODIPY-labeled colchicine”
8. Aaron Kosinski, Research Technologist, **2006-2008**, “Expression of nuclear receptor proteins”
9. Christina Roels, PharmD Student, Wingate University NC, **2006** “Synthesis of Alpha-Helical Proteomimetics Targeting Kaposi’s Sarcoma-Associated Herpes Virus (KSHV)”. (Second best POE 2006 Basic Science Papers)

2002-2005 *UC San Francisco, San Francisco, CA, United States*

Supervision

1. Gerlof Kruidhof, Student, University of Groningen, **2003** “Synthesis of indole derivatives as potential inhibitors of the nuclear hormone receptor coactivator binding”
2. Dave Smithson, Student, UCSF, **2004** “Synthesis of adenosine analogs as potential inhibitors of purine nucleoside phosphorylases”
3. Lillian Seu, Student, Bernard College, **2004** “Synthesis of biarylethers as ion channel modulators”
4. Andrea C. McReynolds, Research Technologist, **2004-2005** “Expression of the thyroid and androgen hormone receptor proteins”

1998-2002 University of Groningen, Groningen, The Netherlands

Assistant

- Tutorials for organic chemistry I and II for undergraduate students
- Organic chemistry lab (I-V) for biologists, chemists, and medical undergraduate students
- Organometallic chemistry lab for undergraduate chemists

Supervision (Master (Graduate) research project)

- Hinke Malda, Student, University of Groningen, **1999-2001**, “Copper catalyzed enantioselective allylic alkylation with diorganozinc compounds using phosphoramidite ligands”.
- Anthoni W. van Zijl, Student, University of Groningen, **2000-2002**, “Copper catalyzed enantioselective allylic alkylation with diorganozinc compounds using phosphoramidite ligands”.

COMMITTEE AND ADMINISTRATION

PhD and MS Committee:

1. PhD Thesis Chair, Nicolas Zahn, **January 2017-**
2. PhD Thesis Committee Member, Jawad Bin Belayet, **September 2017** - “Effects of the Leaving Groups on Photo-Induced Benzyl Cation Formation and Subsequent DNA Cross-Linking”. (PI:Hossain)
3. PhD Thesis Committee Member, Prithu Mondal, **January 2017** - “Synthesis of Imidazobenzodiazepine for Cancer”. (PI:Cook)
4. PhD Thesis Committee Member, Kamal Prasad Pandey, **January 2017** - “Synthesis of Imidazobenzodiazepine for Cancer”. (PI:Cook)
5. PhD Thesis Committee Member, Md Asad Uz Zaman, **January 2017** - “Synthesis of Imidazobenzodiazepine for Cancer”. (PI:Peng)
6. PhD Thesis Committee Member, Jawad Bin Belayet **January 2017** - “Synthesis of Imidazobenzodiazepine for Cancer”. (PI:Cook)
7. PhD Thesis Committee Chair, Tania Mutchie, **January 2017** - “Synthesis of VDR ligands and inhibitor of VDR-coregulator interactions”.
8. PhD Thesis Committee Chair, Rashid Roni, **January 2017** - “Preclinical evaluation using LSMS/MS”
9. PhD Thesis Committee Chair, Elliot DeMilo, **January 2017** - “Biological investigation of calcitric acid and its metabolites in vitro and in vivo”.
10. PhD Thesis Committee Chair, Ted Harris, **January 2017 – Summer 2017** “Asthma and Inflammation”.
11. PhD Thesis Committee Member, Ahmed Taukir **January 2016** - “Synthesis of Imidazobenzodiazepine for Cancer”. (PI:Cook)
12. PhD Thesis Committee Member, Khorshada Jahan **September 2016** - “”. (PI:Hossain)
13. PhD Thesis Committee Member, Kevin Wolters, **October 2016** – “”. (PI:Aldstadt)
14. PhD Thesis Committee Member, Joseph Roman, **January 2016** – “”. (PI:Moran)
15. PhD Thesis Committee Member, Nemanja Vuksanovic **September 2015** - “”. (PI:Silvaggi)
16. PhD Thesis Committee Member, Tyler Fenske, **January 2015** – “”. (PI:Schwabacher)
17. PhD Thesis Committee Member, Charles Smith, **January 2015** – “”. (PI:Dietz)
18. PhD Thesis Committee Member, Farjana Rashid, **December 2016-** “Design and synthesis of different BZ/Gabereric subtype selective ligand to treat cancers, pain disorders and schizophrenia via a common early intermediate” (PI:Cook)
19. PhD Thesis Committee Member, Heli Fan, **September 2014** – “”. (PI:Peng)
20. PhD Thesis Committee Member, Surajdeen, Omolabake, **January 2014 – June 2016** “The synthesis of fluorescent 3,6-dihydroxylanthones: a route to substituted fluoresceins”. (PI:Schwabacher)
21. PhD Thesis Committee Chair, Amanda Youmans, **January 2015** - “Asthma and Inflammation”.
22. PhD Thesis Committee Chair, Olivia Yu, **January 2015** - “Asthma and mucous production”.
23. PhD Thesis Committee Member, Monica Thomas (MCW), **November 2014-** (PI:Brian Volkman)
24. MS Thesis Committee Chair, Grant Fernstrum, **January 2014-December 2015**, “Synthesis of non-covalent VDR-coactivator inhibitors.
25. PhD Thesis Committee Member, Lanlan Han, **January 2013 – December 2017**“Strucutre function relationship in bacterial regulatory proteins and an enzyme involved in antibiotic biosynthesis”. (PI:Silvaggi)

26. MS Thesis Committee Member, Sarah Oplawski, **November 2013 – May 2014** “Extraction of Indicator dyes into imidazolium-based ionic liquies”. (PI:Dietz)
27. PhD Thesis Committee Member, German Fonseca, **November 2013 – December 2014** “Enantiospecific Strategy for the Total Synthesis of Sarpagine and Macroline Related Oxindole Alkaloids”. (PI:Cook)
28. PhD Thesis Committee Member, Raiwana Jahan, **November 2013 -** “The Synthesis of XHE-III-74 and its analog as novel GABA(A) receptor modulators”. (PI:Cook)
29. MS Thesis Committee Member, Kaniz Fatema, **November 2013-April 2014 -** “Formation of Small Molecule Adducts with the Zn-Proteome”. (PI:Petering)
30. PhD Thesis Committee Member, Sarah Oehm, **October 2013 -** “Synthesis of functionalized amino acids and artificial beta-sheets”. (PI:Schwabacher)
31. PhD Thesis Committee Member, Zubair Ahmed Khan, **October 2013 -** “Towards the total synthesis of hystrixine”. (PI:Cook/Arnold)
32. PhD Thesis Committee Member, Guanguan Li, **October 2013 -** “The Synthesis of SH-053-2’F-S-CH₃ and its analog as novel GABA(A) receptor modulators”. (PI:Cook)
33. PhD Thesis Committee Member, Megan Josie Corby, **September 2013 -** “Interactions of hepatitis C with other viral and cellular proteins.” (PI:Frick)
34. PhD Thesis Committee Member, Eric Lund, **August 2013 -** “Quantification of the in vivo heavy metal proteome using laser-ablation spectroscopy”. (PI:Petering)
35. PhD Thesis Committee Member, Xavier Sacro Udad, **August 2013 -** “Immobilizing A Single DNA Molecule In Solution With An Electrical Field”. (PI:Wohl)
36. PhD Thesis Committee Member, Huabing Sun, **August 2013 – January 2015** “Oligonucleotides Containing Coumarin Derivatives: Synthesis, DNA Mutation Detection, and Interstrand Cross-Link (ICL) Formation”. (PI:Peng)
37. PhD Thesis Committee Member, Veera Venkata Naga Phani Babu Tiruveedhula, **July 2013 – August 2017**“ Design and Synthesis of Novel Antimicrobials for the Treatment of Drug Resistance Bacterial Infections including Mycobacterium tuberculosis”. (PI:Cook)
38. PhD Thesis Committee Member, Noreena Labrague Sweeney, **June 2013 – April 2015** “Discovery and Analysis of Small Molecules that Inhibit the Non-Structural 3 Helicase Enzyme of the Hepatitis C and Dengue Virus. (PI:Frick)
39. PhD Thesis Committee Member, Lisa Mueller, **March 2013 – July 2016** “A Riddle Wrapped in a Mystery, Inside an Enigma: Streptomyces bingchenggensis “Acetoacetate Decarboxylase”. (PI:Silvaggi)
40. PhD Thesis Chair, Margaret Guthrie, **January 2013 – December 2017**, “Development of pre-clinical high throughput screening assays.
41. PhD Thesis Committee Member, Yibin Wang, **December 2012 – December 2015** “Inducible DNA Cross-Linking Agents: Design, Synthesis, and Biological Investigation”. (PI:Peng)
42. PhD Thesis Committee Member, Mike Poe, **September 2012 – May 2016** “New Treatments for Fibromyalgia, Diabetic Neuropathy, Ghost Limb Pain and other Pain Disorders as well as Schizophrenia”. (PI:Cook)
43. PhD Thesis Committee Member, Bradley Michael Moran, **September 2012 – November 2016** “The Revealing Nature of Negative Space: Spectroscopically Mapping Electron Density Distributions.” (PI:Woehl)
44. PhD Thesis Committee Member, Md. Sharif Asad, **September 2012 – July 2015**”Asymmetric Synthesis of Compounds Containing All Carbon Quaternary Centers”. (PI:Hossain)
45. PhD Thesis Committee Member, Md. Mojibul Haque, **September 2012-Spetember 2014** –“Establish a Methodology to Incorporate Azide Modified Thymidine into DNA and Modified Pyrimidines Nucleotides: Design, Synthesis, and Properties (DNA Cross-Linking Ability, and Anticancer and Antiviral Activity”. (PI:Peng)
46. PhD Thesis Committee Member, Abdul Momen, **September 2012 – May 2015** Improved extraction chromatographic materials for the separation and pre-concentration of metal ions”. (PI:Dietz)
47. PhD Thesis Committee Member, Christopher Michael Witzigmann, **September 2012 – November 2016** “Development of Novel Antimicrobials for the Treatment of Drug Resistant Bacterial Infections”. (PI:Cook)
48. PhD Thesis Committee Member, Mohammad Rezaul Karim, **September 2012 – May 2015** “Zinc Fluorophores: What do they image?”. (PI:Petering)
49. MS Thesis Committee Chair, Belaynesh Feleke, **September 2011-April 2014** “Development of selective direct inhibitors of 1,25-dihydroxyvitamin D₃”.
50. PhD Thesis Committee Chair, Nina Yuan, **September 2011 – September 2016** “Establishment of a HTS assay for the GABA_A receptor”.
51. PhD Thesis Committee Chair, Kelly Teske, **September 2010 – Summer 2015** “Development of selective vitamin D receptor-coregulator inhibitors”.

52. MS Thesis Committee Chair, Athena Baranowski, **September 2009 – December 2013**, “Evaluation of vitamin D receptor-coactivator inhibitors using cell based assays”.
53. MS Thesis Committee Chair, Tahniyath Ara, **September 2009 – May 2012**, “Expression, Purification and Crystallization of the vitamin D receptor ligand binding domain”.
54. PhD Thesis Committee Member, Joseph S Ulicki, **September 2009 – December 2014** “Chiral Brønsted Acid Catalyzed Reactions and Their Applications”. (PI:Hossain)
55. PhD Thesis Committee Chair, Megan McCallum, **September 2009 – May 2013** “Minimizing sample size and increasing throughput in preclinical drug development assays”.
56. PhD Thesis Committee Member, Matthew Marcus Huisman, **September 2009 – December 2014** “A new synthesis route toward tryprostatin derivatives and their biological evaluation”. (PI:Hossain)
57. PhD Thesis Committee Member, Terry Clayton, **September 2009 – December 2011**, “ part 1. Unified pharmacophoric protein models for the benzodiazepine receptor subtypes; part 2 subtype selective ligand the $\alpha 5$ GABA_A/Bz receptors”. (PI:Cook)
58. PhD Thesis Committee Member, Chitra R Edwankar, **September 2009 – December 2011** , “General approach toward the total synthesis of 10-methoxy indole alkaloids”.(PI:Cook)
59. PhD Thesis Committee Member, Ujala Rana, **September 2009 - August 2010**, “Metallothionein: Its role in cellular zinc trafficking”. (PI:Petering)
60. MS Thesis Committee Member, Ivan Kamyshko, **September 2009 - August 2010**, “Inhibitory effects of cadmium on sp1-regulated SGLT1 gene expression is independent form PKC activation”.(PI:Petering)

Other

1. Faculty Recruitment Ambassador, **July 2017 – June 2018**, Interaction with incoming science students in forma of workshops and presentations.
2. Graduate Subcommittee, Committee Chair, **September 2017 –** , Graduate Students affairs in respect to TA ship and progression.
3. Graduate Admission Committee, Committee Member, **September 2017 –** , Selection of future graduate student for the department of chemistry and biochemistry.
4. University Workplace Safety Policy committee, **May 2017-** , to address chemical safety at UWM
5. Mass Spectrometry Technician search and screening committee, **October 2016 - February 2017**, Selection of technician for the Shimadzu Center for Analytical and Applied Chemistry.
6. Graduate Admission Committee, Committee Chair, **September 2015 – August 2017**, Selection of future graduate student for the department of chemistry and biochemistry.
7. Graduate Subcommittee, Committee Member, **September 2015 – August 2017**, Graduate Students affairs in respect to TA ship and progression.
8. College and University Faculty Award Committee, Committee Member, **September 2015 –** , Nomination of Faculty for College and University Faculty Awards
9. Tenure promotion committee, Committee Member, **June 2015- December 2015**
10. Mass spectrometry scientist search and screening committee, Committee Member, **June 2015 – October 2015**, Selection of mass spectrometry expert for the Milwaukee Institute for Drug Discovery.
11. Graduate Admission Committee, Committee Member, **September 2014 – August 2015**, Selection of future graduate student for the department of chemistry and biochemistry.
12. Graduate Subcommittee, Committee Member, **September 2014 – August 2015**, Graduate Students affairs in respect to TA ship and progression.
13. Space Subcommittee, Committee Member, **September 2013 – August 2014**, Assessment and distribution of space within the Department of Chemistry and Biochemistry.
14. Grant writer search and screening committee, Committee Member, **May 2013 – August 2013**, Selection of grant writer for MIDD and the department of chemistry and biochemistry.
15. Department manager search and screening committee, Committee Member, **October 2012 - January 2013**, Selection of department manager for the department of chemistry and biochemistry.
16. Academic Planning Committee, Committee member, **August 2012– current**, Development of future initiatives for the Department of Chemistry and Biochemistry.
17. Undergraduate and Graduate Assessment Subcommittee, **September 2012 - current**, Assessment of academic quality standards for chemistry majors of the Department of Chemistry and Biochemistry.
18. Undergraduate Subcommittee, **September 2012 – September 2013**, Undergraduate affairs.

19. Facility manager search and screening committee, Committee member, **August 2012– April 2013**, Selection of a facility manager for the Department of Chemistry and Biochemistry.
20. Undergraduate and Graduate Appeals Committee, **September 2011 – August 2012**, Undergraduate affairs.
21. Faculty advisor for the Student Affiliates of the American Chemical Society SAACS of the department of chemistry and biochemistry; **September 2010-August 2011**.
22. Director of the Milwaukee Institute of Drug Discovery (MIDD) search and screening committee, Committee member, **August 2010 – December 2010**, Selection of director for the MIDD embedded in the Department of Chemistry and Biochemistry.
23. Mass Spectroscopist search and screening committee, Committee Chair, **March 2010 - August 2010**, Selection of mass spectroscopist for the department of chemistry and biochemistry.
24. Graduate Admission Committee, Committee Member, **September 2009 – August 2010**, Selection of future graduate student for the department of chemistry and biochemistry.

PUBLICATIONS

1. Brittney N. Wyatt, Leggy A. Arnold, Martin St Maurice “A high-throughput screening assay for pyruvate carboxylase” *Anal Biochem* **2018**, 550, 90-98.
2. Gloria S. Forkuo, Amanda N. Nieman, Revathi Kodali, Nicolas M. Zahn, Guanguan Li, M. S. Rashid Roni, Michael Rajesh Stephen, Ted W. Harris, Rajwana Jahan, Margaret L. Guthrie, Olivia B. Yu, Janet L. Fisher, Gene T. Yocum, Charles W. Emala, Douglas A. Steeber, Douglas C. Stafford, James M. Cook , and Leggy A. Arnold “A Novel Orally Available Asthma Drug Candidate That Reduces Smooth Muscle Constriction and Inflammation by Targeting GABA(A) Receptors in the Lung” *Mol. Pharmaceutics* **2018**, 15, 1766-1777.
3. Daniel E. Knutson, Revathi Kodali, Branka Divović, Marco Treven, Michael R. Stephen , Nicolas M. Zahn, Vladimir Dobričić, Alec T. Huber, Matheus A. Meirelles, Ranjit S. Verma, Laurin Wimmer, Christopher Witzigmann, Leggy A. Arnold , Lih-Chu Chiou, Margot Ernst, Marko D. Mihovilovic, Miroslav M. Savić, Werner Sieghart, and James M. Cook ”Design and Synthesis of Novel Deuterated Ligands Functionally Selective for the γ -Aminobutyric Acid Type A Receptor (GABA_{AR}) α 6 Subtype with Improved Metabolic Stability and Enhanced Bioavailability” **2018**, 61, 2422-2446.
4. Guanguan Li, Michael R. Stephen, Revathi Kodali, Nicolas M. Zahn, Michael M. Poe, V.V.N. Phani Babu Tiruveedhula, Alec T. Huber, Melissa K. Schussman, Krista Qualmann, Cristina M. Panhans, Nicholas J. Raddatz, David A. Baker, Thomas D. Prevot, Mounira Banasr, Etienne Sibille, Leggy A. Arnold, and James M. Cook “Synthesis of chiral GABAA receptor subtype selective ligands as potential agents to treat schizophrenia as well as depression” *ARKIVOC* **2018**, 4, 158-183.
5. Kelly A. Teske, Jonathan W. Bogart and Leggy A. Arnold "Novel VDR antagonists based on the GW0742 scaffold" *Bioorganic & Medicinal Chemistry Letters* **2018**, 28, 351-354.
6. Katherine M. J. McMurray, Marcia J. Ramaker, A. M. Barkley-Levenson, Preetpal S. Sidhu, Pavel Elkin, K. M. Reddy, Margaret L. Guthrie, James M. Cook, Viresh H. Rawal, Leggy A. Arnold, Stephanie C. Dulawa, Abraham A. Palmer, “Identification of a novel, fast-acting GABAergic antidepressant” *Molecular Psychiatry* **2018**, 23, 384-391.
7. Kelly A. Teske, Ganesha Rai, Premchendar Nandhikonda, Preetpal Sidhu, Belaynesh D. Feleke, Anton Simeonov, Adam Yasgar, Ajit Jadhav, David J. Maloney, and Leggy A. Arnold “A parallel chemistry approach to identify novel nuclear receptor ligands based on the GW0742 scaffold” *ACS Combinatorial Chemistry* **2017**, 19, 646-656.
8. Gloria S. Forkuo, Amanda N. Nieman, Nina Y. Yuan, Revathi Kodali, Olivia B. Yu, Nicolas M. Zahn, Rajwana Jahan, Guanguan Li, Michael Rajesh Stephen, Margaret L. Guthrie, Michael M. Poe, Benjamin D. Hartzler, Ted W. Harris, Gene T. Yocum, Charles W. Emala, Douglas A. Steeber, Douglas C. Stafford, James M. Cook and Leggy A. Arnold “Alleviation of Multiple Asthmatic Pathologic Features with Orally Available and Subtype Selective GABAA Receptor Modulators” *Molecular Pharmaceutics* **2017**, 14, 2088-2098.
9. Jeffrey M. Witkin, Rok Cerne, M. Wakulchik, J. S., S.D. Gleason, Timothy M. Jones, Guanguan Li, Leggy A. Arnold, Jun-Xu Li, Jeffrey M. Schkeryantz, Kashi R. Methuku, James M. Cook, Michael M. Poe “Further evaluation of the potential anxiolytic activity of imidazo[1,5-a][1,4]diazepin agents selective for α 2/3-containing GABA_A receptors” *Pharmacology, Biochemistry and Behavior* **2017**, 157, 35-40.
10. Yibin Wang, Heli Fan, Kumudha Balakrishnan, Zechao Lin, Sheng Cao, Wenbing Chen, Yukai Fan, Quibria A. Guthrie, Huabing Sun, Kelly A. Teske, Varsha Gandhib, Leggy A. Arnold, Xiaohua Peng “Hydrogen Peroxide Activated

Quinone Methide Precursors with Enhanced DNA Cross-Linking Capability and Cytotoxicity towards Cancer Cells” *European Journal of Medicinal Chemistry* **2017**, 133, 197-207.

11. Bradford D. Fischer, Raymond J. Schlitt, Bryan Z. Hamade, Sabah Rehman, Margot Ernst, Michael M. Poe, Guanguan Li, Revathi Kodali, Leggy A. Arnold, James M. Cook, “Pharmacological and antihyperalgesic properties of the novel α 2/3 preferring GABAA receptor ligand MP-III-024” *Brain Res Bull.* **2017**, 131, 62-69.
12. Katherine M. J. McMurray, Preetpal S. Sidhu, James M. Cook, Leggy A. Arnold, Abraham A. Palmer, “Genetic and pharmacological manipulation of glyoxalase 1 regulates voluntary ethanol consumption in mice” *Addiction Biology* **2017**, 22, 381-389.
13. Rajwana Jahan, Michael R. Stephen, Gloria S. Forkuo, Revathi Kodali, Margaret L. Guthrie, Amanda N. Nieman, Nina Y. Yuan, Nicolas M. Zahn, Michael M. Poe, Guanguan Li, Olivia B. Yu, Gene T. Yocum, Charles W. Emala, Douglas C. Stafford, James M. Cook, and Leggy A. Arnold “Optimization of Substituted Imidazobenzodiazepines as Novel Asthma Treatments” *European Journal of Medicinal Chemistry* **2017**, 126, 550-560.
14. Michael M. Poe, Kashi R. Methuku, Guanguan Li, Ashwini Verma, Kelly A. Teske, Douglas C. Stafford, Leggy A. Arnold, Jeffrey W. Cramer, Timothy M. Jones, Rok Cerne, Michael J. Krambis, Jeffrey M. Witkin, Enrique Jambrina, Sabah Rehman, Margot Ernst, James M. Cook and Jeffrey M. Schkeryantz “Synthesis and characterization of a novel GABA_A receptor ligand that combines outstanding metabolic stability, pharmacokinetics, and anxiolytic efficacy” *Journal of medicinal chemistry* **2016**, 59, 10800-10806.
15. Olivia B. Yu, Leggy A. Arnold, “Calcitroic acid—a review” *ACS Chemical Biology* **2016**, 11, 2665-2672.
16. Nina Y. Yuan, Michael M. Poe, Christopher Witzigmann, James M. Cook, Douglas C. Stafford, Leggy A. Arnold “Characterization of GABA_A receptor ligands with automated patch-clamp using human neurons derived from pluripotent stem cells” *Journal of Pharmacological and Toxicological Methods* **2016**, 82, 109-114.
17. Gloria S. Forkuo, Margaret L. Guthrie, Nina Y. Yuan, Amanda N. Nieman, Revathi Kodali, Rajwana Jahan, Michael R. Stephen, Gene T. Yocum, Marco Treven, Michael M. Poe, Guanguan Li, Olivia B. Yu, Benjamin D. Hartzler, Nicolas M. Zahn, Margot Ernst, Charles W. Emala, Douglas C. Stafford, James M. Cook, and Leggy A. Arnold “Development of GABA(A) Receptor Subtype-Selective Imidazobenzodiazepines as Novel Asthma treatments” *Molecular Pharmaceutics* **2016**, 13, 2026-2038.
18. Kelly A. Teske, Olivia Yu, and Leggy A. Arnold, “Inhibitors for the Vitamin D Receptor–Coregulator Interaction” *Vitamin and Hormones* **2016**, 100, 45-82.
19. Kelly A. Teske, Jonathon W. Bogart, Luis M. Sanchez, Olivia B. Yu, Joshua V. Preston, James M. Cook, Nicholas R. Silvaggi, Daniel D. Bikle, and Leggy A. Arnold, “Synthesis and Evaluation of Vitamin D Receptor-Mediated Activities of Cholesterol and Vitamin D Metabolites” *European Journal of Medicinal Chemistry* **2016**, 109, 238-246.
20. Revathi Kodali, Margaret L. Guthrie, Michael M. Poe, Michael R. Stephen, Rajwana Jahan, Charles W. Emala, James M. Cook, Douglas Stafford, and Leggy A. Arnold, “Metabolic Studies of Drug Candidates for Neurological Disorders and Asthma Based on GABA(A) Receptor Subtype Selective Ligands using Mass Spectrometry” *Shimadzu Journal* **2015**, 3(3), 64-68.
21. Terry Clayton, Michael Poe, Sundari Rallapalli, Poonam Biawat, Miroslav Savic, James K. Rowlett, George Gallos, Charles W. Emala, Catherine C. Kaczorowski, James M. Cook, Douglas C. Stafford and Leggy A. Arnold “Review of the Updated Pharmacophore for the Alpha 5 GABA(A) Benzodiazepine Receptor Model” *International Journal of Medicinal Chemistry* **2015**, ID430248.
22. Margaret L Guthrie, Preetpal S. Sidhu, Emily K. Hill, Timothy C. Horan, Premchendar Nandhikonda, Kelly Teske, Nina Y. Yuan, Marino Sidorko, Revathi Kodali, James M. Cook, Lanlan Han, Nicholas R. Silvaggi, Daniel D. Bikle, Richard G. Moore, Rakesh K. Singh, and Leggy A. Arnold “Antitumor activity of 3-Indolylmethanamines 31B and PS121912” *Anticancer Research* **2015**, 35(11), 6001-6007.
23. Preetpal S. Sidhu, Kelly Teske, Belaynesh Feleke, Nina Y. Yuan, Margaret L. Guthrie, Grant B. Fernstrum, Nishita D. Vyas, Lanlan Han, Joshua Preston, Jonathan W. Bogart, Nicholas R. Silvaggi, James M. Cook, Rakesh K. Singh, Daniel D. Bikle, Leggy A. Arnold “Anticancer Activity of VDR-Coregulator Inhibitor PS121912” *Cancer Chemotherapy and Pharmacology* **2014**, 74(4), 787-798.
24. Kelly Teske, Premchendar Nandhikonda, Jonathan W. Bogart, Belaynesh Feleke, Preetpal Sidhu, Nina Yuan, Joshua Preston, Robin Goy, Rakesh K. Singh, Daniel D. Bikle, James M. Cook, Leggy A. Arnold “Identification of VDR antagonists among nuclear receptor ligands using virtual screening” *Nuclear Receptor Research* **2014**, 1, 1-8.
25. Preetpal S. Sidhu, Nicholas Nassif, Megan M. McCallum, Kelly Teske, Belaynesh Feleke, Nina Y. Yuan, Premchendar Nandhikonda, James M. Cook, Rakesh K. Singh, Daniel D. Bikle, Leggy A. Arnold “Vitamin D Receptor-Coactivator Binding Inhibitors” *ACS Med Chem Lett* **2014**, 5(2), 199-204.

26. Kelly Teske, Premchendar Nandhikonda, Jonathan W. Bogart, Belaynesh Feleke, Preetpal Sidhu, Nina Yuan, Joshua Preston, Robin Goy, Leggy A. Arnold "Modulation of Transcription mediated by the Vitamin D Receptor and the Peroxisome Proliferator-Activated Receptor δ in the presence of GW0742 analogs" *J Biomol Res Ther* **2014**, 3, e111.
27. Megan M. McCallum, Alan J. Pawlak, William R. Shadrick, Anton Simeonov, Ajit Jadhav, Adam Yasgar, David J. Maloney, Leggy A. Arnold "A Fluorescence-Based High Throughput Assay for the Determination of Small Molecule-Human Serum Albumin Protein Binding" *Anal Bioanal Chem* **2014**, 406(7), 1867-1875.
28. Katherine M.J. McMurray, Margaret G. Distler, Preetpal Sidhu, James M. Cook, Leggy A. Arnold, Abraham A. Palmer, Leigh D. Plant "Glo1 inhibitors for neuropsychiatric and anti-epileptic drug development" *Biochem. Soc. Trans.* **2014**, 42(2), 461-467.
29. Nada Kawar, Shannon Maclaughlan, Timothy C. Horan, Alper Uzun, Thilo S. Lange, Kyu K. Kim, Russell Hopson, Ajay P. Singh, Preetpal S. Sidhu, Kyle A. Glass, Sunil Shaw, James F. Padbury, Nicholi Vorsa, Leggy A. Arnold, Richard G. Moore, Laurent Brard, and Rakesh K. Singh "PT19c, Another Nonhypercalcemic Vitamin D2 Derivative, Demonstrates Antitumor Efficacy in Epithelial Ovarian and Endometrial Cancer Models" *Genes and Cancer* **2013**, 4(11-12), 524-534.
30. Premchendar Nandhikonda, Adam Yasgar, Athena M. Baranowski, Preetpal S. Sidhu, Megan M. McCallum, Alan J. Pawlak, Kelly Teske, Belaynesh Feleke, Nina Y. Yuan, Chinedum Kevin, Daniel D. Bikle, Steven D. Ayers, Paul Webb, Ganesh Rai, Anton Simeonov, Ajit Jadhav, David Maloney, Leggy A. Arnold "PPAR δ agonist GW0742 interacts weakly with multiple nuclear receptors including the vitamin D receptor" *Biochemistry* **2013**, 52, 4193-4203.
31. Megan M. McCallum, Premchendar Nandhikonda, Jonathan J. Temmer, Charles Eyerhmann, Anton Simeonov, Ajit Jadhav, Adam Yasgar, David Maloney, Leggy A. Arnold "High-Throughput Identification of Promiscuous Inhibitors from Screening Libraries with the Use of a Thiol-Containing Fluorescent Probe" *J Biomol. Screen.* **2013**, 18(6), 705-713.
32. Sourav Mukherjee, Alicia M. Hanson, William R. Shadrick, Jean Ndjomou, Noreena L. Sweeney, John J. Hernandez, Diana Bartczak, Kevin Li, Kevin J. Frankowski, Julie A. Heck, Leggy A. Arnold, Frank J. Schoenen, David N. Frick "Identification and analysis of hepatitis C virus NS3 helicase inhibitors using nucleic acid binding assays" *Nucleic Acids Res.* **2012**, 40(17), 8607-8621.
33. Premchendar Nandhikonda, Wen Z. Lynt, Megan M. McCallum, Tahniyath Ara, Athena M. Baranowski, Nina Y. Yuan, Dana Pearson, Daniel D. Bikle, R. Kiplin Guy, Leggy A. Arnold "Discovery of the First Irreversible Small Molecule Inhibitors of the Interaction between the Vitamin D Receptor and Coactivators" *J Med Chem*, **2012**, 55(10), 4640-4651.
34. Richard G. Moore, Thilo S. Lange, Katina Robinson, Kyu K. Kim, Alper Uzun, Timothy C. Horan, Nada Kawar, Naohiro Yano, Sharon R. Chu, Quanfu Mao, Laurent Brard, Monique E. DePaepe, James F. Padbury, Leggy A. Arnold, Alexander Brodsky, Tun-Li Shen, Rakesh K. Singh "Efficacy of a Non-Hypercalcemic Vitamin-D2 Derived Anti-Cancer Agent (MT19c) and Inhibition of Fatty Acid Synthesis in an Ovarian Cancer Xenograft Model" *PLOS one*, **2012**, 7(4), e34443.
35. Qin Chen, Peter D. Yim, Nina Yuan, Juliette Johnson, James M Cook, Steve Smith, Cristian Ionescu-Zanetti, Zhi-Jian Wang, Leggy A. Arnold, Charles W. Emala "Comparison of cell expression formats for the characterization the GABA_A channels using a microfluidic patch clamp system" *Assay Drug Dev. Technol.* **2012**, 10(4), 325-335.
36. Jennifer M. Atkinson, Anang A. Shelat, Angel Montero Carcaboso, Tanya A. Kranenburg, Leggy A. Arnold, Nidal Boulos, Karen Wright, Robert A. Johnson, Helen Poppleton, Kumarasampet M. Mohankumar, Clementine Féau, Timothy Phoenix, Paul Gibson, Liqin Zhu, Yiai Tong, Chris Eden, David W. Ellison, Waldemar Priebe, Dimpy Koul, W. K. Alfred Yung, Amar Gajjar, Clinton F. Stewart, R. Kiplin Guy, Richard J. Gilbertson "An Integrated In Vitro and In Vivo High-Throughput Screen Identifies Treatment Leads for Ependymoma" *Cancer Cell*, **2011**, 20(3), 384-399.
37. Prabodh Sadana, Jong Yeon Hwang, Ramy R. Attia, Leggy A. Arnold, Geoffrey Neale, and R. Kiplin Guy "Similarities and Differences between Two Modes of Antagonism of the Thyroid Hormone Receptor" *ACS Chemical Biology*, **2011**, 6(10), 1096-106.
38. Laurent Brard, Thilo S. Lange, Katina Robison, Kyu Kwang Kim, Tahniyath Ara, Megan Marie McCallum, Leggy A. Arnold, Richard G. Moore, Rakesh K. Singh "Evaluation of the first Ergocalciferol-derived, non hypercalcemic anti-cancer agent MT19c in ovarian cancer SKOV-3 cell lines" *Gynecologic Oncology*, **2011**, 123(2), 370-8.
39. Jong Yeon Hwang, Wenwei Huang, Leggy A. Arnold, Ruili Huang, Michele Connelly, Jennifer Wichterman, Fangyi Zhu, Indre Augustinaite, Christopher P. Austin, James Inglese, Ronald L. Johnson, R. Kiplin Guy. "Methylsulfonylnitrobenzoates (MSNBs): A new class of irreversible inhibitors of the interaction of the thyroid hormone receptor and its obligate coactivators that functionally antagonizes thyroid hormone" *J Biol Chem*, **2011**, 286(14), 11895-11908.
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BOOK CHAPTERS

1. Olivia Yu, Leggy A. Arnold "Modulating Vitamin D Receptor–Coregulator Binding with Small Molecules", **2018**, Vitamin D, Volume 2: Health, Disease and Therapeutics, Fourth Edition, p657-666.
2. Kelly Teske, Olivia Yu, and Leggy A. Arnold: *Vitamins and Hormones*, Chapter 3, "Inhibitors for the Vitamin D Receptor-Coregulator Interaction, Elsevier, Oxford UK, **2016**.
3. Clémentine Féau, Leggy A. Arnold, Aaron Kosinski, and R. Kiplin Guy in Androgen Action, Chapter 4, "Ligand competition binding assay the androgen receptor" *Methods in Molecular Biology* **2011**, 776, 59-68
4. Ben L. Feringa, Robert Naasz, Rosalinde Imbos, Leggy A. Arnold in: Krause N. *Modern Organocopper Chemistry*, Wiley, VCH Weinheim, **2002**, chapter 7: Enantioselective Catalytic Conjugate Addition of Organozinc Reagents.

INVITED PRESENTATIONS

1. Leggy A. Arnold, Gloria Forkuo, Amanda Nieman, Guanguan Li, Charles W. Emala, James Cook, Douglas Stafford "MIDD0301: A first-in-class drug for asthma" Allegropharm, Hamburg Germany, May 29th, **2018**.
2. Leggy A. Arnold, Olivia Yu, Elliot DeMilo, Revathi Kodali "Calcitroic acid and its phase II metabolites" *Vitamin D Workshop, Barcelona Spain, May 24th, 2018*.
3. Leggy A. Arnold, Gloria Forkuo, Amanda Nieman, Olivia Yu, Margaret Guthrie, Revathi Kodali, Michael Stephen, Charles W. Emala, Gene Yocum, James Cook, Douglas Stafford, Mitchell H. Grayson "Clinical Drug Candidate MIDD0301 is a Novel Oral Asthma Treatment combating Inflammation and Muscle Constriction in the Lung" *AAAAI meeting, Orlando, Florida, March 2018*.
4. Leggy A. Arnold, Gloria Forkuo, Amanda Nieman, Olivia Yu, Margaret Guthrie, Revathi Kodali, Michael Stephen, Charles W. Emala, Gene Yocum, James Cook, Douglas Stafford, Mitchell H. Grayson, Leggy A. Arnold "Drug Discovery at UWM" UWM Research Foundation, Milwaukee, September 20th, **2017**.

5. Leggy A. Arnold "Development of new therapies for asthma based on compounds that specifically target GABA_A receptors in the lung" Feringa Academic Alumni Symposium, Groningen, The Netherlands, September 14-15 September, **2017**.
6. Leggy A. Arnold "Vitamin D research- From the past today" UWM, Science Olympiad, Milwaukee, April, 8th **2017**.
7. Leggy A. Arnold "Development of a new therapies for asthma based on compounds that specifically target GABA_A receptors in the lung" *253rd ACS National Meeting, San Francisco, April 2nd, 2017*.
8. Leggy A. Arnold "Cancer and Immunology" Venture Investor Meeting, February 24th, **2017**
9. Leggy A. Arnold "All about vitamin D", lecture series at UWM, February **2017**.
10. Leggy A. Arnold "Application of mass spectrometry in vitamin D receptor research" *Shimadzu Journal" Volume 3, Issue 3, September 2015*
11. Leggy A. Arnold "Small molecule-mediated gene regulation caused by vitamin D receptor-coactivator binding inhibition" *Medical College of Wisconsin, Department of Biochemistry, Oct 8th, 2014*.
12. Leggy A. Arnold "Novel Modulators for the Vitamin D Receptor As Drug Candidate" *University of Groningen, Groningen, Netherlands, July 31th, 2014*.
13. Leggy A. Arnold "The workings of Drug Discovery in Academia" *Blood Center of Wisconsin, Milwaukee, July 8th, 2014*.
14. Leggy A. Arnold "Vitamin D Receptor-Coregulator Inhibitors as Anticancer Agents" *Vitamin D Workshop, Chicago, June 16th-20th, 2014*.
15. Leggy A. Arnold "High-Throughput Screening and Assay Development" *Medical College of Wisconsin, Milwaukee, April 10th, 2014*.
16. Leggy A. Arnold "Molecules" UWM, Milwaukee, March, **2014**.
17. Leggy A. Arnold "Discovery of transcriptional modulators that target the vitamin D receptor" *247nd ACS National Meeting, Dallas, March 16th, 2014*.
18. Leggy A. Arnold "Novel Vitamin D receptor Modulators as Drug Candidates" *University of Illinois at Chicago, February 21th, 2014*.
19. Leggy A. Arnold "Discovery and Development of non-secosteroid vitamin D receptor antagonists." *University of Wisconsin Whitewater, October 10th, 2013*.
20. Leggy A. Arnold "Identification and Development of Three Different Classes of Vitamin D Receptor-Coactivator Inhibitors" *Medical College of Wisconsin, May 30th, 2013*.
21. Leggy A. Arnold "Small molecule inhibitors of the vitamin D receptor-coactivator interaction: An HTS approach" *Concordia University Wisconsin, October 10th, 2012*.
22. Leggy A. Arnold "High throughput screening and assay development" *Medical College of Wisconsin, May 31th, 2012*.
23. Leggy A. Arnold "Discovery of small molecule inhibitors of the vitamin D receptor-coregulator interaction" *Northeast Ohio Medical University, March 23th, 2012*.
24. Leggy A. Arnold and Nina Yuan "Automated patch clamp to determine GABA_A receptor subtype selectivity of novel benzodiazepines" *Webinar hosted by WebEx, December 12, 2011*.
25. Leggy A. Arnold and Nina Yuan "Automated patch clamp to determine GABA_A receptor subtype selectivity of novel benzodiazepines" *Automated Patch Clamp Systems & Ion Channel Expressing Cells, Akihabara UDX, Tokyo, Japan, November 8, 2011*.
26. Leggy A. Arnold "First Identification of Irreversible Inhibitors of the Vitamin D Receptor-Coregulator Interaction" *Northern Illinois University, DeKalb, IL, United States, October 3, 2011*.
27. Leggy A. Arnold "Discovery of small molecule inhibitors of the vitamin D receptor-coregulator interactions as transcriptional regulators for the 24-hydroxylase gene CYP24A1" *242nd ACS National Meeting, Denver, Colorado, August 29, 2011*.
28. Leggy A. Arnold, Jong Y. Hwang, Prabodh Sadana, Fangyi Zhu, R. Kiplin Guy" Thyroid Receptor-Coregulator Inhibitors as potential regulators for metabolic diseases" *Gordon-Kenan Research Conference - High Throughput Chemistry & Chemical Biology, New London, NH, United States, 2009*.
29. Leggy A. Arnold and R. Kiplin Guy "Nuclear Hormone Receptor-Coregulator Interactions as Novel Targets in Drug Discovery" *University of Memphis, United States, 2009*.
30. Leggy A. Arnold and R. Kiplin Guy "Phosphoramidites, superior ligands in asymmetric catalytic transformations and the discovery of a small molecule inhibitor of the thyroid receptor-coregulator binding" *North Carolina State University, United States, 2009*.

31. Leggy A. Arnold and R. Kiplin Guy “Phosphoramidites, superior ligands in asymmetric catalytic transformations and the discovery of a small molecule inhibitor of the thyroid receptor-coregulator binding” *University of Wisconsin, Milwaukee, United States, 2009.*
32. Leggy A. Arnold, Clémentine Féau, JongYeon Hwang, Prabodh Sadana and R. Kiplin Guy “Nuclear Hormone Receptor-Coregulator interactions as novel targets in drug discovery” *St Jude Children’s Research Hospital, United States, 2008.*
33. Leggy A. Arnold, Eva Estébanez-Perpiñá, Paul Webb, Robert J. Fletterick, John D. Baxter, R. Kiplin Guy “New Small Molecule Inhibitors of the Thyroid Hormone Receptor-Coactivator interaction” *SBS 13th Annual Meeting, Montréal, Canada, 2007.*
34. Leggy A. Arnold, Eva Estébanez-Perpiñá, Clementine Feau, Paul Webb, Robert J. Fletterick, R. Kiplin Guy “Nuclear Hormone Receptor-Coregulator Interactions as Novel Targets in Drug Discovery” *University of Tennessee Memphis, TN, United States 2006.*
35. Leggy A. Arnold, Eva Estébanez-Perpiñá, Robert J. Fletterick, R. Kiplin Guy “Nuclear Receptor Rational Drug Design; Androgen Receptor and Thyroid Receptor Hand-in-Hand” *Nuclear Receptor Seminar, UC San Francisco, CA, United States 2005.*
36. Leggy A. Arnold and R. Kiplin Guy “Non-peptide Nuclear Receptor Coregulators” *California State University Chico, United States, 2003.*
37. Leggy A. Arnold and Ben L. Feringa “Catalytic Asymmetric Total Synthesis of Prostaglandin E₁ Methyl Ester” *223rd ACS National Meeting, Orlando (FL), United States, 2002.*
38. Leggy A. Arnold and Ben L. Feringa “Prostaglandins and Phosphoramidites” *University of California, San Francisco, United States, 2002.*
39. Leggy A. Arnold and Ben Feringa “Total Synthesis of Prostaglandin E₁ (PGE₁)” *Thesis Defense, University of Groningen, 2002.*
40. Leggy A. Arnold and Ben L. Feringa “Enantioselective Copper-Catalyzed Allylic Alkylation with Organozinc Compounds Using Phosphoramidite Ligands” *EET-Meeting (Economy, Ecology, Technology) by the Dutch Ministry of Economic Affairs and DSM, Groningen, 2001.*
41. Leggy A. Arnold and Ben L. Feringa “New Phosphoramidite Ligands for the Enantioselective Copper-Catalyzed 1,4-Addition of Diethylzinc to Enones” *NCCC Conference, Noordwijkerhout, The Netherlands 2001.*
42. Leggy A. Arnold and Ben L. Feringa “Catalytic conjugate addition reaction” *EET-Meeting (Economy, Ecology, Technology) by the Dutch Ministry of Economic Affairs and DSM, Amsterdam, 2000.*
43. Leggy A. Arnold and Ben L. Feringa “Highly Enantioselective Catalytic Conjugate Addition Reaction and Applications of Phosphoramidite Ligands” *NWO-CW Conference, Lunteren, The Netherlands 1999.*
44. Leggy A. Arnold and Ben L. Feringa “New Catalysts Based on Phosphoramidites” *EET-Meeting (Economy, Ecology, Technology) by the Dutch Ministry of Economic Affairs and DSM, Maastricht, 1999.*
45. Leggy A. Arnold and Ben L. Feringa “Phosphoramidites - The Next Generation of Highly Enantioselective Copper Catalyzed 1,4-Addition to enones” *Thesis Defense, University of Groningen, 1998.*

POSTER PRESENTATIONS

1. Leggy A. Arnold, Gloria S. Forkuo, Margaret L. Guthrie, Nina Y. Yuan, Amanda N. Nieman, Revathi Kodali, Rajwana Jahan, Ted W. Harris, Gene Yocum, Michael Stephen, Michael Poe, Guanguan Li, Olivia B. Yu, Benjamin Hartzler, Nicholas Zahn, Charles W Emala, Douglas C. Stafford, James M. Cook, Mitchell H. Grayson, “New Oral Treatments for Asthma through Tissue-Specific Modulation of the GABA_A Receptor” *AAAAI meeting, Atlanta, Georgia, March 2017.*
2. Leggy A. Arnold, PhD, Gloria S. Forkuo, PhD, Amanda N. Nieman, Olivia B. Yu, Margaret L. Guthrie, Nina Y. Yuan, Revathi Kodali, Rajwana Jahan, Charles W Emala, James M. Cook, PhD, Douglas C. Stafford, PhD, Mitchell H. Grayson, “A New Pharmacological Approach for Asthma through Tissue-Specific Modulation of the GABA(A) Receptor” *AAAAI meeting, Los Angeles, March 2016.*
3. Leggy A. Arnold, Premchendar Nandhikonda, Adam Yasgar, Preetpal S. Sidhu, Kelly Teske, Belaynesh Dejene Feleke Ganesha Rai, Robert Smith, William Leister, Frank Schoenen, Daniel D. Bikle, “Identification and development of three new distinct classes of non-secosteroidal VDR modulators for metabolic diseases and cancer” *Vitamin D workshop, San Francisco, 2013.*
4. Leggy A. Arnold, Premchendar Nandhikonda, Adam Yasgar, Preetpal S. Sidhu, Kelly Teske, Belaynesh Dejene Feleke Ganesha Rai, Robert Smith, William Leister, Frank Schoenen, Daniel D. Bikle, “Identification and development of

three new distinct classes of non-secosteroidal VDR modulators” *Gordon Research Conference - High Throughput Chemistry & Chemical Biology*, June 2-7, New London, NH **2013**.

5. Leggy A. Arnold, Premchendar Nandhikonda, Adam Yasgar, Kelly Teske, Athena M. Baranowski, Megan McCallum, Daniel D. Bikle, Steven D. Ayers, Paul Webb, Ganesha Bantukallu, Anton Simeonov, Ajit Jadhav, David Maloney “Development of the first non-secosteroid antagonists to modulate Vitamin D Receptor function” *2nd Congress on Steroid Research, Chicago*, **2013**.
6. Leggy A. Arnold, Premchendar Nandhikonda, Megan M. McCallum, Athena Baranowski, Kelly Teske, Tahniyath Ara, Nina Yuan, Jonathan James Temmer, Belaynesh Dejene Feleke, Nicholas A Talerico, Cynthia Catherine Henderson, Westley Goy Robin “Assay Development and High Throughput Screening” *CTSI Drug Development Collaborative Workshop, Medical College of Wisconsin*, **2012**.
7. Leggy A. Arnold. Premchendar Nandhikonda, Wen Z. Lynt, Megan M. McCallum, Tahniyath Ara, Athena M. Baranowski, Nina Y. Yuan, Kelly Teske, Belaynesh D. Feleke, Diana Pearson, Daniel D. Bikle, R. Kip Guy “Identification of small molecule VDR-coregulator inhibitors using high throughput screening” *Vitamin D workshop, Houston*, **2012**.
8. Leggy A. Arnold, Jong Y. Hwang, Prabodh Sadana, Fangyi Zhu, R. Kiplin Guy” Irreversible Thyroid Receptor Coactivator Modulators: Structure-activity relationship study and their application for chemical biology *NIH workshop: Chemical Approaches to Nuclear Receptor and Metabolism, Bethesda*, **2009**.
9. Leggy A. Arnold, Jong Y. Hwang, Aaron Kosinski, R. Kiplin Guy “Development of a WRO cell line that stably expresses a thyroid responsive luciferase reporter for high throughput detection of transcriptional thyroid receptor modulators *Keystone Symposia: Nuclear Receptor: Orphan Brothers and Steroid Sisters, Whistler, Canada*, **2008**.
10. Leggy A. Arnold, Eva Estébanez-Perpiñá, Jong Y. Hwang, Aaron Kosinski, Paul Webb, John D. Baxter, Robert J. Fletterick, R. Kiplin Guy “Small Molecule Inhibitors of the Thyroid Hormone Receptor-Coregulator Interaction” *Keystone Symposia: Nuclear Receptor Pathways to Metabolic Regulation & Metabolic Syndrome and Cardiovascular Risk*”, *Steamboat Springs, CO*, **2007**.
11. Leggy A. Arnold, Eva Estébanez-Perpiñá, Robert J. Fletterick, R. Kiplin Guy “Discovery of Small Discovery of Small Molecule Inhibitors of Thyroid Hormone Receptor” *Drug Discovery Technology & Development, Boston, MA, United States* **2005**.
12. Leggy A. Arnold, Wenchen Luo, R. Kip Guy “Towards the synthesis of a selective non-peptide hormone receptor modulator” *CCB/Biophysics Retreat, Pacific Groove, CA, United States* **2003**.
13. Leggy A. Arnold, Anthoni W. van Zijl, Hinke Malda, Ben L. Feringa “Enantioselective Copper-Catalyzed Allylic Alkylation with Diorganozinc Compounds using Phosphoramidite Ligands” *223rd ACS National Meeting, Orlando, FL, United States* **2002**.
14. Leggy A. Arnold, Robert Naasz, Adri J. Minnaard, Ben L. Feringa “Catalytic Enantioselective Synthesis of Prostaglandin E1 Methyl Ester using a Tandem 1,4-Addition-Aldol Reaction to a Cyclopenten-3,5-dione Monoacetal” *ESOC-12 "12th European Symposium on Organic Chemistry" Groningen, Netherlands* **2001**.
15. Leggy A. Arnold, Robert Naasz, Adri J. Minnaard, Ben L. Feringa “New Phosphoramidite Ligands for the Enantioselective Copper-Catalyzed 1,4-Addition of Diethylzinc to Enones “ *NWO-CW Conference, Lunteren, The Netherlands* **2000**.

STUDENT PRESENTATIONS

1. Amanda N. Nieman, Gloria S. Forkuo, Nicolas M. Zahn, Revathi Kodali, Guanguan Li, M. S. Rashid Roni, Michael R. Stephen, Ted W. Harris, Rajwana Jahan, Margaret L. Guthrie, Olivia B. Yu, Janet L. Fisher, Gene T. Yocum, Charles W. Emala, Douglas A. Steeber, Douglas C. Stafford, James M. Cook, and Leggy A. Arnold “Reducing airway constriction and inflammation through GABA_A receptors in the lung with a novel, orally available drug candidate” *Chemistry and Biochemistry Research Symposium, UWM, Milwaukee, May 22nd* **2018**.
2. Tania Mutchie, Rodrigo Ramos Morales, Fernando Ramos Morales, and Leggy A. Arnold” Synthesis of novel compounds to study expression and localization of the vitamin D receptor” *Chemistry and Biochemistry Research Symposium, UWM, Milwaukee, May 22nd* **2018**.
3. Revathi Kodali, Nicolas M. Zahn, Gloria S. Forkuo, M. S. Rashid Roni, Margaret L. Guthrie, Rajwana Jahan, Guanguan Li, Charles W. Emala, James M. Cook, Douglas Stafford, Leggy A. Arnold “Revathi Pharmacokinetic Studies of Drug Candidates for Neurological Disorders and Asthma Based on GABA_A Receptor Subtype Selective Ligands” *Chemistry and Biochemistry Research Symposium, UWM, Milwaukee, May 22nd* **2018**.

4. M S Rashid Roni, Amanda Nieman, Nicolas Zahn, Gloria S Forkuo, Revathi Kodali, Margaret Guthrie, Guanguan Li, James M Cook, Douglas C Stafford, Leggy A Arnold "Development of a protein binding assay for drug discovery" *Chemistry and Biochemistry Research Symposium*, UWM, Milwaukee, May 22nd **2018**.
5. Elliot Di Milo, Revathi Kodali, Olivia Yu, Leggy A. Arnold "Liquid Chromatography Tandem Mass Spectrometry for Quantification of Calcitroic Acid in Tissue and Microsomal Stability Assays" *Chemistry and Biochemistry Research Symposium*, UWM, Milwaukee, May 22nd **2018**.
6. Nicolas Zahn, Revathi Kodali, Margaret Guthrie, Rajwana Jahan, Michael Rajesh Stephen, Michael M Poe, Jim Cook, Douglas Stafford, Leggy Arnold "Nervous System Effects of Metabolic Analysis of Imidazobenzodiazepines in Human and Mouse Liver Microsomes" *Chemistry and Biochemistry Research Symposium*, UWM, Milwaukee, May 22nd **2018**.
7. Olivia Yu, Elliot DeMilo, and Leggy A. Arnold "Investigating Calcitroic Acid, Its Phase Two Metabolites, and Their Biological Function" *Vitamin D workshop*, Barcelona (Spain), May 17th, **2018**.
8. Amanda N. Nieman, Gloria S. Forkuo, Nicolas M. Zahn, Revathi Kodali, Guanguan Li, M. S. Rashid Roni, Michael R. Stephen, Ted W. Harris, Rajwana Jahan, Margaret L. Guthrie, Olivia B. Yu, Janet L. Fisher, Gene T. Yocum, Charles W. Emala, Douglas A. Steeber, Douglas C. Stafford, James M. Cook, and Leggy A. Arnold "Reducing airway constriction and inflammation through GABAA receptors in the lung with a novel, orally available drug candidate" *Immunology*, Austin Tx, May 8th, 2018.
9. Amanda N. Nieman, Gloria S. Forkuo, Nicolas M. Zahn, Revathi Kodali, Guanguan Li, Md. S. Rashid Roni, Michael R. Stephen, Ted W. Harris, Rajwana Jahan, Margaret L. Guthrie, Olivia B. Yu, Janet L. Fisher, Gene T. Yocum, Charles W. Emala, Douglas A. Steeber, Douglas C. Stafford, James M. Cook, and Leggy A. Arnold "Reducing airway constriction and inflammation through GABAA receptors in the lung with a novel, orally available drug candidate" *Immunology*, Austin Tx, May 8th, 2018. (oral presentation)
10. Alec Huber, Nicolas M. Zahn, Guanguan Li, M. S. Rashid Roni, Ted W. Harris, Revathi Kodali, Gloria S. Forkuo, James M. Cook, Leggy A. Arnold "An Immunotoxicity Safety Study of MIDD0301", *10th annual UWM Undergraduate Research Symposium*, UWM, Milwaukee, April 27th, **2018**.
11. Brandon Mikulsky, Amanda Nieman, Leggy A. Arnold "Finding a New Treatment for Neuropathic Pain: Targeting the GABA(A) Receptor on Microglia" *10th annual UWM Undergraduate Research Symposium*, UWM, Milwaukee, April 27th, **2018**.
12. Jon Gould and Leggy A. Arnold "Identification of Novel Pepsin Inhibitors for Target Drugs to Treat Laryngopharyngeal Reflux Disease" *10th annual UWM Undergraduate Research Symposium*, UWM, Milwaukee, April 27th, **2018**. (oral)
13. Amanda N. Nieman, Gloria S. Forkuo, Nina Y. Yuan, Ted W. Harris, Md. S. Rashid Roni, Rajwana Jahan, Guanguan Li, Michael Rajesh Stephen, Douglas A. Steeber, Douglas C. Stafford, James M. Cook, and Leggy A. Arnold "Automated Patch Clamp to Determine the Pharmacology and GABA_A receptor Subtype Selectivity of Imidazobenzodiazepines", *UW System Faculty Meeting*, UWM, Milwaukee, September 29th **2017**.
14. Olivia Yu, Elliot DiMilo, Viktoriia Senych, Kelly A. Teske, and Leggy A. Arnold "Investigation of the Biological Function of Calcitroic Acid and Its Phase Two Metabolites", *UW System Faculty Meeting*, UWM, Milwaukee, September 29th **2017**.
15. Margaret L. Guthrie, Nicolas Zahn, Guanguan Li, Revathi Kodali, Glorio Forkuo, Morgan E. Stevenson, Shama Mirza, James M. Cook, Douglas C. Stafford, Leggy A. Arnold "Localization of novel imidobenzodiazepines in asthmatic mouse lung tissue by MALDI imaging mass spectrometry", *UW System Faculty Meeting*, UWM, Milwaukee, September 29th **2017**.
16. Tania Mutchie, Rodrigo Ramos Morales, Fernando Ramos Morales, and Leggy A. Arnold "Synthesis of novel compounds to study expression and localization of the vitamin D receptor", *UW System Faculty Meeting*, UWM, Milwaukee, September 29th **2017**.
17. Md Shadiqur Rashid Roni and Leggy A. Arnold "Microsomal stability determination of novel Imidazobenzodiazepines", *UW System Faculty Meeting*, UWM, Milwaukee, September 29th **2017**.
18. Revathi Kodali, Nicolas M. Zahn, Gloria S. Forkuo, Rashid Roni, Margaret L. Guthrie, Rajwana Jahan, Guanguan Li, Charles W. Emala, James M. Cook, Douglas Stafford, Leggy A. Arnold "Pharmacokinetic Studies of Drug Candidates for Neurological Disorders and Asthma Based on GABAA Receptor Subtype Selective Ligands", *UW System Faculty Meeting*, UWM, Milwaukee, September 29th **2017**.
19. Gloria S. Forkuo, Ted Harris William, Amanda N. Nieman, Olivia B. Yu, Margaret L. Guthrie, Revathi Kodali, Guanguan Li, Rajwana Jahan, Michael R. Stephen, Charles W. Emala, James M. Cook¹, Douglas Stafford, Leggy A Arnold, "Novel orally bioavailable GABA A receptor positive allosteric modulator for alleviating multiple asthma symptoms", *UW System Faculty Meeting*, UWM, Milwaukee, September 29th **2017**.
20. Alec Huber, Nicolas M. Zahn, Guanguan Li, Md S.R. Roni, Leggy A. Arnold "An Immunotoxicity Safety Study of GL-II-93", *UW System Faculty Meeting*, UWM, Milwaukee, September 29th **2017**.

21. Elliot Di Milo, Margaret Guthrie, Revathi Kodali, Olivia Yu, Leggy A. Arnold "Quantification of Calcitroic Acid using Liquid Chromatography Tandem Mass Spectrometry", *UW System Faculty Meeting*, UWM, Milwaukee, September 29th **2017**.
22. Margaret L. Guthrie and Leggy A Arnold" MALDI-IMS for Asthma Drugs that Target the GABA_A Receptor *ASMS Conference on Mass Spectrometry and Allied Topics*, Indianapolis, June 3-4, **2017**. (oral)
23. Margaret L. Guthrie, Nicolas Zahn, Gloria Forkuo, Guanguan Li, Revathi Kodali, Rajwana Jahan, Morgan E. Stevenson, Jim M. Cook, Douglas Stafford, Leggy A. Arnold "Imaging the distribution of selective GABA_A receptor modulators in the asthmatic lung using MALDI mass spectrometry", *Chemistry and Biochemistry Research Symposium*, UWM, Milwaukee, May **2017**.
24. Amanda N. Nieman, Gloria S. Forkuo, Nina Y. Yuan, Ted W. Harris, Md. S. R. Roni, Rajwana Jahan, Guanguan Li, Michael Rajesh Stephen, Douglas A. Steeber, Douglas C. Stafford, James M. Cook, and Leggy A. Arnold "Automated Patch Clamp for Determining the Pharmacology and GABA_A Receptor Subtype Selectivity of Imidazobenzodiazepines", *Chemistry and Biochemistry Research Symposium*, UWM, Milwaukee, May **2017**.
25. Nicolas Zahn, Revathi Kodali, Margaret L. Guthrie, Rajwana Jahan, Michael R. Stephen, Michael M. Poe, Jim M. Cook, Douglas Stafford, Leggy A. Arnold "Nervous System Effects & Metabolic Analysis of Benzodiazepines in Human and Mouse Liver Microsomes", *Chemistry and Biochemistry Research Symposium*, UWM, Milwaukee, May **2017**.
26. Elliot Di Milo, Margaret Guthrie, Revathi Kodali, Olivia Yu, Leggy A. Arnold "Quantification of calcitroic Acid using Liquid Chromatography Tandem Mass Spectrometry", *Chemistry and Biochemistry Research Symposium*, UWM, Milwaukee, May **2017**.
27. Md Rashid Roni, Revathi Kodali, Nicolas M. Zahn, James C Cook, Leggy A. Arnold "Microsomal Stability Determination of Novel Imidazobenzodiazepines", *Chemistry and Biochemistry Research Symposium*, UWM, Milwaukee, May **2017**. Revathi Kodali, Nicolas M. Zahn, Gloria S. Forkuo, Rashid Roni, Margaret L. Guthrie, Rajwana Jahan, Guanguan Li, Charles W. Emala, James M. Cook, Douglas Stafford, Leggy A. Arnold "Pharmacokinetic Studies of Drug Candidates for Neurological Disorders and Asthma Based on GABA_A Receptor Subtype Selective Ligands", *Chemistry and Biochemistry Research Symposium*, UWM, Milwaukee, May **2017**.
29. Alec Huber, Nicolas M. Zahn, Douglas C. Stafford, James M. Cook, Leggy A. Arnold, "Application of rotarod studies to the investigation possible adverse side effects of imidazobenzodiazepines", *Chemistry and Biochemistry Research Symposium*, UWM, Milwaukee, May **2017**.
30. Olivia Yu, Elliot DeMilo, Viktoriia Seynch, Kelly A. Teske, Leggy A. Arnold "Investigation of the Biological Function of Calcitroic Acid", *Chemistry and Biochemistry Research Symposium*, UWM, Milwaukee, May **2017**.
31. Alessandra Ebben, Olivia B. Yu, Viktoriia Senych, Leggy A. Arnold "Calcitroic Acid as a Potential Key Element in Colon Cancer Prevention" *Chemistry and Biochemistry Research Symposium*, UWM, Milwaukee, May **2017**.
32. Viktoriia Senych, Olivia B. Yu, Alessandra A. Ebben and Dr. Leggy A. Arnold "Synthesis of Calcitroic Acid to Determine its Potential for Prevention of Colon Cancer", *Chemistry and Biochemistry Research Symposium*, UWM, Milwaukee, May **2017**.
33. Tania Mutchie, Rodrigo Ramos Morales, Fernando Ramos Morales, and Leggy A. Arnold "Synthesis of Novel Compounds to Study Expression and Localization of the Vitamin D Receptor", *Chemistry and Biochemistry Research Symposium*, UWM, Milwaukee, May **2017**.
34. Ted Harris, Gloria Forkuo, Guanguan Li, James M Cook, Douglas Stafford, Leggy A. Arnold "A murine asthma model to determine the attenuation of airway hyper-responsiveness of novel imidazobenzodiazepines", *Chemistry and Biochemistry Research Symposium*, UWM, Milwaukee, May **2017**.
35. Alessandra Ebben, Olivia B. Yu, Viktoriia Senych, Leggy A. Arnold "Calcitroic Acid as a Potential Key Element in Colon Cancer Prevention" *9th annual UWM Undergraduate Research Symposium, April 28th 2017*.
36. Viktoriia Senych, Olivia B. Yu, Alessandra A. Ebben and Dr. Leggy A. Arnold "Synthesis of Calcitroic Acid to Determine its Potential for Prevention of Colon Cancer", *9th annual UWM Undergraduate Research Symposium, April 28th 2017*.
37. Margaret L. Guthrie, Nicolas Zahn, Gloria Forkuo, Guanguan Li, Revathi Kodali, Rajwana Jahan, Morgan E. Stevenson, Jim M. Cook, Douglas Stafford, Leggy A. Arnold "Imaging the distribution of selective GABA_A receptor modulators in the asthmatic lung using MALDI mass spectrometry", *253rd ACS National Meeting, San Francisco, April 2nd, 2017*.
38. Olivia Yu, Elliot DeMilo, Viktoriia Seynch, Kelly A. Teske, Leggy A. Arnold "Investigation of the Biological Function of Calcitroic Acid", *Vitamin D workshop, Orlando, Florida, March 31st, 2017*.
39. Viktoriia Senych, Olivia Yu, Alessandra A. Ebben and Dr. Leggy A. Arnold "Initial Steps Towards Synthesizing Calcitroic Acid to Determine its Biological Function", *253rd ACS National Meeting, San Francisco, April 2nd, 2017*.

40. Gloria Forkuo, Amanda N. Nieman, Olivia B. Yu, Margaret L. Guthrie, Nina Y. Yuan, Revathi Kodali, Rajwana Jahan, Michael R. Stephen, Michael M. Poe, Benjamin D. Hartzler, Charles W. Emala, James M. Cook, Douglas Stafford, Leggy A Arnold "Alpha 4&5-selective GABAA receptor positive allosteric modulators attenuates the asthma-like phenotype", *International Chemical Biology Society meeting*, Madison, WI, October **2016**.
41. Nicolas Zahn, Revathi Kodali, Margaret L. Guthrie, Rajwana Jahan, Michael R. Stephen, Michael M. Poe, Jim M. Cook, Douglas Stafford, Leggy A. Arnold "Nervous System Effects & Metabolic Analysis of Benzodiazepines in Human and Mouse Liver Microsomes", *International Chemical Biology Society meeting 2016*, Madison, WI, October **2016**.
42. Olivia Yu and Leggy A. Arnold "Synthesis of Calcitroic Acid to Determine Its Potential for Prevention of Colon Cancer", *International Chemical Biology Society meeting 2016*, Madison, WI, October **2016**.
43. Amanda Nieman, Gloria S. Forkuo, Margaret L. Guthrie, Nina Y. Yuan, Olivia B. Yu, Revathi Kodali, Rajwana Jahan, Michael R. Stephen, Michael M. Poe, Benjamin Hartzler, Charles W. Emala, James M. Cook, Douglas C. Stafford, Leggy A. Arnold "Targeting the immune system with subtype-selective GABA(A) receptor modulators to alleviate asthma symptoms", *International Chemical Biology Society meeting 2016*, Madison, WI, October **2016**.
44. Margaret L. Guthrie, Rajwana Jahan, Michael R. Stephen, Jim M. Cook, Douglas Stafford, Leggy A. Arnold "Comparison of in-line HPLC SPE extraction and liquid/liquid extraction for the pharmacokinetic profiling using LC-MS/MS", *Chemistry and Biochemistry Research Symposium*, UWM, Milwaukee, May **2016**.
45. Olivia Yu and Leggy A. Arnold "Synthesis of Calcitroic Acid to Determine its Potential of Prevention of Colon Cancer", *Chemistry and Biochemistry Research Symposium*, UWM, Milwaukee, May **2016**.
46. Nicolas Zahn, Revathi Kodali, Margaret L. Guthrie, Rajwana Jahan, Michael R. Stephen, Daniel E Knutson, Michael M. Poe, Jim M. Cook, Douglas Stafford, Leggy A. Arnold" Determine of CNS effects of $\alpha 4$ and $\alpha 6$ selective GABA_A receptor ligands using a rotarod study *Chemistry and Biochemistry Research Symposium*, UWM, Milwaukee, June **2016**.
47. Revathi Kodali, Margaret L. Guthrie, Michael R. Stephen, Rajwana Jahan, Charles W. Emala, James M. Cook, Douglas Stafford and Leggy A. Arnold "Metabolic Studies of Drug Candidates for Neurological Disorders and Asthma based on GABAA receptor subtype selective ligands using Mass Spectrometry", 252th ACS National Meeting, Philadelphia, PA **2016**.
48. Revathi Kodali, Margaret L. Guthrie, Michael R. Stephen, Rajwana Jahan, Charles W. Emala, James M. Cook, Douglas Stafford and Leggy A. Arnold "Metabolic Studies of Drug Candidates for Neurological Disorders and Asthma based on GABAA receptor subtype selective ligands using Mass Spectrometry", 8th Yao Yuan Biotech-Pharma Symposium, Chicago, IL, **2016**.
49. Revathi Kodali, Margaret L. Guthrie, Michael R. Stephen, Rajwana Jahan, Charles W. Emala, James M. Cook, Douglas Stafford and Leggy A. Arnold; "Metabolic Studies of Drug Candidates for Neurological Disorders and Asthma based on GABAA receptor subtype selective ligands using Mass Spectrometry", *Chemistry and Biochemistry Research Symposium*, UWM, Milwaukee, May **2016**
50. Benjamin D. Hartzler, Gloria S. Forkuo, Amanda N. Nieman, Olivia B. Yu, Margaret L. Guthrie, Nina Y. Yuan, Revathi Kodali, Rajwana Jahan, Michael R. Stephen, Michael M. Poe, Charles W. Emala, James M. Cook, Douglas Stafford, Leggy A Arnold "Characterization of the GABAA Receptor Subunits in a Murine Model of Asthma " *UW System Symposium for Undergraduate Research and Creative Activity*, UW Steven's Point, April **2016**
51. Gloria S. Forkuo, Amanda N. Nieman, Olivia B. Yu, Margaret L. Guthrie, Nina Y. Yuan, Revathi Kodali, Rajwana Jahan, Michael R. Stephen, Michael M. Poe, Benjamin D. Hartzler, Charles W. Emala, James M. Cook, Douglas Stafford, Leggy A Arnold "α4-selective GABA_A receptor positive modulator attenuates the "asthma-like phenotype" in a murine asthma model" *Chemistry and Biochemistry Research Symposium*, UWM, Milwaukee, May **2016**
52. Gloria S. Forkuo, Amanda N. Nieman, Olivia B. Yu, Margaret L. Guthrie, Nina Y. Yuan, Revathi Kodali, Rajwana Jahan, Michael R. Stephen, Michael M. Poe, Benjamin D. Hartzler, Charles W. Emala, James M. Cook, Douglas Stafford, Leggy A Arnold "α4-selective GABA_A receptor positive modulator attenuates the "asthma-like phenotype" in a murine asthma model" *Experimental Biology*, San Diego, April **2016**.
53. Benjamin D. Hartzler, Gloria S. Forkuo, Amanda N. Nieman, Olivia B. Yu, Margaret L. Guthrie, Nina Y. Yuan, Revathi Kodali, Rajwana Jahan, Michael R. Stephen, Michael M. Poe, Charles W. Emala, James M. Cook, Douglas Stafford, Leggy A Arnold "Characterization of the GABAA Receptor Subunits in a Murine Model of Asthma " *Chemistry and Biochemistry Research Symposium*, UWM, Milwaukee, May **2016**
54. Benjamin D. Hartzler, Gloria S. Forkuo, Amanda N. Nieman, Olivia B. Yu, Margaret L. Guthrie, Nina Y. Yuan, Revathi Kodali, Rajwana Jahan, Michael R. Stephen, Michael M. Poe, Charles W. Emala, James M. Cook, Douglas Stafford, Leggy A Arnold "Characterization of the GABAA Receptor Subunits in a Murine Model of Asthma " *UWM Undergraduate Research Symposium*, UWM, April **2016**

55. Owen Dinauer, Olivia Yu, and Leggy A. Arnold "Optimization of Intermediate Compounds for a Direct VDR Binding Assay", *UWM Undergraduate Research Symposium*, UWM, April **2016**
56. Gino Scuncio, Nikki Johnston, Leggy A. Arnold "Identification of Novel Pepsin Inhibitors for Target Drugs to Treat Laryngopharyngeal Reflux Disease" *UWM Undergraduate Research Symposium*, UWM, April **2016**
57. Gino Scuncio, Nikki Johnston, Leggy A. Arnold "Identification of Novel Pepsin Inhibitors for Target Drugs to Treat Laryngopharyngeal Reflux Disease" *Chemistry and Biochemistry Research Symposium*, UWM, Milwaukee, June **2016**
58. Amanda Nieman, Gloria S. Forkuo, Margaret L. Guthrie, Nina Y. Yuan, Olivia B. Yu, Revathi Kodali, Rajwana Jahan, Michael R. Stephen, Michael M. Poe, Benjamin Hartzler, Charles W. Emala, James M. Cook, Douglas C. Stafford, Leggy A. Arnold "Targeting the Immune System with Subtype-Selective GABA_A Receptor Modulators to Alleviate Asthma Symptoms" *Immunology 2016*, Seattle, May **2016**
59. Nina Y. Yuan, James M. Cook, Leggy A. Arnold "Cross-Talk: The Brain and The Immune System – Functional GABA_A Receptor on Leukocytes", *Chemistry and Biochemistry Research Symposium*, UWM, Milwaukee, May **2016**
60. Nina, Y. Yuan, James M. Cook, Leggy A. Arnold "Electrophysiological Assay of GABA_A Receptor: Roles in Neuropharmacology & Immunology" *Northwestern Feinberg School of Medicine*, Chicago, April **2016** Oral presentation
61. Nicolas Zahn, Revathi Kodali, Margaret L. Guthrie, Rajwana Jahan, Michael R. Stephen, Michael M. Poe, Jim M. Cook, Douglas Stafford, Leggy A. Arnold "Metabolic Analysis of Imidazobenzodiazepines in Human and Mouse Liver Microsomes" *Summer Undergraduate Research Symposium*, UWM, Milwaukee, WI, August 19th, **2015**. (Poster Award: 3rd place).
62. Gino Scuncio, Chris Goetz, Nikki Johnston*, and Leggy A. Arnold" Identification of novel pepsin inhibitors for target drugs to treat laryngopharyngeal reflux disease" *Summer Undergraduate Research Symposium*, UWM, Milwaukee, WI, August 19th, **2015**.
63. Charles Stangl, Kelly Teske, Olivia Yu, Leggy A. Arnold" Synthesis of New Vitamin D Receptor- Coactivator Inhibitors" *Summer Undergraduate Research Symposium*, UWM, Milwaukee, WI, August 19th, **2015**.
64. Chris Goetz, Tina Samuels, Nikki Johnston, Leggy A. Arnold "New high throughput screening assay for the identification of new pepsin inhibitors" *Chemistry and Biochemistry Research Symposium*, UWM, April **2015** (Chemistry Alumni Award for the Undergraduate Research for the best poster presentation).
65. Chris Goetz, Tina Samuels, Nikki Johnston, Leggy A. Arnold "New high throughput screening assay for the identification of new pepsin inhibitors" *Chemistry and Biochemistry Research Symposium*, UWM, April **2015** (Chemistry Alumni Award for the Undergraduate Research for the best poster presentation).
66. Kelly A. Teske, Jon W. Bogart, Luis Sanchez, Leggy A. Arnold "Synthesis of natural VDR ligand metabolites and their interaction with the vitamin D receptor" *250nd ACS National Meeting*, Boston, MA, August 16th, **2015**.
67. Margaret L. Guthrie, Nicolas Zahn, Revathi Kodali, Glorio Forkuo, Rajwana Jahan, Michael R. Stephen, Michael M. Poe, Jim M. Cook, Douglas Stafford, Leggy A. Arnold "Development of a liquid chromatography tandem mass spectrometry (LC-MS/MS) method for quantification of imidazobenzodiazepines following liquid-liquid extraction (LLE) and on-line solid-phase extraction (SPE)." *250nd ACS National Meeting*, Boston, MA, August 16th, **2015**.
68. Revathi Kodali, Margaret L. Guthrie, Michael M. Poe, Michael R. Stephen, Rajwana Jahan, Charles W. Emala, James M. Cook, Douglas Stafford, and Leggy A. Arnold "Metabolic Studies of Drug Candidates for Neurological Disorders and Asthma Based on GABA_A Receptor Subtype Selective Ligands using Mass Spectrometry." *250nd ACS National Meeting*, Boston, MA, August 16th, **2015**
69. Nina Yuan, Mike Poe, James M. Cook, Leggy A. Arnold "Electrophysiological Assay of GABA_A Receptor: Roles in Neuropharmacology & Immunology" Great Lakes Chapter Chinese American Chemical Society (GLCACS), Abbott Auditorium, Northwestern University, Chicago **2015**. (Third best presentation)
70. Gino Scuncio, Christopher Goetz, Nikki Johnston, Leggy A. Arnold, "Development of a High Throughput Screening Campaign to Identify Novel Pepsin Inhibitors to treat Laryngopharyngeal Reflux Disease", *7th Yao Yuan Biotech-Pharma Symposium*, Illinois Institute of Technology, Chicago **2015**.
71. Gloria Forkuo, Amanda Youmans, Olivia Yu, Margaret L. Guthrie, Nina Yuan, Revathi Kodali, Rajwana Jahan, Michael R. Stephen, Michael M. Poe, Charles W. Emala, James M. Cook, Douglas Stafford, Leggy A. Arnold "Characterization of airway hyper-responsiveness in a murine model of asthma with the Buxco® FinePointe Non-Invasive Airway Mechanics instrumentation" *Chemistry and Biochemistry Research Symposium*, UWM, April **2015**.
72. Amanda Youmans, Gloria Forkuo, Olivia Yu, Margaret L. Guthrie, Nina Yuan, Revathi Kodali, Rajwana Jahan, Michael R. Stephen, Michael M. Michael, Charles W. Emala, James M. Cook, Douglas Stafford, Leggy A. Arnold,

- "The Effect of γ -Aminobutyric Acid on IL-2 Production in Jurkat Cell Line" *Chemistry and Biochemistry Research Symposium*, UWM, April **2015**.
73. Margaret L. Guthrie, Marina Sidorko, Nicolas Zahn, Rajwana Jahan, Michael R. Stephen, Michael M. Poe, Charles W. Emala, Jim M. Cook, Douglas Stafford, Leggy A. Arnold "Development of a liquid chromatography-tandem mass spectrometry (LC-MS/MS) method for the quantitation of benzodiazepines in mouse tissue homogenates" *Chemistry and Biochemistry Research Symposium*, UWM, April **2015**.
74. Kelly A. Teske, Adam Yasgar, Ganesha Bantukallu, Jon Bogart, Anton Simeonov, Ajit Jadhav, David Maloney and Leggy A. Arnold, "Further Investigation of the First Non-Secosteroidal Antagonist for the Vitamin D Receptor" *Chemistry and Biochemistry Research Symposium*, UWM, April **2015** (Sosnovsky Award for Excellence in Graduate Research).
75. Olivia Yu, Kelly A. Teske, Charlie Stangl, James M. Cook, and Leggy A. Arnold, "Development of a Direct VDR Binding Assay Based on Fluorescence Polarization" *Chemistry and Biochemistry Research Symposium*, UWM, April **2015**.
76. Nina Yuan, James M. Cook, Leggy A. Arnold "Electrophysiological Assay of GABA(A) Receptor Roles in Neuropharmacology & Immunology" *Chemistry and Biochemistry Research Symposium*, UWM, April **2015** (Chemistry Alumni Award for Graduate Research for the 1st best poster presentation).
77. Revathi Kodali, Margaret L. Guthrie, Michael M. Poe, Michael R. Stephen, Rajwana Jahan, Charles W. Emala, James M. Cook, Douglas Stafford, and Leggy A. Arnold "In Vitro Metabolic Stability Studies of GABAA Receptor Subtype Selective Ligands in Liver Sub-Cellular Fractions" *Chemistry and Biochemistry Research Symposium*, UWM, April **2015**.
78. Chris Goetz, Tina Samuels, Nikki Johnston, Leggy A. Arnold "New high throughput screening assay for the identification of new pepsin inhibitors" *Chemistry and Biochemistry Research Symposium*, UWM, April **2015** (Chemistry Alumni Award for the Undergraduate Research for the best poster presentation).
79. Christopher Goetz, Tina Samuels, Nikki Johnston, Leggy A. Arnold "Development of a high throughput screening campaign for the identification of new pepsin inhibitors" *24th Annual Graduate School of Biomedical Science Research Poster Session*, Medical College of Wisconsin, Milwaukee, WI, October 9th, **2014**.
80. Christopher Goetz, Tina Samuels, Nikki Johnston, Leggy A. Arnold "Development of a high throughput screening campaign for the identification of new pepsin inhibitors" *Summer Undergraduate Research Symposium*, UWM, Milwaukee, WI, August 30th, **2014**.
81. Joshua Preston, Nina Yuan, Leggy A. Arnold "Development of a stable cell line for nuclear receptor research" *Summer Undergraduate Research Symposium*, UWM, Milwaukee, WI, August 30th, **2014**.
82. Skylar J. Gabel-Eissens, Jonathan W. Bogart, Grant B. Fernstrum, Kelly Teske, Joshua Preston, Nina Yuan, Leggy A. Arnold "Synthesis of VDR-Coregulator Inhibitor SG72914" *Summer Undergraduate Research Symposium*, UWM, Milwaukee, WI, August 30th, **2014**.
83. Kelly A Teske, Jon W Bogart, Luis Sanchez, Ganesha Bantukallu, Anton Simeonov, Ajit Jadhav, Adam Yasgar, David Maloney, and Leggy A Arnold "Development of selective non-secosteroidal vitamin D receptor inhibitors" *248nd ACS National Meeting*, San Francisco, CA, August 13th, **2014**. (oral)
84. Kelly A Teske, Jon W Bogart, Luis Sanchez, and Leggy A Arnold "Identification of New Vitamin D Receptor-Coregulator Inhibitors among Nuclear Receptor Ligands", *248nd ACS National Meeting*, San Francisco, CA, August 10th, **2014**.
85. Nina Y. Yuan, James M. Cook, and Leggy A. Arnold "Development of high throughput assays to identify new alpha subtype-selective GABAA receptor modulators to treat anxiety and depression disorders" *Experimental Instrumentation and Models in Interdisciplinary Neuroscience Research*, UWM, Milwaukee, WI, July 30th, **2014**. (oral)
86. Nina Yuan, Mike M. Poe, Christopher M. Witzigmann, Werner Sieghart, James M. Cook, and Leggy A. Arnold "Identifying New Treatments for the Brain: Electrophysiological Assay and Generation of a Stable Recombinant Cell Line" *Gordon Research Conference – Ion Channels*, South Hadley, MA, July 8th, **2014**.
87. Nina Y. Yuan, James M. Cook, and Leggy A. Arnold "Development of high throughput assays to identify new alpha subtype-selective GABAA receptor modulators to treat anxiety and depression disorders" *Gordon Research Seminar – Ion Channels*, South Hadley, MA, July 6th, **2014**.(oral)
88. Kelly Teske and Leggy A. Arnold "Novel Modulators for the Vitamin D Receptor as Drug Candidates", *MIDD retreat 2014*, UWM, May 22nd, **2014**. (oral)
89. Kelly Teske, Jonathan Bogart, Adam Yasgar, Ganesha Bantukallu, Jon Bogart, Anton Simeonov, Ajit Jadhav, David Maloney and Leggy A. Arnold "Development of Selective Non-Secosteroid Vitamin D Receptor Inhibitors",

Chemistry and Biochemistry Research Symposium, UWM, April **2014**, received the Chemistry Alumni Award for Graduate Research.

90. Jonathan W. Bogart, Kelly A. Teske, Leggy A. Arnold “The Synthesis and Evaluation of Potential Non-Secosteroid VDR-coactivator Inhibitors”, *Chemistry and Biochemistry Research Symposium*, UWM, April **2014**.
91. Margaret L. Guthrie, Preetpal Sidhu, Michael Poe, Michael Rajesh Stephen, V.V.N. Phani Babu Tiruveedhula, Rakesh K. Singh, James Cook and Leggy A. Arnold “Development of a Metabolic Stability Assay to Determine Drug-like Properties of Small Molecules” *Chemistry and Biochemistry Research Symposium*, UWM, April **2014**.
92. Joshua Preston, Preetpal S. Sidhu, and Leggy A. Arnold “Sequence Verification of Nuclear Receptor Plasmids for Ligand-mediated Transcription Assays” *Chemistry and Biochemistry Research Symposium*, UWM, April **2014**.
93. Belaynesh Feleke, Kelly Teske, Preetpal S. Sidhu, Nina Y. Yuan, Leggy A. Arnold “Novel VDR-Coregulator Inhibitors” *Chemistry and Biochemistry Research Symposium*, UWM, April **2014**.
94. Nina Yuan, Mike M. Poe, Christopher M. Witzigmann, Werner Sieghart, James M. Cook, Leggy A. Arnold, “Identifying New Treatments for the Brain: Electrophysiological Assay and Generation of a Stable Recombinant Cell Line” *Chemistry and Biochemistry Research Symposium*, UWM, April **2014**.
95. Jonathan W. Bogart, Kelly A. Teske, Leggy A. Arnold “The Synthesis and evaluation of potential non-secosteroid VDR-coactivator inhibitors”, *UWM System Symposium*, UWM, April **2014**. Award for Outstanding Presentation.
96. Joshua Preston, Preetpal S. Sidhu, and Leggy A. Arnold “Sequence Verification of Nuclear Receptor Plasmids for Ligand-mediated Transcription Assays”, *UWM System Symposium*, UWM, April **2014**.
97. Kelly Teske, Adam Yasgar, Ganesha Bantukallu, Jon Bogart, Anton Simeonov, Ajit Jadhav, David Maloney and Leggy A. Arnold “Further Investigation of the First Non-Secosteroidal Antagonist for the Vitamin D Receptor” *6th Yao Yuan Biotech-Pharma Symposium, Illinois Institute of Technology, Chicago 2014*.
98. Nina Yuan, James M. Cook, Leggy A. Arnold “Identifying New Treatments for the Brain: Anxiolytic Neurochemistry and Electrophysiology” *6th Yao Yuan Biotech-Pharma Symposium, Illinois Institute of Technology, Chicago 2014*.
99. Belaynesh Feleke, Kelly Teske, Preetpal S. Sidhu, Nina Y. Yuan, Leggy A. Arnold “Novel VDR-Coregulator Inhibitors” *6th Yao Yuan Biotech-Pharma Symposium, Illinois Institute of Technology, Chicago 2014*.
100. Preetpal S. Sidhu, Premchendar Nandhikonda, Kelly Teske, Belaynesh Feleke, Nina Y. Yuan, Rakesh K. Singh, Daniel D. Bikle, Leggy A. Arnold “Novel VDR-Coactivator Inhibitors and Their Anti-Cancer Effects” *6th Yao Yuan Biotech-Pharma Symposium, Illinois Institute of Technology, Chicago 2014*.
101. Joshua Preston, Preetpal S. Sidhu, and Leggy A. Arnold “Sequence Verification of Nuclear Receptor Plasmids for Ligand-mediated Transcription Assays” *6th Yao Yuan Biotech-Pharma Symposium, Illinois Institute of Technology, Chicago 2014*.
102. Jonathan W. Bogart, Kelly A. Teske, Leggy A. Arnold “The Synthesis and evaluation of potential non-secosteroid VDR-coactivator inhibitors” *6th Yao Yuan Biotech-Pharma Symposium, Illinois Institute of Technology, Chicago 2014*.
103. Kelly Teske, Jonathan Bogart, and Leggy A. Arnold “Identification of the first non-secosteroid antagonist for the vitamin D receptor” *American Chemical Society Section Meeting (Younger Chemist Committee), UWM, Milwaukee 2013*.
104. Joshua Preston, Preetpal S. Sidhu, Leggy A. Arnold “Sequence Verification of Nuclear Receptor Plasmids for Ligand-mediated Transcription Assays” *American Chemical Society Section Meeting (Younger Chemist Committee), UWM, Milwaukee 2013*.
105. Jonathan Bogart, Kelly Teske, Leggy A. Arnold “The Synthesis and Evaluation of Potential Non-Secosteroid VDR-Coactivator Inhibitors” *American Chemical Society Section Meeting (Younger Chemist Committee), UWM, Milwaukee 2013*.
106. Belaynesh Feleke, Kelly Teske, Preetpal S. Sidhu, Nina Y. Yuan, Leggy A. Arnold “Novel VDR-Coregulator inhibitors” *American Chemical Society Section Meeting (Younger Chemist Committee), UWM, Milwaukee 2013*.
107. Jonathan Bogart, Kelly Teske, Leggy A. Arnold “The synthesis of non-secosteroid VDR-coactivator inhibitors using the Hantzsch reaction” *Summer Undergraduate Research Symposium, UWM, Milwaukee, August 2013*. (Second Best Poster)
108. Robin Goy, Nina Yuan, Lanlan Han, Lisa Mueller, Leggy A. Arnold “Expression and Purification of the Retinoic X Receptor Gamma” *Summer Undergraduate Research Symposium, UWM, Milwaukee, August 2013*.
109. Joshua Preston, Leggy A. Arnold “Gene sequencing of the Peroxisome Proliferator-Activated Receptor Alpha in pBind” *Summer Undergraduate Research Symposium, UWM, Milwaukee, August 2013*.
110. Preetpal S. Sidhu, Leggy A. Arnold “Selective, Irreversible VDR-coactivator Inhibitors and Their Evaluation In Vivo Using an Ovarian Cancer Animal Model”, *Gordon Research Seminar, London, NH, August 2013*.

111. Nicholas D. Nassif, Kelly Teske, Ganesha Bantukallu, Adam Yasgar, David Maloney, Ajit Jadhav, Leggy A. Arnold "Expression and Purification of the Vitamin D Receptor Ligand Binding Domain for the Identification of Vitamin D Receptor Coactivator Inhibitors", *NCUR, LaCrosse, WI, March 2013*.
112. Nicholas D. Nassif, Kelly Teske, Ganesha Bantukallu, Adam Yasgar, David Maloney, Ajit Jadhav, Leggy A. Arnold "Expression and Purification of the Vitamin D Receptor Ligand Binding Domain for the Identification of Vitamin D Receptor Coactivator Inhibitors", *UWM Chemistry and Biochemistry Research Symposium, Milwaukee, WI, April 2013*.
113. Kelly Teske, Leggy A. Arnold "Identification of the first non-secosteroid antagonist for the vitamin D receptor" *245th ACS National Meeting and Exposition, New Orleans, LA, April 2013*.
114. Preetpal S. Sidhu, Leggy A. Arnold "Chemical improvement of pharmacological properties of irreversible VDR-coactivator inhibitors", *245th ACS National Meeting and Exposition, New Orleans, LA, April 2013*.
115. Nina Yuan, James Cook, Leggy A. Arnold "Identifying New Treatments for the Brain: Anxiolytic Neurochemistry and Electrophysiology", *UWM Chemistry and Biochemistry Research Symposium, Milwaukee, WI, April 2013*.
116. Nina Yuan "Uppers, Downers, All Arounders: Identifying New Treatments for the Human Brain", *UWM Chemistry and Biochemistry Research Symposium and Recruiting Event, Milwaukee, WI, April 2013*.
117. M. M. McCallum, Alan J. Pawlak, Anton Simeonov, Ajit Jadhav, Adam Yasgar, David Maloney, L. A. Arnold, "A new fluorescent-based high throughput method for the quantification of drug-protein binding" *Student Awards Day, UWM, Milwaukee, WI, April 2013*.
118. M. M. McCallum, L. A. Arnold, "A new fluorescent-based high throughput method for the quantification of drug-protein binding" *245th ACS National Meeting & Exposition, New Orleans, LA, April, 2013*.
119. M. M. McCallum, P. Nandhikonda, J. J. Temmer, L. A. Arnold, "A high throughput approach for the identification of promiscuous inhibitors among screening libraries with the use of a nucleophilic fluorescent probe" *245th ACS National Meeting & Exposition, New Orleans, LA, April, 2013*.
120. Premchendar Nandhikonda, Megan M. Callum, Leggy A. Arnold "Identification of Promiscuous Inhibitors in Screening Libraries with the use of an Intrinsically Fluorescent Probe: High Throughput Screening Approach", *SLAS 2013, 2nd Annual Conference, Orlando, FL, January 2013*.
121. Jonathan Temmer, Megan M. Callum, Premchendar Nandhikonda, Leggy A. Arnold "A fluorescence-based high throughput assay for the identification of promiscuous inhibitors", *Summer Undergraduate Research Symposium, UWM, Milwaukee, WI, August 2012*.
122. Robin Goy, Nina Yuan, Leggy A. Arnold "Expression and Purification of VDR-LBD" *Summer Undergraduate Research Symposium, UWM, Milwaukee, WI, August 2012*.
123. Kelly Teske, Angela Zivkovic and Leggy A. Arnold "Rational Development of Reversible Inhibitors of the Vitamin D Receptor-Coregulator Interactions" *Student Awards Day, UWM, Milwaukee, WI, May 2012*.
124. Kelly Teske, Angela Zivkovic and Leggy A. Arnold "Rational Development of Reversible Inhibitors of the Vitamin D Receptor-Coregulator Interactions" *243rd ACS National Meeting & Exposition, San Diego, CA, March 25-29, 2012*.
125. Megan M. McCallum, Premchendar Nandhikonda, Leggy A. Arnold "High throughput determination of glutathione binding ability of small molecules with the use of intrinsically fluorescent probes" *Student Awards Day, University of Wisconsin-Milwaukee, May 2012*.
126. Megan M. McCallum, Premchendar Nandhikonda, Leggy A. Arnold "High throughput determination of glutathione binding ability of small molecules with the use of intrinsically fluorescent probes" *243rd ACS National Meeting & Exposition, San Diego, CA, March 25-29, 2012*.
127. Chinedum K. Kevin, Premchendar Nandhikonda, and Leggy A. Arnold "Quantification of Small Molecule Vitamin D Receptor-Coregulator inhibition" *Spring Undergraduate Research Symposium, University of Wisconsin Milwaukee 2012*.
128. Chinedum K. Kevin, Premchendar Nandhikonda, and Leggy A. Arnold "Quantification of Small Molecule Vitamin D Receptor-Coregulator inhibition" *Student Awards Day, University of Wisconsin-Milwaukee, May 2012*.
129. Angela Zivkovic, Kelly Teske and Leggy A. Arnold "Synthesis of a Novel Non-secosteroidal Vitamin D Receptor Agonist" *Spring Undergraduate Research Symposium, University of Wisconsin Milwaukee 2012*.
130. Angela Zivkovic, Kelly Teske and Leggy A. Arnold "Synthesis of a Novel Non-secosteroidal Vitamin D Receptor Agonist" *Student Awards Day, University of Wisconsin-Milwaukee, May 2012*.
131. Nina Y. Yuan, Leggy A. Arnold, "Benzodiazepine Specificity of GABA_A Receptor Subtypes: High-Throughput Electrophysiological Assay with Transiently Transfected Cells", *ACS National Conference San Diego 2012*.
132. Nina Y. Yuan, Leggy A. Arnold, "Benzodiazepine Specificity of GABA_A Receptor Subtypes: High-Throughput Electrophysiological Assay with Transiently Transfected Cells", *UWM Chemistry Department Awards Day 2012*.

133. Megan M. McCallum, Leggy A. Arnold “Miniaturizing Solubility and Permeability Assays for Small Molecules” *3rd Annual Chemistry in Southeastern Wisconsin Symposium, ACS Milwaukee Section – ACS Younger Chemists Committee, Milwaukee, WI, November 2011.*
134. Nicholas Talerico, Premchendar Nandhikonda, Leggy A. Arnold , “Synthesis of Coregulator Binding Inhibitors for the Vitamin D Receptor”, *Summer Undergraduate Research Symposium, University of Wisconsin Milwaukee 2011.*
135. Nina Yina Yuan, James M. Cook, Leggy A. Arnold, “Benzodiazepine Specificity of GABA_A Receptor Subtypes” *Summer Undergraduate Research Symposium, University of Wisconsin Milwaukee 2011.*
136. Megan M. McCallum, Leggy A. Arnold, “Miniaturizing Solubility and Permeability Assays for Small Molecules”, *Awards Day, University of Wisconsin Milwaukee 2011.*
137. Athena Baranowski, Leggy A. Arnold. "Cell-Based Assays Used to Study the Affects of Small Molecule Modulators of the Vitamin D Receptor-Coactivator Interactions," *Awards Day, University of Wisconsin Milwaukee 2011.*
138. Tahniyath Ara, Leggy A. Arnold, “Temperature Dependency of VDR-LBD during Protein Purification” *Awards Day, University of Wisconsin Milwaukee 2011.*
139. Nina Yuan, James M. Cook, Leggy A. Arnold, "Electrophysiological Response of Benzodiazepines to GABA_A Receptor in Transiently Transfected Mammalian Cells", *Spring Undergraduate Research Symposium, University of Wisconsin Milwaukee 2011.*
140. Megan M. McCallum, Leggy A. Arnold, “Miniaturizing Solubility and Permeability Assays for Small Molecules”, *International ACS Conference, Anaheim 2011.*
141. Nina Yina Yuan, Leggy A. Arnold, “Determination of binding modes for small molecule vitamin D receptor-coregulator inhibitors”, *Summer Undergraduate Research Symposium, University of Wisconsin Milwaukee 2010.*
142. Tahniyath Ara, Nina Yuan, Leggy A. Arnold, “Characterization of Small Molecule Vitamin D Receptor-Coregulator Inhibitors”, *The Open House, University of Wisconsin Milwaukee 2010.*
143. Travis R. Dove, Leggy A. Arnold, “Synthesis of vitamin D mimic LG190178”, *Summer Undergraduate Research Symposium, University of Wisconsin Milwaukee 2010.*

LICENSURES AND CERTIFICATIONS

1. Arnold LA, Stafford DC, Cook JM, Emala CW, Forkuo GS, Jahan R, Kodali R, Li G, Stephen MR “GABAA receptor modulators and methods to control airway hyperresponsiveness and inflammation in asthma” WO 2018/035246 A1, filed **August 2017.**
2. Provisional Patent OTT 1519, Alexander E. Arnold, James M. Cook, Charles W. Emala, Gloria Forkuo, Rajwana Jahan, Michael Poe, Douglas C. Stafford “New oral small molecule treatments to control airway hyperresponsiveness and inflammation in asthma based on GABA(A) receptor modulators” filed **November 2016.**
3. Provisional Patent OTT 1516, Douglas C. Stafford, James M. Cook, Alexander E. Arnold, Charles W. Emala, Sr “Novel GABA(A) Receptor Modulators and methods to control airway hyperresponsiveness and inflammation in asthma” filed **September 2016.**
4. Exclusive Licensing Agreement of US9416104 B2 to Systems Oncology on **March 2017.**
5. Patent US9416104 B2 “Vitamin D receptor-coregulator inhibitors” Alexander E. Arnold, Preetpal Singh Sidhu, Premchendar Nandhikonda, Rakesh K. Singh, filed August 2012, allowed **August 2016.**
6. License with KeraFAST (Boston, USA) that include the commercialization of the MSTI probe, **January 2014.**
7. Provisional patent OTT1368 “High throughput identification of promiscuous inhibitors among screening libraries with the use of an intrinsically fluorescent probe” Alexander E. Arnold, Megan McCallum, Premchendar Nandhikonda filed **November 2013.**
8. Patent US0232473 A1 “Novel GABAA agonists and methods of using to control airway hyperresponsiveness and inflammation in asthma” Douglas C. Stafford, James M. Cook, Alexander E. Arnold, Charles W. Emala, Sr.; filed September 2013, allowed **October 2017.**
9. Provisional patent OTT1319 “Development of a GABA_A agonist to control airway hyperresponsiveness and inflammation in asthma” Douglas C. Stafford, James M. Cook, Alexander E. Arnold, Charles W. Emala, Sr.; filed **September 2012.**
10. Provisional patent OTT 1250 “ New Treatments for Cancer and Metabolic Diseases: Vitamin D Receptor-Coregulator Inhibitors, Alexander Arnold, filed **August 2011.**

GRANTS AND FELLOWSHIPS (Total Funding at UWM:\$12,147,008.00)

2018 (Total funding: \$46,043.00)

1. Fellowships for two graduate students were negotiated with Eurofins for fall 2018. The support includes salary and fringes at \$31,390.00. (September 2018 – January 2019).
2. Arnold, A (PI), Cook, J (Co-PI) “*Novel asthma drug discovery by defining the GABAergic system in lung inflammation*” sponsored by NIH (R01), renewal, Research, awarding organization is national, **under review**, \$2,640,377.00 (February 2019 – January 2024).
3. Sengupta J, Cunningham C, Arnold A “*Analgesic Effects of Biased Opioid Agonists in Pelvic Pain; a non-addictive pain therapy*” CTSI Pilot Start-up Award Proposal, **not funded** \$50,000.00 (October 2018 – September 2019).
4. Arnold, A (PI), Cook, J (Co-PI) “*Selectively Targeting GABAA Receptors to Treat Neuropathic Pain*” sponsored by NIH (R01), Research, awarding organization is national, **not funded**, \$2,568,397.00 (October 2018 – September 2023).
5. Jed Hubbs (PI), Arnold A. (Co-PI) “*Subtype selective GABA_A receptor modulators for the treatment of neuropathic pain*” sponsored by NIH (SBIR) resubmission, Research, awarding organization is national, **not funded**, \$2,251,624.00, (October 2018 – September 2021).
6. Arnold, A. (PI), Johnson N. (Co-PI) “*Development of new inhibitors for pepsin*”, sponsored by MCW, \$14,653.00, **funded** (May 2018- July 2018).
7. Jed Hubbs (PI), Arnold A. (Co-PI) “*Subtype-Selective GABA_A Receptor Modulators as Improved Anticonvulsants*” sponsored by Epilepsy Foundation, resubmission, Research, awarding organization is national, \$ 328,600.00, **under review**. (October 2018 – September 2019).
8. Jed Hubbs (PI), Arnold A. (Co-PI) “*Subtype Selective GABA_A Receptor Modulators for the Treatment of Drave syndrome*” sponsored by NIH (SBIR), resubmission, Research, awarding organization is national, **under review**, \$466.867.00, (October 2018 – September 2019).

2017 (Total funding: \$60,426.00)

1. Jed Hubbs (PI), Arnold A. (Co-PI) “*Development of a fixed-dose combination therapy for the treatment of arthritic pain*” sponsored by NIH (SBIR), Research, awarding organization is national, **not funded** \$230,000.00 (July 2018 – June 2019).
2. Arnold, A. (PI), Grant (Catalyst) “*Evaluation of calcitroic acid and its phase II metabolites*” sponsored by Graduate School at UWM, RGI Funding, \$108,244.00, **not funded**. (July 2018-June 2019).
3. Jed Hubbs (PI), Arnold A. (Co-PI) “*Subtype-Selective GABA_A Receptor Modulators as Improved Anticonvulsants*” sponsored by Epilepsy Foundation, Research, awarding organization is national, \$ 328,600.00, **not funded**. (October 2017 – September 2018).
4. Jed Hubbs (PI), Arnold A. (Co-PI) “*Subtype selective GABA_A receptor modulators for the treatment of neuropathic pain*” sponsored by NIH (SBIR), Research, awarding organization is national, **not funded**, \$1,929,376.00, (January 2018 – December 2020).
5. Jed Hubbs (PI), Arnold A. (Co-PI) “*Subtype Selective GABA_A Receptor Modulators for the Treatment of Drave syndrome*” sponsored by NIH (SBIR), Research, awarding organization is national, **not funded**, \$466.867.00, (April 2018 – March 2019).
6. Arnold, A (PI), “*Evaluation of 31B as new cancer agent*”, sponsored by Systems Oncology, \$3078.00, **funded**, (September 2017-January 2018)
7. Peng, X (PI), Arnold, A (Co-PI) “*The pharmacokinetics and In vivo efficacy of ROS-activated anticancer prodrugs*”, sponsored by NIH R21, resubmission, \$144,954.00, **not funded**. (June 2017-May 2019).
8. Arnold, A (PI), Stafford, D (Co-PI), Cook, J.(Co-PI), grant (Catalyst), “*Targeting Microglia in Neuropathic Pain Drug Discovery*”, sponsored by UWM Research Foundation, awarding organization is local, \$50,000.00, **funded**. (July 2017-June 2018)
9. Arnold, A (PI), “*Evaluation of 31B as new cancer agent*”, sponsored by Systems Oncology, \$7,348.00, **funded**, (May 2017 - October 2017)

2016 (Total funding: \$0)

1. Arnold, A. (PI) “*Investigations of calcitroic acid and its metabolites*”, sponsored by Graduate School UWM, **not funded**, \$102,444.00, (June 2017-May 2018).
2. Arnold, A. (PI), Cook (Co-PI) Hubbs (Co-PI), Stafford (Co-PI) “*Subtype Selective GABA_A Receptor Modulators for the Treatment of Neuropathic Pain*”, sponsored by the NIH (BPN grant), \$1,929,376.00, **not funded** (May 2017-April 2020).
3. Arnold, A. (PI), Grant (Catalyst) “*Investigations of calcitroic acid and its metabolites*” sponsored by Graduate School at UWM, RGI Funding, \$102,444.00, **not funded**. (July 2017-June 2018).
4. St. Maurice, M. (PI) Arnold, A. (Co-PI), Grant “*High-throughput assay development for novel probes targeting pyruvate carboxylase*” sponsored by NIH, \$868,250.00, **not funded**. (July 2016-June 2019).
5. Peng, X (PI), Arnold, A (Co-PI) “*The pharmacokinetics and In vivo efficacy of ROS-activated anticancer prodrugs*”, sponsored by NIH, \$144,954.00, **not funded**. (June 2016-May 2018).

2015 (Total funding: \$2,725,763.00)

1. Peng, X (PI), Arnold, A (Co-PI) “*The pharmacokinetics and In vivo efficacy of ROS-activated anticancer prodrugs*”, sponsored by Falk Medical Research Trust, \$396,063.00, **not Funded**. (January 2016-December 2017).
2. Widlansky, M (PI), Arnold, A (Co-PI), Hill, B “*Endothelial function in human diabetes: role of mitochondrial fission proteins*” sponsored by NIH/HLB, R01HL125409, \$2,665,763.00 **funded** (March 2016 - February 2021).
3. Hill, Blake (PI), Brian Volkman (Co-PI) Arnold, A (Collaborator) “A Structure-Based Drug Discovery Resource for Clinical and Basic Scientists” sponsored by MCW, \$60,000, **funded** (June 2015- May 2016)
4. Johnston, N. (PI) Arnold, A. (Co-PI), Grant “*Novel Pepsin Inhibitors for the Treatment of Laryngopharyngeal Reflux Disease*” sponsored by Falk Medical Research Trust, \$355,035.00, **not Funded**. (April 2015-March 2016).
5. Dockendorff, C. (PI), Arnold, A (Co-PI), Donaldson, B. (Co-PI), Kovriguine, E. (Co-PI), St. Maurice, M. (Co-PI), Yang, P. (Co-PI), Ghasemzadeh, B. (Co-PI) Innovation Fund “*Milwaukee Institute for Drug Discovery Chemistry Core Facility*” sponsored by Marquette University 250,000.00, **not Funded** (September 2015-August 2017).
6. St. Maurice, M. (PI) Arnold, A. (Co-PI), Grant “*High-throughput assay development for novel probes targeting pyruvate carboxylase*” sponsored by NIH, \$868,250.00, **not Funded**. (July 2015-June 2018).

2014 (Total funding: \$2,244,109.00)

1. Peng, X. (PI), Arnold, A. (Co-PI), Grant (RGI) “*The pharmacokinetics and In vivo efficacy of ROS-activated anticancer prodrugs*”, sponsored by Graduate School at UWM, RGI Funding, \$84,000.00, **Funded**. (July 2015-June 2016).
2. Arnold, A. (PI), Grant (Catalyst) “*Development of pre-clinical assays to characterize drug candidates prior to in vivo studies*”, sponsored by Graduate School at UWM, RGI Funding, \$62,000.00, **not funded**. (July 2015-June 2016).
3. Cook J.M. (PI), Arnold, A. (Co-PI), Grant R01 resubmission, “*Development of new drugs for asthma by targeting GABA(A) receptors in the lung*”, sponsored by NIH/NIHLB R01HL118561, awarding organization is Federal, \$1,965,763.00 **funded** (September 2014 - June 2018).
4. Cook J. (PI), Arnold A. (Co-Investigator), Stafford (Co-Investigator), Grant (Catalyst), “*New Treatments for asthma that target GABA(A) receptors in the lung*”, sponsored by UWM Research Foundation, awarding organization is local, \$50,000.00, **funded**. (July 2014-June 2015)
5. Arnold, A. (PI), Grant (Catalyst), “*Development of pre-clinical assays to characterize drug candidates prior to in vivo studies*”, sponsored by UWM Research Foundation, awarding organization is local, \$50,000.00, **not funded**. (July 2014-June 2015).
6. Arnold, A. (Co-Investigator), Peng, X. (PI), Grant (Catalyst), “*The pharmacokinetics and In vivo efficacy of ROS-activated anticancer prodrugs*”, sponsored by UWM Research Foundation, awarding organization is local, \$60,000.00, **funded**. (July 2014-June 2015).
7. Arnold, A. (PI), Daniel Sem (PI), Grant, “*Commercialization of a Universal Kinase and GTPase Assay*”, sponsored by the State of Wisconsin, awarding organization is the UWM Applied Chemistry Center, \$84,346.00, **funded** (April 2014 - June 2015).

2013 (Total funding: \$3,154,200.00)

1. Arnold, A. (PI Scientist), Stafford, D. (PI), Geissinger P. (Co-PI), Grant, "Grant, "Equipment Grant for Teaching & Research" sponsored by Shimadzu, \$1,300,000.00, **funded** (January 2014-December 2018).
2. Arnold, A. (PI), Silvaggi, N. (Co-Investigator), Grant R01, "*Vitamin D receptor-Coregulator Interaction as Anticancer Targets*", sponsored by NIH/NCI awarding organization is Federal, \$1,102,410.00, **not funded** (April 2014 - March 2017).
3. Arnold A./Palmer A. (PI), Grant R01, "*Glo1 inhibitors: A novel class of GABAergic anxiolytic and antidepressant drugs*", sponsored by NIH/NIMH, awarding organization is Federal, \$2,789,230.00, **not funded** (December 2013 – November 2018).
4. Cook J.M. (PI), Arnold, A. (Co-PI), Grant R01, "*Development of new drugs for asthma by targeting GABA (A) receptors in the lung*", sponsored by NIH/NIHLB, awarding organization is Federal, \$1,861,161.00, **not funded**. (June 2013 – May (2018).
5. Cook J.M. (PI), Arnold, A. (Co-PI), Grant R01 resubmission, "*Design of New Therapeutic Agents to Treat Schizophrenia*", sponsored by NIH/NIMH, awarding organization is Federal, \$1,850,690.00, **funded** (June 2013 - May 2018).
6. Arnold, A. (PI), Grant, "*Quantification of different GABA(A) receptor alpha subunits in icell neurons*", sponsored by Cellular Dynamics International, awarding organization is national, \$3,510.00, **funded**. (February 2013 – July 2013).

2012 (Total funding: \$1,863,169.00)

1. Arnold, A. (PI), Grant, "*New Treatments for asthma that target GABA(A) receptors in the lung*", sponsored by Research Growth Initiative/Graduate School UWM, awarding organization is University of Wisconsin-Milwaukee, \$113,848.00, **not funded**. (July 2013 – December 2014).
2. Arnold, A. (PI), Grant, "*Determination of alpha subtype selective of GABA(A) receptor ligands*", sponsored by ConcertPharma, awarding is national, \$2,895.44, **funded**. (October 2012 – September 2013).
3. Arnold, A. (PI), Grant (Catalyst), "*In vivo evaluation of selective inhibitors of the vitamin D receptor-Coregulator interactions*", sponsored by UWM Research Foundation, awarding organization is local, \$35,000.00, **funded**. (July 2012-June 2013).
4. Cook J.M. (PI), Arnold, A. (Co-PI), Grant R01 resubmission, "*Synthesis of Alpha2/Alpha3 GABA Agonists to Treat Neuropathic Pain*", sponsored by NIH/NINDS, awarding organization is Federal, \$1,825,274.00, **funded**. (January 2013 – December (2017).
5. Cook J.M., (PI), Arnold, A. (Co-PI), "*Development and validation of a GABA_A agonist to control airway hyperresponsiveness and inflammation in asthma*" sponsored by American Asthma Foundation, awarding organization is national, \$750,000.00, **not funded**. (July 2012 – June 2015).
6. Arnold, A. (PI), Target Development Grant, "*Vitamin D receptor-coregulator inhibitors as novel chemotherapeutics for highly resistance ovarian and prostate cancer*" TPP global development, awarding organization is international, coverage of commercialization with shared revenue, **not funded**. (May 2012).
7. Arnold, A. (PI), Grant (Shaw Award), "*3-Indolyl methanamines as new cancer treatments*" sponsored by Greater Milwaukee Foundation, awarding organization is local, \$200,000.00, **not funded**. (May 2012-May 2017).
8. Cook J.M., (PI), Arnold, A. (Co-PI), "*Sub-type Selective GABA_A Agonists for PTSD*", sponsored by US Army Medical Research and Material Command (USAMRMC), awarding organization is University of Wisconsin-Milwaukee, \$1,000,000.00, **not funded**. (July 2012 – June 2014).
9. Arnold, A. (PI), Grant, "*Vitamin D Receptor-Coregulator interactions: A new pharmaceutical target for colorectal cancer*", sponsored by Department of Defense, awarding organization is University of Wisconsin-Milwaukee, \$293,013.00, **not funded**. (September 2012 – August 2014).

2011 (Total funding: \$110,140.00)

1. Arnold, A. (PI), Grant, "*Vitamin D Receptor-Coregulator Interactions as Anticancer Targets*", sponsored by Research Growth Initiative/Graduate School UWM, awarding organization is University of Wisconsin-Milwaukee, \$90,140.00, **Funded**. (July 2012 - June 2013).
2. Cook J.M. (PI), Arnold, A. (Co-PI), Grant R01, "*Design of New Therapeutic Agents to Treat Schizophrenia*", sponsored by NIH/NIMH, awarding organization is Federal, \$1,838,816.00, **not funded** (June 2011 - May 2016).

3. Arnold Cook J.M. (PI), Arnold, A. (Co-PI), Grant R01, "*Synthesis of Alpha2/Alpha3 GABA Agonists to Treat Neuropathic Pain*", sponsored by NIH/NIMH, awarding organization is Federal, \$ 1,838,816.00, **not Funded**. (June 2011 - May 2016).
4. Arnold, A. (PI), Sponsored Research, "*Special RFP for new or enhanced Undergraduate Research*", sponsored by Office of Undergraduate Research, awarding organization is University of Wisconsin-Milwaukee, \$20,000.00, **Funded**. (July 2011 - August 2011).
5. Arnold, A. (PI), Grant (Shaw Award), "*Transcriptional inhibitors of 24-hydroxylase as new treatments for cancer*" sponsored by Greater Milwaukee Foundation, awarding organization is local, \$200,000.00, **not Funded**. (May 2011-May 2016).
6. Arnold, A. (PI), Grant R01, "*Vitamin D Receptor–Coregulator Interactions as Targets for New Therapeutics*", sponsored by NIH, awarding organization is Federal, \$364,294.00, **not Funded**. (July 2011 - June 2013).

2010 (Total funding: \$114,418.00)

1. Cook J.M. (PI), Arnold, A. (Co-PI), Subcontract for R01, "*Design and Synthesis of Anxiolytics*", sponsored by NIH/NIMH, awarding organization is Federal, \$106,918.00, **Funded**. (June 2010 - May 2011).
2. Sem D.S. (PI), Arnold, A. (Supporting), Instrumentation Grant, "*Acquisition of an LC-MS/MS system for chemical and proteomic studies*", sponsored by NSF, awarding organization is Federal, \$279,818.00, **not Funded**. (December 2010 - November 2011).
3. Arnold, A. (PI), Sponsored Research, "*Research Fellows Program*", sponsored by UWM Foundation, awarding organization is University of Wisconsin-Milwaukee, \$7,500.00, **Funded**. (February 2011 - January 2012).
4. Arnold, A. (PI), Grant RGI, "*New Treatments for Sarcoidosis based on Vitamin D Receptor-Coactivator Inhibition*", sponsored by Research Growth Initiative/Graduate School, awarding organization is University of Wisconsin-Milwaukee, \$84,395.00, **not Funded**. (July 2011 - June 2012).

2009 (Total funding: \$1,761,100.00)

1. Arnold, A. (PI), Grant R03, "*Small molecule inhibitors of the vitamin D receptor-coactivator interaction*", sponsored by NIH/NIDA, awarding organization is Federal, \$73,850.00, **Funded** (July 2010 - June 2012).
2. Bikle, D.D. (PI), Arnold, A. (Supporting); Grant R01, renewal, "*Vitamin D Receptor Coactivators in Keratinocytes*", sponsored by NIH/NIAMS, awarding organization is Federal, \$1,667,250.00, **Funded** (July 2010 - May 2015).
3. Arnold, A. (PI), Grant RGI, "*Small Molecule Inhibitors of Vitamin D Receptor-Coregulator Interactions*", sponsored by Research Growth Initiative/Graduate School UWM, awarding organization is University of Wisconsin-Milwaukee, \$192,482.00, **not Funded**. (July 2010 - June 2011).
4. Arnold, A. (PI), Sponsored Research, "*Special RFP for new or enhanced Undergraduate Research*", sponsored by Office of Undergraduate Research, awarding organization is University of Wisconsin-Milwaukee, \$20,000.00, **Funded**. (October 2009 - August 2010).

Before UWM: (Total funding: \$5,922,092.00)

1. Feau C. (PI), Arnold A. (Supporting), Grant "*Novel Small Molecule Antagonists of the Interaction of the Androgen Receptor and Transcriptional Co-regulators*", sponsored by the Department of Defense, awarding organization is Federal, \$113,797.00, **Funded**. (January 2007-Dec 2008).
2. Arnold A. (PI), Grant, "*Development of a new class of drugs against cancer*", sponsored by the Cancer Research Fund of the Damon Runyon Walter Winchell Foundation, awarding organization is private, 128,500.00, **not Funded**. (August 2003 – July 2006)
3. Guy, R.K. (PI), Arnold, A. (Supporting), Grant, "*Novel inhibitors of nuclear receptor function*", sponsored by NIH/NIDDK, awarding organization is Federal, \$3,152,295.00, **Funded**. (January 2000 – December 2011).
4. Arnold, A. (Supporting), Grant, "*Economy-Ecology-Technology*", sponsored by Dutch Ministry of Economic Affairs, awarding organization is Federal, \$2,500,000.00, **Funded**. (June 2000 – May 2004).
5. Arnold, A. (PI), Fellowship, "*Ubbo Emmius Ph.D. Scholarship*", sponsored by University of Groningen, awarding organization is national, \$150,000.00, **Funded**. (August 1998 – July 2002).
6. Arnold, A. (PI), Fellowship, "*ERASMUS fellowship*", sponsored by Deutscher Akademische Austausch Dienst, awarding organization is Federal, \$6,000.00, **Funded**. (May 1995- April 1996).

Student SURF awards: (total funding: \$99,030.00)

2018 (Total funding: \$11,330.00)

1. Arnold, A. (PI), Mikulsky, B. (Undergraduate Student) Sponsored Research, “*Determining the Mechanisms of Neuropathic Pain*”, sponsored by Office of Undergraduate Research, awarding organization is University of Wisconsin-Milwaukee, \$3,300.00, Funded. (**June 2018 – August 2018**).
2. Arnold, A. (PI), Stepanski, M. (Undergraduate Student) Sponsored Research, “*Safety studies with MIDD0301 in vivo*”, sponsored by Office of Undergraduate Research, awarding organization is University of Wisconsin-Milwaukee, \$2,750.00, Funded. (**June 2018 – August 2018**).
3. Arnold, A. (PI), Huber, A. (Undergraduate Student) Sponsored Research, “*Investigation of CNS effects of novel imidazobenzodiazepines*”, sponsored by Office of Undergraduate Research, awarding organization is University of Wisconsin-Milwaukee, \$2,640.00, Funded. (**June 2018 – August 2018**).
4. Arnold, A. (PI), Schussman, M. (Undergraduate Student) Sponsored Research, “*Characterization of novel imidazobenzodiazepines in respect to CNS effects*”, sponsored by Office of Undergraduate Research, awarding organization is University of Wisconsin-Milwaukee, \$2,640.00, Funded. (**January 2018 – May 2018**).

2017 (Total funding: \$11,800.00)

1. Arnold, A. (PI), Huber, A. (Undergraduate Student) Sponsored Research, “*Investigation of CNS effects of novel imidazobenzodiazepines*”, sponsored by Office of Undergraduate Research, awarding organization is University of Wisconsin-Milwaukee, \$2,600.00, Funded. (**June 2017 – August 2017**).
2. Arnold, A. (PI), Gould, J. (Undergraduate Student) Sponsored Research, “*Synthesis of new pepsin inhibitors*”, sponsored by Office of Undergraduate Research, awarding organization is University of Wisconsin-Milwaukee, \$2,600.00, Funded. (**June 2017 – August 2017**).
3. Arnold, A. (PI), Ebben, A. (Undergraduate Student) Sponsored Research, “*Synthesis of calcitroic acid and its metabolic products*”, sponsored by Office of Undergraduate Research, awarding organization is University of Wisconsin-Milwaukee, \$2,600.00, Funded. (**June 2017 – August 2017**).
4. Arnold, A. (PI), Ebben, A. (Undergraduate Student) Sponsored Research, “*Synthesis of calcitroic acid analogs*”, sponsored by Office of Undergraduate Research, awarding organization is University of Wisconsin-Milwaukee, \$2,000.00, Funded. (**January 2017 – May 2017**).
5. Arnold, A. (PI), Senych, V. (Undergraduate Student) Sponsored Research, “*Cell-based analysis of calcitroic acid*”, sponsored by Office of Undergraduate Research, awarding organization is University of Wisconsin-Milwaukee, \$2,000.00, Funded. (**January 2017 – May 2017**).

2016 (Total funding: \$8,700.00)

1. Arnold, A. (PI), Benjamin Hartzler (undergraduate student), Sponsored Research, “*Expression of GABA_AR subunits on stable cells using flow cytometry*” awarding organization is University of Wisconsin-Milwaukee, \$2,400.00, Funded. (**September 2016 – December 2016**).
2. Arnold, A. (PI), Senych, V. (Undergraduate Student) Sponsored Research, “*Synthesis of calcitriol and analogs*”, sponsored by Office of Undergraduate Research, awarding organization is University of Wisconsin-Milwaukee, \$3,600.00, Funded. (**June 2016 – August 2016**).
3. Arnold, A. (PI), Radde, L. (Undergraduate Student) Sponsored Research, “*Development of new protease assays to detect novel pepsin inhibitors*”, sponsored by Office of Undergraduate Research, awarding organization is University of Wisconsin-Milwaukee, \$2,700.00, Funded. (**June 2016 – August 2016**).

2015 (Total funding: \$16,600.00)

1. Arnold, A. (PI), Stangl, C. (Undergraduate Student) Sponsored Research, “*Synthesis of new vitamin D receptor–SRC2 inhibitors*”, sponsored by Office of Undergraduate Research, awarding organization is University of Wisconsin-Milwaukee, \$1,500.00, Funded. (**September 2015 – December 2015**).

2. Arnold, A. (PI), Scuncio, G. (Undergraduate Student) Sponsored Research, “*Development of new protease assays to detect novel pepsin inhibitors*”, sponsored by Office of Undergraduate Research, awarding organization is University of Wisconsin-Milwaukee, \$1,500.00, Funded. **(September 2015 – December 2015)**.
3. Arnold, A. (PI), Stangl, C. (Undergraduate Student) Sponsored Research, “*Synthesis of new vitamin D receptor–SRC2 inhibitors*”, sponsored by Office of Undergraduate Research, awarding organization is University of Wisconsin-Milwaukee, \$3,000.00, Funded. **(June 2015 – August 2015)**.
4. Arnold, A. (PI), Scuncio, G. (Undergraduate Student) Sponsored Research, “*Development of new protease assays to detect novel pepsin inhibitors*”, sponsored by Office of Undergraduate Research, awarding organization is University of Wisconsin-Milwaukee, \$1,600.00, Funded. **(June 2015 – August 2015)**.
5. Arnold, A. (PI), Sanchez, L. (Undergraduate Student) Sponsored Research, “*The Synthesis of metabolic lithocholic acid derivatives and evaluation of their Vitamin D Receptor binding*”, sponsored by Office of Undergraduate Research, awarding organization is University of Wisconsin-Milwaukee, \$3,000.00, Funded. **(January 2015 – May 2015)**.
6. Arnold, A. (PI), Goetz, C. (Undergraduate Student) Sponsored Research, “*A high throughput assay to identify novel therapeutics for laryngopharyngeal reflux disease (LPRD)*”, sponsored by Office of Undergraduate Research, awarding organization is University of Wisconsin-Milwaukee, \$3,000.00, Funded. **(January 2015 – May 2015)**.
7. Arnold, A. (PI), Scuncio, G. (Undergraduate Student) Sponsored Research, “*Development of new protease assays to detect novel pepsin inhibitors.*”, sponsored by Office of Undergraduate Research, awarding organization is University of Wisconsin-Milwaukee, \$3,000.00, Funded. **(January 2015 – May 2015)**.

2014 (Total funding: \$23,600.00)

1. Arnold, A. (PI), Sanchez, L. (Undergraduate Student) Sponsored Research “*Synthesis of VDR-coregulator Inhibitors*”, sponsored by Office of Undergraduate Research, awarding organization is University of Wisconsin-Milwaukee, \$3,000.00, Funded. **(September 2014 – December 2014)**.
2. Arnold, A. (PI), Preston J. (Undergraduate Student) Sponsored Research, “*Development of a stable cell line for nuclear receptor research*”, sponsored by Office of Undergraduate Research, awarding organization is University of Wisconsin-Milwaukee, \$3,000.00, Funded. **(May 2014 – August 2014)**.
3. Arnold, A. (PI), Chris Goetz (Undergraduate Student) Sponsored Research, “*Identification of novel therapeutics for laryngopharyngeal reflux disease (LPRD)*”, sponsored by Office of Undergraduate Research, awarding organization is University of Wisconsin-Milwaukee, \$3,000.00, Funded. **(May 2014 – August 2014)**.
4. Arnold, A. (PI), Skylar Gabel-Eissens (Undergraduate Student) Sponsored Research, “*Synthesis of VDR-Coregulator inhibitors*”, sponsored by Office of Undergraduate Research, awarding organization is University of Wisconsin-Whitewater \$3,600.00, Funded. **(May 2014 – August 2014)**.
5. Arnold, A. (PI), Sanchez, L. (Undergraduate Student) Sponsored Research, “*Synthesis of VDR-coregulator Inhibitors*”, sponsored by Office of Undergraduate Research, awarding organization is University of Wisconsin-Milwaukee, \$3,000.00, Funded. **(May 2014 – August 2014)**.
6. Arnold, A. (PI), Preston J. (Undergraduate Student) Sponsored Research, “*Sequence Verification of Nuclear Receptor Plasmids for Ligand-mediated Transcription Assays*”, sponsored by Office of Undergraduate Research, awarding organization is University of Wisconsin-Milwaukee, \$2,000.00, Funded. **(January 2014 – May 2014)**.
7. Arnold, A. (PI), Bogart J. (Undergraduate Student) Sponsored Research, “*Synthesis and characterization of VDR-coregulator inhibitors*”, sponsored by Office of Undergraduate Research, awarding organization is University of Wisconsin-Milwaukee, \$2,000.00, Funded. **(January 2014 – May 2014)**.
8. Arnold, A. (PI), Goy R. (Undergraduate Student) Sponsored Research, “*Expression and Purification of the ER receptor to validate vitamin D receptor coregulator binding inhibitors*”, sponsored by Office of Undergraduate Research, awarding organization is University of Wisconsin-Milwaukee, \$2,000.00, Funded. **(January 2014 – May 2014)**.
9. Arnold, A. (PI), Sanchez, L. (Undergraduate Student) Sponsored Research, “*Synthesis of VDR-coregulator Inhibitors*”, sponsored by Office of Undergraduate Research, awarding organization is University of Wisconsin-Milwaukee, \$2,000.00, Funded. **(January 2014 – May 2014)**.

2013 (Total funding: \$17,000.00)

1. Arnold, A. (PI), Preston J. (Undergraduate Student) Sponsored Research, "*Gene Sequencing of Nuclear Receptors in pBind Plasmids*", sponsored by Office of Undergraduate Research, awarding organization is University of Wisconsin-Milwaukee, \$2,000.00, Funded. (**September 2013 – December 2013**).
2. Arnold, A. (PI), Bogart J. (Undergraduate Student) Sponsored Research, "*Synthesis of VDR-coactivator inhibitors based on the GW0742 scaffold*", sponsored by Office of Undergraduate Research, awarding organization is University of Wisconsin-Milwaukee, \$2,000.00, Funded. (**September 2013 – December 2013**).
3. Arnold, A. (PI), Goy R. (Undergraduate Student) Sponsored Research, "*Expression and Purification of the ER receptor to validate vitamin D receptor coregulator binding inhibitors*", sponsored by Office of Undergraduate Research, awarding organization is University of Wisconsin-Milwaukee, \$2,000.00, Funded. (**September 2013 – December 2013**).
4. Arnold, A. (PI), Preston J. (Undergraduate Student) Sponsored Research, "*Sequencing of nuclear receptor vectors to establish a plasmid data base*", sponsored by Office of Undergraduate Research, awarding organization is University of Wisconsin-Milwaukee, \$3,000.00, Funded. (**June 2013 – August 2013**).
5. Arnold, A. (PI), Bogart J. (Undergraduate Student) Sponsored Research, "*Synthesis of VDR-coactivator inhibitors based on the GW0742 scaffold*", sponsored by Office of Undergraduate Research, awarding organization is University of Wisconsin-Milwaukee, \$3,000.00, Funded. (**June 2013 – August 2013**).
6. Arnold, A. (PI), Goy R. (Undergraduate Student) Sponsored Research, "*Expression and purification of RXR protein*", sponsored by Office of Undergraduate Research, awarding organization is University of Wisconsin-Milwaukee, \$3,000.00, Funded. (**June 2013 – August 2013**).
7. Arnold, A. (PI), Nassif N. (Undergraduate Student) Sponsored Research, "*Evaluation of novel small molecule modulators of nuclear receptor mediated transcription*", sponsored by Office of Undergraduate Research, awarding organization is University of Wisconsin-Milwaukee, \$2,000.00, Funded. (**January 2013 - May 2013**).

2012(Total funding: \$4,000.00)

1. Arnold, A. (PI), Goy R. (Undergraduate Student) Sponsored Research, "*Expression and purification of RXR protein*", sponsored by Office of Undergraduate Research, awarding organization is University of Wisconsin-Milwaukee, \$2,000.00, Funded. (**June 2012 - August 2012**).
2. Arnold, A. (PI), Temmer J. (Undergraduate Student) Sponsored Research, "*Synthesis of a fluorescent probe to identify promiscuous inhibitors*", sponsored by Office of Undergraduate Research, awarding organization is University of Wisconsin-Milwaukee, \$2,000.00, Funded. (**June 2012 - August 2012**).

2011 (Total funding: \$4,000.00)

1. Arnold, A. (PI), Yuan N. (Undergraduate Student) Sponsored Research, "*Development of an automated patch-clamp assay for GABA_A receptor subtype-selective modulators*", sponsored by Office of Undergraduate Research, awarding organization is University of Wisconsin-Milwaukee, \$2,000.00, Funded. (**July 2011 – August 2011**).
2. Arnold, A. (PI), Yuan N. (Undergraduate Student) Sponsored Research, "*An automated subtype-selective GABA_A receptor patch-clamp assay using transient transfected HEK293T cells*", sponsored by Office of Undergraduate Research, awarding organization is University of Wisconsin-Milwaukee, \$2,000.00, Funded. (**February 2011 - May 2011**).

2010 (Total funding: \$2,000.00)

1. Arnold, A. (PI), Yuan N. (Undergraduate Student) Sponsored Research, "*Binding Studies on Vitamin D Receptor—Coregulator Binding Inhibitors*", sponsored by Office of Undergraduate Research, awarding organization is University of Wisconsin-Milwaukee, \$2,000.00, Funded. (**May 2010 - August 2010**).