March 2017

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Professor
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EDUCATION AND POSTDOCTORAL TRAINING

2013	Visiting Scholar, Sabbatical in protein NMR methods, Laboratory of Thomas Pochapsky, Department of Chemistry, Brandeis University
1999 – 2004	Postdoctoral Fellow, Department of Pharmacology and Toxicology, University of Texas Medical Branch, Galveston, TX; Mentor: James R. Halpert
1998 – 1999	Postdoctoral Fellow, Department of Biochemistry and Cell Biology, Rice University, Houston, TX; Mentors: John S. Olson, Quentin H. Gibson
1998	Ph.D., Department of Biochemistry and Cell Biology, Rice University, Houston, TX; Mentors: John S. Olson, Quentin H. Gibson
1992	B.S., Department of Marine Biology, Texas A&M University at Galveston, Galveston, TX; Mentor: Dr. Donald A. Harper

ACADEMIC APPOINTMENTS

2016 –	Professor, Department of Medicinal Chemistry, University of Michigan, Ann Arbor, MI
2016 –	Professor, Department of Pharmacology, University of Michigan Medical Center, Ann Arbor, MI
2016 –	Affiliate Professor, Biophysics Program, University of Michigan, Ann Arbor, MI
2015 – 2016	Professor, Department of Medicinal Chemistry, University of Kansas, Lawrence, KS
2010 – 2015	Associate Professor, Department of Medicinal Chemistry, University of Kansas, Lawrence, KS
2008 – 2016	Courtesy Faculty, Department of Chemistry, University of Kansas, Lawrence, KS
2007 – 2016	Affiliate Faculty, Department of Molecular Biosciences, University of Kansas, Lawrence, KS
2004 – 2010	Assistant Professor, Department of Medicinal Chemistry, University of Kansas, Lawrence, KS

FELLOWSHIPS, HONORS, AND AWARDS

2015	MERIT Award, National Institutes of Health/NIGMS
2012	North American New Investigator Award in honor of James R. Gillette, The International Society for the Study of Xenobiotics
2011	Early Career Achievement Award, Drug Metabolism Division, American Society for Pharmacology and Experimental Therapeutics
2009	James R. Gillette Drug Metabolism Best Paper of 2009 in *Drug Metabolism and Disposition*
2007	Travel Award to attend Experimental Biology and Microsomes and Drug Oxidations Meetings, University of Kansas Cancer Center
2006	1st place Award, 5th Southwest P450 Meeting, Poster Presentation
2003	Postdoctoral Scientist Award, Drug Metabolism Division, American Society for Pharmacology and Experimental Therapeutics Annual Meeting
2003	Young Scientist Travel Award, American Society for Pharmacology and Experimental Therapeutics Annual Meeting

2000 – 2003	Ruth L. Kirschstein National Research Service Award (NRSA) Postdoctoral Fellowship, National Institutes of Health
1996 – 1998	NIH Training Grant Fellow, Houston Area Molecular Biophysics Predoctoral Fellowship

PROFESSIONAL SCIENTIFIC ACTIVITIES

Professional Associations

Comprehensive Cancer Center, University of Michigan	2016 – present
American Association for the Advancement of Science	2013 – present
American Chemical Society	2009 – present
Drug Discovery, Delivery & Experimental Therapeutics Research Program, University of Kansas Cancer Center	2006 – 2016
International Society for the Study of Xenobiotics	2006 – present
American Society for Pharmacology and Experimental Therapeutics	2002 – present
American Society for Biochemistry and Molecular Biology	2000 – present

Grant Peer Review

National Institutes of Health, COBRE program	2017
National Institutes of Health, Regular reviewer for MSFA	2012 – 2016
Marsden Fund, New Zealand	2015
Worldwide Cancer Research/American Institute for Cancer Research	2014
COBRE Center in Structural Biology, University of Oklahoma	2013
National Institutes of Health, Ad hoc reviewer for XNDA, MSFA	2011
National Science Foundation, Ad hoc reviewer	2011
COBRE Center for Biomolecular Structure and Dynamics, University of Montana	2011

Editorial Boards

ASPET Board of Publications Trustees	2016 – present
Journal of Biological Chemistry	2013 – present
Drug Metabolism Reviews	2012 – present
Drug Metabolism & Disposition	2012 – present
Faculty of 1000, Pharmacology and Drug Discovery, Toxicology	2011 – 2016
Toxicology and Applied Pharmacology	2012 – 2014
Pharmacological Reviews	2010 – 2014

Ad hoc Peer Review for Additional Journals (not listed above)

General:	*Nature, Proceedings of the National Academy of Science, Nature Protocols, Nature Scientific Reports*
Medicinal Chemistry:	*Journal of Medicinal Chemistry, Bioorganic & Medicinal Chemistry Letters*
Chemistry	*Journal of the American Chemical Society*
Biochemistry:	*Biochemistry, Archives of Biochemistry and Biophysics, Protein and Peptide Letters, Chemico-Biological Interactions, Proteins, Journal of Biological Inorganic Chemistry, Journal of Inorganic Biochemistry, Biochemistry et Biophysica Acta, Steroid Biochemistry and Molecular Biology*
Pharmacology/Toxicology:	*Molecular Pharmacology, Chemical Research in Toxicology, Jounal of Pharmacology and Experimental Therapeutics*
Structural/Computational Biology:	*Acta Crystallographica, Journal of Chemical Theory and Computation*

Consulting

Genentech, South San Francisco	2015 – present
Pfizer, Inc., St. Louis, MO	2008, 2009
Theravance, Inc., South San Francisco, CA	2007
Boehringer-Ingelheim, Ridgefield, CT	2013

RESEARCH SUPPORT (Peer Reviewed Only)

Current

R37 (MERIT) GM076343 (E. E. Scott, PI) 03/01/15 – 2/28/20
Agency: National Institutes of Health/National Institute of General Medical Sciences
Title: Structural Basis of Cytochrome P450 Activity
Summary: The objective of this proposal is to extend our structural knowledge across current boundaries by determining the first structures of several human cytochrome P450 enzymes of clinical utility, examining clinically-important new P450/ligand complexes, and probing the structural relationships between cytochrome P450 enzymes and other proteins involved in catalysis.
Current status: The second renewal of this R01 was selected for NIH MERIT (R37: Method to Extend Research In Time) Award in June 2015.

P41 RR001209
2B40, 3B60, 5B12 (E. E. Scott, Subproject PI) 5/31/08 – 5/31/18
Agency: National Institutes of Health/Stanford Synchrotron Radiation Laboratory
Title: Structures of Membrane Cytochrome P450 Enzymes
Summary: Each renewal provides 2-years of access to a Department of Energy synchrotron facility for X-ray crystallography data collection.
Current status: Previously reviewed and renewed four times.

R01 GM102505 (E. E. Scott and J. Aubé, co-PI) 7/1/12 – 3/31/17
Agency: National Institutes of Health/National Institutes of General Medical Sciences
Title: Structure and Function of Cytochrome P450 17A1
Summary: The objective of this proposal is to understand the mechanisms controlling the multifunctional reactions of cytochrome P450 17A1 through convergent structural, synthetic, and functional approaches.
Current status: In initial funding period.

R01 GM123253 (W. Backes, PI; E. E. Scott, co-I) 3/1/2017 – 2/28/21
Agency: National Institutes of Health/National Institutes of General Medical Sciences
Title: Interactions among P450 System Proteins and their Distribution into Endoplasmic Reticulum Microdomains
Summary: The objective of this proposal is to better understand how the proteins of the P450 monooxygenase system are organized in the ER and the role of P450-P450 interactions on the function of these enzymes.
Current status: In initial funding period.

Completed

P30 GM110761-01 (R. P. Hanzlik, PI) 08/01/14 – 06/30/19
Agency: National Institutes of Health/National Institutes of General Medical Sciences
Title: Protein Structure and Function
Objective: The objective is to continue to grow a critical mass of investigators focused on protein structure and function among four Kansas campuses by supporting small projects and core laboratories.
Role: E. E. Scott served a) on the administrative Leadership Committee with specific responsibilities for the Writing Program, b) as Chair of the Protein Structure Lab Steering Committee, and c) as mentor for a junior faculty pilot project. Grant continues, but E. E. Scott changed institutions in August 2016.

R01 GM076343 (E. E. Scott, PI) 03/01/11 – 2/28/15
Agency: National Institutes of Health/National Institute of General Medical Sciences
Title: Structural Basis of Cytochrome P450 Activity
Summary: The objective of this proposal was to expand, test, and apply our understanding of the unique relationships between the structures of human cytochrome P450 2A and 2E enzymes and their ligand selectivity. Renewed as current R37 grant listed above.

66296 (E. E. Scott, PI) 2/15/10 – 6/30/13
Agency: Institute for Advancing Medical Innovation
Title: Advancement of compounds targeting human lung cytochrome P450 2A13 for the prevention of nicotine-associated lung cancer
Summary: These studies characterized the solubility, toxicity, metabolic stability, and preliminary pharmacokinetics of benzylmorpholine compounds selective for inhibition of cytochrome P450 2A13.

68944 (E. E. Scott, PI) 12/1/11 – 11/30/12
Agency: University of Kansas Cancer Center
Title: Inhibitors of Cytochrome P450 17A1 to Treat Metastatic Prostate Cancer
Summary: This proposal supported characterization of the structure and function of CYP17A1 with substrates and current inhibitors and the use of this information to design new drugs for metastatic castration resistant prostate cancer with improved efficacy and selectivity.

P20 RR017708 (R. P. Hanzlik, COBRE PI) 4/1/10 – 3/31/12
50342, 50454 (E. E. Scott, subproject PI)
Agency: National Institutes of Health/National Center for Research Resources
Title: Structure and Function of CYP17A1, Critical Enzyme in Human Androgen Biosynthesis
Summary: The structure of a CYP17A1/inhibitor complex was determined to characterize how cytochrome P450 17A1 interacts with inhibitors then in clinical trials for prostate cancer and to provide a basis for improving these compounds.

GM076343-04S1 (E. E. Scott, PI) 7/17/09 – 12/31/10
Agency: National Institutes of Health/National Institute of General Medical Sciences
Title: Administrative Supplement to Structural Basis of Cytochrome P450 2A13 Activity
Summary: Application of solution NMR techniques to P450-ligand interactions.

R01 GM076343 (E. E. Scott, PI) 1/1/06 – 12/31/10
Agency: National Institutes of Health/National Institute of General Medical Sciences
Title: Structural Basis of Cytochrome P450 2A13 Activity
Summary: The objective of the proposed studies was to define unique relationships between the structure of human cytochrome P450 2A13 and its specific metabolic activities relative to its role in nicotine-derived procarcinogen activation and potential inhibition in preventing lung cancer.

2506011 (E. E. Scott, PI) 7/1/09 – 6/30/10
Agency: General Research Fund, Kansas University Center for Research
Title: Chemoprevention of tobacco-related lung cancer by selective inhibition of cytochrome P450 2A13
Summary: The objective was to characterize a family of compounds that inhibit cytochrome P450 2A13, but not cytochrome P450 2A6, to identify one or two of the best compounds toward a long-term goal of developing a compound that can be used as a chemopreventative in human smokers.

R01 GM079447 (PI: J. Limburg; E. E. Scott, Co-I) 5/1/07 – 5/1/10
Agency: National Institutes of Health/National Institute of General Medical Sciences
Title: Mechanism and Inhibition of Collagen Prolyl-4-hydroxylases
Summary: The objective was to elucidate the mechanism of peptidyl proline hydroxylation by both human and anthrax prolyl-4-hydroxylase. The role of E. E. Scott was as crystallographer to determine protein structures, one of the three specific aims.

R01 GM076343-04S2 (E. E. Scott, PI) 1/1/09-12/31/09 (*declined)*
Agency: National Institutes of Health/National Institute of General Medical Sciences
Title: Minority Supplement to Structural Basis of Cytochrome P450 2A13 Activity
Summary: Fund Pharm.D. student to apply solution NMR techniques to P450-ligand interactions.

No grant number. (E. E. Scott, PI) 6/09
Agency: Higuchi Biosciences Center
Title: Nanodrop 2000 UV-Vis Spectrophotometer
Summary: Provided 80% of instrument purchase price.

49610 (E. E. Scott, PI) 1/1/08 – 2/22/09
Agency: Kansas Masonic Research Institute
Title: Cytochrome P450 2A13 Inhibitors for Preventing Nicotine-Induced Lung Cancer
Summary: The objective of the proposed studies was to identify compounds that selectively inhibit cytochrome P450 2A13, but not cytochrome P450 2A6.

2302006 (E. E. Scott, PI) 2/14/06 – 3/21/08
Agency: New Faculty General Research Fund, Kansas University Center for Research
Title: Crystallization of Cytochrome P450 2E1 as Preliminary Data for NIH R01 Application
Summary: The proposal funded part of a postdoctoral fellow to initiate crystallization trials of a new protein under study in the laboratory.

P20 RR017708 (R.P. Hanzlik, COBRE PI)
31218, 31219, and 31220 (E. E. Scott, Subproject PI) 7/1/04 – 6/30/07
Agency: National Institutes of Health/National Center for Research Resources
Subproject Title: Structure-Function of Cytochrome P450 2A and 2E Enzymes.
Summary: The goal was to elucidate the structural basis for the differing but overlapping substrate specificities of the human xenobiotic-metabolizing cytochrome P450 2A and 2E enzymes.

No grant number. (E. E. Scott, PI) 2/2/06
Agency: Higuchi Biosciences Center.
Title: AKTA Purifier Purification System
Summary: Provided ~50% of instrument purchase price.

PUBLICATIONS

Research Publications (corresponding author underlined)

1. Petrunak, E.M., Rogers, S.A., Aubé, J., and Scott, E.E. (2017) Structural and functional evaluation of clinically relevant inhibitors of cytochrome P450 17A1 (CYP17A1). *Drug Metab. Dispos.* (*in press*).
2. Scott, E.E. (2017) ω versus ω-1 hydroxylation: Cytochrome P450 4B1 sterics make the call. *J. Biol. Chem.* 292:5622-5623.
3. Li, A., Yadav, R., White, J.K., Herroon, M.K., Callahan, B.P., Podgorski, I., Turro, C., Scott, E.E., and Kodanko, J.J. (2016) Illuminating cytochrome P450 binding: Ru(II)-caged inhibitors of CYP17A1. *Chem. Commun.* (*Camb.)* 53:3673-3676.
4. Yadav, R., Petrunak, E.M., Estrada, D.F., and Scott, E.E. (2016) Structural insights into the function of steroidogenic cytochrome P450 17A1. *Mol. Cell. Endocrinol.* 7207:30330-30336.
5. Bonomo, S., Hansen, C.H., Petrunak, E.M., Scott, E.E., Styrishave, B., Jorgensen, F. S., and Olsen, L. (2016) Promising tools in prostate cancer research: Selective non steroidal cytochrome P450 17A1 inhibitors. *Nat. Sci. Reports* 6:29468-29479.
6. Scott, E.E., Wolf, R.C., Otyepka, M., Humphreys, S.C., Reed, J.R., Henderson, C.J., McLaughlin, L.A., Paloncýová, M., Navrátilová, V., Berka, K., Anzenbacher, P., Dahal, U.P. Barnaba, C., Brozik, J.A., Jones, J.P., Estrada, D.F., Laurence, J.S., Park, J.W., and Backes, W.L. (2016) The role of protein-protein and protein-membrane interactions on P450 function. *Drug. Metab. Dispos.* 44: 576-590.
7. Estrada, D.F., Laurence, J.S., and Scott, E.E. (2015) Cytochrome P450 17A1 interactions with the FMN domain of its reductase as characterized by NMR. *J. Biol. Chem.* 291:3390-4003.
8. Petrunak, E.M., DeVore, N.M., Porubsky, P.R., and Scott, E.E. (2014) Structures of human steroidogenic cytochrome P450 17A1 with substrates. *J. Biol. Chem.* 289: 32952-32964.
9. Estrada, D.F., Skinner, A.L., Laurence, J.S., and Scott, E.E. (2014) Human cytochrome P450 17A1 conformational selection: Modulation by ligand and cytochrome b_5. *J. Biol. Chem.* 289:14310-14320.
10. Johnson, E.F., Connick, J.P., Reed, J.R., Backes, W.L., Desai, M.C., Xu, L., Estrada, D.F., Laurence, J.S. and Scott, E.E. (2014) Correlating Structure and Function of Drug Metabolizing Enzymes: Progress and Ongoing Challenges. *Drug Metab. Dispos.* 42:9-22.
11. Estrada, D.F., Laurence, J.S., and Scott, E.E. (2013) Substrate-modulated cytochrome P450 17A1 and cytochrome b_5 interactions revealed by NMR. *J. Biol. Chem.* 288:17008-17018.
12. Blake, L.C., Roy, A., Neul, D., Schoenen, F.J., Aubé, J. and Scott, E.E. (2013) Benzylmorpholine analogs as selective inhibitors of lung cytochrome P450 2A13 for the chemoprevention of lung cancer in tobacco users. *Pharm. Res*. 30: 2290-2302.
13. Walsh, A.A., Szklarz, G.D. and Scott, E.E. (2013) Human cytochrome P450 1A1 structure and utility in understanding drug and xenobiotic metabolism. *J. Biol. Chem.* 288:12932-12943.
14. DeVore, N.M. and Scott, E.E. (2012) Nicotine and 4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone (NNK) binding and access channel in human cytochrome P450 2A6 and 2A13 enzymes. *J. Biol. Chem.* 287:26576-26585.
15. Stephens, E.S., Walsh, A.A., and Scott, E.E. (2012) Evaluation of inhibition selectivity for human cytochrome P450 2A enzymes. *Drug Metab. Dispos.* 40:1797-1802.
16. DeVore, N.M. and Scott, E.E. (2012) Cytochrome P450 17A1 structures with prostate cancer drugs abiraterone and TOK-001. *Nature* 482:116-119.
17. DeVore, N.M., Meneely, K.M., Bart, A.G., Stephens, E.S., Battaile, K.P., and Scott, E.E. (2012) Structural comparison of cytochromes P450 2A6, 2A13, and 2E1 with pilocarpine. *FEBS J.* 279:1621-1631.
18. Reed, T., Lushington, G.H., Xia, Y., Hirakawa, H., Mure, M., Scott, E.E., and Limburg, J. (2010) Crystal structure of histamine dehydrogenase from *Nocardioides simplex J. Biol. Chem.* 285:25782-25791.

19. Porubsky, P.R., Battaile, K.P., and Scott, E.E. (2010) Human cytochrome P450 2E1 structures with fatty acid analogs reveal unexpected binding mode *J. Biol. Chem.* 285:22282-22290.
20. Swanson, H.I., Njar, V.C.O., Yu, Z., Castro, D.J., Gonzalez, F.J., Williams, D.E., Huang, Y., Kong, A-N.T., Doloff, J.C., Ma, J., Waxman, D.J., and Scott, E.E. (2010) Targeting drug metabolizing enzymes for effective chemoprevention and chemotherapy. *Drug Metab. Dispos.* 38:539-544.
21. Culpepper, M.A., Scott, E.E., and Limburg, J. (2010) Crystal structure of prolyl 4-hydroxylase from *Bacillus anthracis*. Biochemistry 49:124-133.
22. DeVore, N.M., Smith, B.D., Wang, J.L., Lushington, G.H., and Scott, E.E. (2009) Key residues controlling binding of diverse ligands to human cytochrome P450 2A Enzymes. *Drug Metab. Dispos.* 37:1319-1327.
23. Porubsky, P.R., Meneely, K.M., and Scott, E.E. (2008) Structures of human cytochrome P450 2E1: Insights into the binding of inhibitors and both small molecular weight and fatty acid substrates. *J. Biol. Chem.* 283:33698-33707.
24. DeVore, N.M., Smith, B.D., Urban, M.J., and Scott, E.E. (2008) Key residues controlling phenacetin metabolism by human cytochrome P450 2A enzymes. *Drug Metab. Dispos.* 36:2582-2590.
25. Reed, T.M., Hirakawa, H., Mure, M., Scott, E.E., and Limburg, J. (2008) Expression, purification, crystallization and preliminary X-ray studies of histamine dehydrogenase from *Nocardioides simplex*. *Acta Crystallogr. F* 64:788-791.
26. Miller, M.A., Scott, E.E., and Limburg, J.L. (2008) Expression, purification, crystallization, and preliminary X-ray studies of prolyl-4-hydroxylase from *Bacillus anthracis*. *Acta Crystallogr. F* 64:785-787.
27. Porubsky, P.R., Scott, E.E., and Williams, T.D. (2008) *p*-Dimethylaminocinnamaldehyde derivatization for colorimetric detection and HPLC-UV/Vis-MS/MS identification of indoles. *Arch. Biochem. Biophys.* 475:14-17.
28. Schlicht, K.E., Michno, N., Smith, B.D., Scott, E.E., and Murphy, S.E. (2007) Functional characterization of CYP2A13 polymorphisms. *Xenobiotica.* 37:1439-1449.
29. Smith, B.D., Sanders, J.L., Porubsky, P.R., Lushington, G.H., Stout, C.D., and Scott, E.E. (2007) Structure of the human lung cytochrome P450 2A13. *J. Biol. Chem.* 282:17306-17313.
30. Scott E.E. and Halpert J.R. (2005) Structures of cytochrome P450 3A4. *Trends in Biochem. Sci.* 30:5-7.
31. Li W., Liu H., Scott E.E., Grater F., Halpert J.R., Luo X., Shen J., and Jiang H. (2005) Possible pathway(s) of testosterone egress from the active site of cytochrome P450 2B1: A steered molecular dynamics simulation. *Drug Metab Dispos.* 33:910-919.
32. Honma W., Li W., Liu H., Scott E.E., and Halpert J.R. (2005) Functional role of residues in the helix B' region of cytochrome P450 2B1. *Arch. Biochem. Biophys.* 435:157-165.
33. Scott E.E., White M.A., He Y.A., Johnson E.F., Stout C.D., and Halpert J.R. (2004) Structure of mammalian cytochrome P450 2B4 complexed with 4-(4-chlorophenyl)imidazole at 1.9 Å resolution: Insight into the range of P450 conformations and coordination of redox partner binding. *J. Biol. Chem.* 279:27294-27301.
34. Scott E.E., Liu H., He Y.Q, Li W., and Halpert J.R. (2004) Mutagenesis and molecular dynamics suggest structural and functional roles for residues in the N-terminal portion of the cytochrome P450 2B1 I helix. *Arch Biochem Biophys.* 423:266-276.
35. Scott E.E., He Y.A., Wester M.R., White M.A., Chin C.C., Halpert J.R., Johnson E.F., and Stout C.D. (2003) An open conformation of mammalian cytochrome P450 2B4 at 1.6 Å resolution, *Proc. Nat. Acad. Sci. U.S.A.* 100:13196-13201.
36. Kumar S., Scott E.E., Liu H., and Halpert J.R. (2003) A rational approach to re-engineer cytochrome P450 2B1 regioselectivity based on the crystal structure of P450 2C5. *J. Biol. Chem.* 278:17178-171784.

37. Scott E.E., He Y.Q., and Halpert J.R. (2002) Substrate routes to the buried active site may vary among cytochromes P450: Mutagenesis of the F-G region in P450 2B1. *Chem. Res. Tox.* 11:1407-1413.
38. Scott E.E., Spatzenegger M., and Halpert J.R. (2001) A truncation of 2B subfamily cytochromes P450 yields increased expression levels, increased solubility, and decreased aggregation while retaining function. *Arch. Biochem. Biophys.* 395:57-68.
39. Domanski T.L., He Y.Q., Scott E.E., Wang Q., and Halpert J.R. (2001) The role of cytochrome 2B1 substrate recognition site residues 115, 294, 297, 298, and 362 in the oxidation of steroids and 7-alkoxycoumarins. *Arch. Biochem. Biophys.* 394:21-28.
40. Scott E.E., Paster E.V., and Olson J.S. (2000) The stabilities of mammalian apomyoglobins vary over a 600-fold range and can be enhanced by comparative mutagenesis. *J. Biol. Chem.* 35:27129-27136.
41. Liong E.C., Dou Y., Scott E.E., Olson J.S., and Phillips Jr. G.N. (2000) Water-proofing the heme pocket: role of proximal amino acid side chains in preventing hemin loss from myoglobin. *J. Biol. Chem.* 276:9093-9100.
42. Scott E.E., Gibson Q.H., and Olson J.S. (2000) Mapping pathways for ligand entry into and exit from myoglobin. *J. Biol. Chem.* 276:5177-5188.
43. Krzywda S., Murshudov G.N., Brzozowski A.M., Jaskolski M., Scott E.E., Klizas S.A., Gibson Q.H., Olson J.S., and Wilkinson A.J. (1998) Stabilizing bound O_2 in myoglobin by valine 68 (E11) to asparagine substitution. *Biochemistry* 37:15896-15907.
44. Scott E.E. and Gibson Q.H. (1997) Ligand migration in sperm whale myoglobin. *Biochemistry* 36:11909-11917.

U.S. Patents

US8598165 Morpholines as Selective Inhibitors of Cytochrome P450 2A13 (2007)
US9611270 Novel prodrugs of C17-heteroaryl steroidal CYP17 inhibitors/antiandrogens: Synthesis, in vitro biological activities, pharmacokinetics and antitumor activity

PRESENTATIONS

Invited Presentations at Meetings

1. Great Lakes Drug Metabolism Discussion Group, Kalamazoo, MI (2017) Cytochrome P450 3A7: Fetal vs. adult drug metabolism
2. 21st International Symposium on Microsomes and Drug Oxidations, Davis, CA (2016) Crystallography and NMR inputs for understanding CYP17A1
3. Frontiers in Biomedical Research, Center for Protease Research, North Dakota State University, Fargo, ND (2016) Inhibition of cytochrome P450 17A1 for prostate cancer
4. 17th Adrenal Cortex Conference, Boston, MA (2016) Structure and function of cytochrome P450 17A1
5. Metals in Biology, RIKEN Symposium, Wako, Japan (2015) Cytochromes P450 17A1 and 21A2: Selective drug design
6. 19th International Conference on Cytochromes P450, Tokyo, Japan (2015) Structure, function, and inhibition of steroidogenic human cytochrome P450 17A1
7. Delaware Valley Drug Metabolism Discussion Group, Langhorne, PA (2015) Human cytochrome P450 structure and function: Past, present and future (?) evolution
8. Experimental Biology, ASPET Session “Role of protein-protein and protein-membrane interactions on P450 function”, Boston, MA (2015) Human cytochrome P450 interactions with catalytic partners
9. Gordon Research Conference on Drug Metabolism, Holderness, New Hampshire (2014) Cytochrome P450 conformations and protein/protein interactions

10. 20th International Symposium on Microsomes and Drug Oxidations, Stuttgart, Germany (2014) Human cytochrome P450 conformations
11. 10th International Society for the Study of Xenobiotics Meeting, Toronto, Canada (2013) Inhibition of cytochrome P450 17A1: Targeting androgen production in prostate cancer
12. 16th International Conference on Drug-Drug Interactions, Seattle, WA (2013) Human CYP promiscuity: Insights from structural biology
13. 18th International Conference on Cytochromes P450: Biochemistry, Biophysics, and Biotechnology, Seattle, WA (2013) Cytochrome P450 17A1: Interactions with substrates and cytochrome b_5
14. Central Region IDeA Conference, Kansas City, MO (2013) Structure and function of cytochrome P450 17A1: Prostate cancer drug target
15. 1st Annual Symposium on Structural Biology, Oklahoma Center of Biomedical Research Excellence in Structural Biology, The University of Oklahoma, Norman, OK (2013) Structure and function of cytochrome P450 17A1: Prostate cancer drug target
16. Experimental Biology, ASPET Session "Correlating Structure and Function of Drug Metabolizing Enzymes: An Ongoing Challenge", Boston, MA (2013) Investigations of human cytochrome P450 enzymes with solution NMR
17. 245th American Chemical Society National Meeting, Young Investigators Symposium, New Orleans, LA (2013) Structure and function of cytochrome P450 17A1: Drug target for metastatic prostate cancer
18. 18th North American International Society for the Study of Xenobiotics Annual Meeting, Dallas, TX (2012) Control of cytochrome P450 17A1 androgen synthesis
19. 18th North American International Society for the Study of Xenobiotics Annual Meeting, Dallas, TX (2012) Adventures in cytochrome P450 structures, award lecture
20. Gordon Research Conference on Drug Metabolism, Holderness, New Hampshire (2012) Human cytochrome P450 active site adaptations to ligand structure - Within and between enzymes
21. 19th Microsomes and Drug Oxidations and 12th European International Society for the Study of Xenobiotics Joint Meeting, Noordwijk aan Zee, the Netherlands (2012) New cytochrome P450 structures in prediction of drug and procarcinogen metabolism
22. 17th International Conference on Cytochrome P450, Manchester, UK (2011) Cytochrome P450 17A1: Androgen biosynthesis and prostate cancer target
23. ASPET Drug Metabolism Division Early Career Achievement Award Lecture, Experimental Biology, Washington D.C. (2011) (CYP)2B or not 2B: That is the question
24. 18th International Symposium on Microsomes and Drug Oxidations, Beijing, China (2010) Structural insights into human CYP2A function and inhibition
25. Midwest Enzyme Chemistry Conference, Chicago, IL (2009) Selective inhibition of Cytochrome P450 2A13 to reduce lung cancer in smokers
26. 16th International Conference on Cytochrome P450, Okinawa, Japan (2009) Structures of human cytochrome P450 2E1
27. Great Lakes Regional ACS Meeting, Chicago, IL (2009) Targeting a human cytochrome P450 enzyme to reduce nicotine-associated lung cancer
28. 7th Southwest P450 Meeting, Navasota, TX (2009) Cytochrome P450 2E1: Conformational responses to ligand binding
29. Great Lakes Drug Metabolism Discussion Group Meeting, Linconshire, IL (2009) Structure/function analysis of human CYP2A enzymes and the relationship to lung cancer
30. 9th Winter Conference on Medicinal & Bioorganic Chemistry, Steamboat Springs, CO (2009) Human cytochrome P450 enzymes: Drug metabolism and drug target
31. 5th Southwest P450 Meeting, Navasota, TX (2007) Key active site amino acids distinguishing the functions of human P450 2A enzymes
32. 16th International Symposium on Microsomes and Drug Oxidations, Budapest, Hungary (2006) The crystal structure of human lung cytochrome P450 2A13: Principal activator of the major nicotine-derived procarcinogen

33. Microsomes and Drug Oxidations, Mainz, Germany (2004) A structure of cytochrome P450 2B4 with 4-(4-chlorophenyl)imidazole identifies large-scale conformational changes related to substrate, heme, and redox partner binding
34. 4th Southwest P450 Meeting, Navasota, TX (2004) The crystal structure of P450 2B4 with a phenylimidazole inhibitor: Insights into enzyme flexibility
35. Gordon Research Conference on Drug Metabolism, Holderness, New Hampshire (2003) The 1.6 Å structure of cytochrome P450 2B4 and relationship to relevant mutants
36. 13th International Congress of Cytochromes P450, Prague, Czech Republic (2003) The 1.6 Å structure of cytochrome P450 2B4: Novel features and implications
37. 3rd Southwest Cytochrome P450 Conference, Navasota, TX (2003) The 1.6 Å structure of cytochrome P450 2B4: Novel features
38. American Society for Pharmacology and Experimental Therapeutics, Drug Metabolism Division, at Experimental Biology Annual Meeting (2003) Crystallization of a mammalian cytochrome P450 from the 2B subfamily
39. 1st Southwest P450 Meeting, Navasota, TX (2001) A truncation of 2B family cytochrome P450s yields large increases in expression levels, increased solubility, and lower order oligomers while retaining function
40. American Society of Biochemistry and Molecular Biology Annual Meeting, Boston, MA (2000) Substrate access to the cytochrome P450 2B1 binding site: The role of F helix, F/G loop, and G helix residues

Invited Seminars at Companies and Academic Institutions

1. University of Michigan, Structural Biology Seminar Series (2017) Structure and function of human (membrane) cytochrome P450 enzymes: From drug metabolism to cancer therapy
2. Wayne State University, Department of Chemistry (2017) Cytochrome P450 17A1: Prostate cancer drug target
3. University of Michigan, American Chemical Society Medicinal Chemistry Student Chapter Meeting (2016) Presentation skills for graduate students
4. University of Michigan, Department of Biological Chemistry (2016) Cytochrome P450 structure and function in drug metabolism and drug design
5. American Chemical Society Medicinal Chemistry Symposium, Ann Arbor, MI (2016) Cytochrome P450 17A1: Prostate cancer drug target
6. University of Minnesota, Department of Medicinal Chemistry (2016) Structure, function, and inhibition of steroidogenic human cytochrome P450 17A1: Prostate cancer target.
7. University of Illinois, Department of Medicinal Chemistry and Pharmacognosy (2015) Prostate cancer drug design: Adventures in cytochrome P450 enzyme biochemistry.
8. Genentech, South San Francisco, CA (2015) Cytochrome P450 Metabolism: Interactions with substrates, inhibitors, and catalytic partners NADPH-cytochrome P450 reductase and cytochrome b_5.
9. Kansas City Area Life Sciences Institute Regional Translational Medicine Meeting, Lawrence, KS (2015) Prostate cancer: Design of improved drugs
10. University of Michigan, Department of Medicinal Chemistry (2015) Structure/function studies of human steroidogenic cytochrome P450 17A1: Improving prostate cancer drug design
11. Louisiana State University Health Science Center, Department of Pharmacology and Experimental Therapeutics (2014) Prostate cancer and steroidogenic cytochrome P450 17A1: Structural insights into enzyme biochemistry and clinical inhibitors
12. Rice University, Department of Biochemistry and Cell Biology, Houston, TX (2013) Prostate cancer target cytochrome P450 17A1 Structure, Mechanism, Drug Design
13. Boehringer-Ingelheim, Ridgefield, CT (2013) Cytochromes P450: Structural insights into selectivity and mechanism
14. University of Texas Health Science Center at San Antonio, Department of Biochemistry and Cancer Center (2013) Cytochrome P450 17A1: Biochemistry and structural biology of a prostate cancer drug target

15. University of Alabama at Birmingham, Department of Pharmacology and Toxicology (2013) Human steroidogenic cytochrome P450 17A1: Prostate cancer drug target
16. University of Missouri-Kansas City, School of Biological Sciences (2013) Biochemistry and structural biology of cytochrome P450 17A1: Prostate cancer drug target
17. West Virginia University, Randolph Cancer Center (2012) Prostate Cancer: Understanding and designing inhibitors of cytochrome P450 17A1
18. Brandeis University, Department of Chemistry (2012) Structure and function of cytochrome P450 17A1: Prostate cancer drug target
19. University of Pennsylvania, Department of Pharmacology (2012) Cytochrome P450 17A1 in human steroidogenesis: Structure, function, and prostate cancer drug target
20. University of Kansas Medical Center, Department of Pharmacology, Toxicology, and Therapeutics (2012) Cytochrome P450 17A1 as a drug target for metastatic prostate cancer
21. University of Mississippi, Department of Medicinal Chemistry (2012) Structures of cytochrome P450 enzymes: Elucidating drug metabolism and opportunities for drug design
22. Institute for Reproductive Health & Regenerative Medicine, University of Kansas Medical School, Department of Pathology (2012) Cytochrome P450 17A1 as a drug target for metastatic prostate cancer
23. Johns Hopkins University, Department of Pharmacology and Molecular Sciences (2012) Cytochrome P450 17A1: Structure, function and prostate cancer drug target
24. John L. Omdahl Memorial Lecture, Cellular and Molecular Basis of Disease Seminar Series, The University of New Mexico Health Science Center (2012) Drug design targeting cytochrome P450 17A1 to treat metastatic prostate cancer
25. Higuichi Bioscience Center Science Talks (2012) Cytochrome P450 17A1: Structure, function, and prostate cancer drug target
26. University of Alabama, Department of Chemistry (2011) Structural basis for prostate cancer drug design: Cytochrome P450 17A1 inhibitors
27. Benedictine College, Department of Chemistry and Biochemistry (2011) How understanding enzyme function leads to new drugs: A prostate cancer story
28. The Wadsworth Center, NY State Department of Health (2011) Targeting human cytochrome P450 2A13 to reduce carcinogenesis in smokers
29. University of Utah, Department of Pharmacology and Toxicology (2010) Targeting human cytochrome P450 2A13 to prevent tobacco-associated lung cancer
30. Washburn University, Department of Chemistry (2010) Cytochrome P450 enzymes: Opportunities for new interventions in cancer
31. University of Missouri, Kansas City, Department of Pharmacology and Toxicology (2010) Cytochrome P450-mediated metabolism of nicotine and its products: An opportunity to reduce human lung cancer?
32. Kansas State University, Department of Biochemistry (2010) Understanding the diverse repertoire of cytochrome P450 function in human drug metabolism: A story in structure
33. Gilead, Foster City, CA (2010) Targeting human cytochrome P450 2A13 to prevent tobacco-associated lung cancer
34. University of Colorado Health Sciences Center, Department of Biochemistry & Molecular Genetics (2009) Structure/function of human cytochrome P450 enzymes: Understanding the activation of tobacco-derived procarcinogens and developing lung cancer chemopreventatives
35. University of Missouri-Kansas City, Division of Cell Biology and Biophysics (2009) Identifying inhibitors of human cytochrome P450 2A13 as an approach to the prevention of nicotine-associated lung cancer
36. University of Tohoku, Sendai, Japan (2009) Conformational responses to ligand binding in cytochrome P450 enzymes: Structural extremes
37. Pfizer, Inc., St. Louis, MO (2009) Structures of cytochrome P450 enzymes: What information do/don't they provide to decipher drug metabolism?
38. Pfizer, Inc., St. Louis, MO (2009) The search for selective inhibitors of CYP2A13, a lung cancer target

39. Pfizer, Inc., St. Louis, MO (2009) Cytochrome P450 2E1: Conformational responses to ligand binding
40. Theravance, Inc., South San Francisco, CA (2007) Mammalian cytochrome P450 structure and function.
41. University of Iowa, Department of Medicinal Chemistry, Iowa City, IA (2007) Inhibition of cytochrome P450 2A13 as a chemopreventative for lung cancer in smokers
42. Cancer Center Research Symposium, University of Kansas Medical Center, Kansas City, KS (2007) Cytochrome P450 2A13 inhibitors for preventing nicotine-induced lung cancer in smokers
43. University of Minnesota Cancer Center, Carcinogenesis and Chemoprevention Program, Minneapolis, MN (2007) Human lung cytochrome P450 2A13: Correlations between ligand morphology and active site structure
44. Rice University, Department of Biochemistry and Cell Biology, Houston, TX (2006) Human cytochromes P450 as friend or foe: Using structure/function studies to determine how nicotine causes lung cancer and how it might be prevented
45. University of Kansas Medical Center, Department of Pharmacology, Toxicology, and Therapeutics, Kansas City, KS (2006) Structure and function of cytochromes P450 involved in nicotine metabolism and lung cancer
46. William Jewell College, Department of Biology, Liberty, MO (2006) Using structure/function studies to determine how nicotine causes lung cancer and how it might be prevented
47. University of Kansas, Department of Molecular Biosciences, Lawrence, KS (2006) The crystal structure of human lung cytochrome P450 2A13: Principal activator of the major nicotine-derived procarcinogen
48. University of Kansas, Department of Pharmaceutical Chemistry, Lawrence, KS (2006) Structure and function of the lung cytochrome P450 2A13
49. Iowa State University, Department of Biochemistry, Biophysics, and Molecular Biology, Ames, IA (2006) Structure and function of the lung cytochrome P450 2A13
50. Oklahoma University, Department of Chemistry and Biochemistry, Normal, OK (2006) Structure-function in mammalian cytochromes P450
51. Vanderbilt University, Division of Clinical Pharmacology, Nashville, TN (2005) Structural comparisons of cytochrome P450 2A enzymes in the lung vs. liver
52. University of Michigan, Department of Pharmacology, Ann Arbor, MI (2005) Structural diversity of membrane cytochromes P450: Lessons from recent literature
53. University of Kansas Medical Center, Department of Biochemistry and Molecular Biology, Kansas City, MO (2005) Structural diversity of membrane cytochromes P450: Lessons from recent literature
54. Wichita State University, Department of Chemistry, Wichita, KS (2004) Structural insights into xenobiotic metabolism by cytochrome P450s
55. From Cloning to Crystallization Workshop, Kansas University, Lawrence, KS (2003) Engineering and crystallization of membrane bound proteins: The cytochrome P450 2B subfamily
56. NIEHS Toxicology Center Seminar Series, Galveston, TX (2001) Cytochromes P450: Engineering solubility for functional and structural studies

COMMITTEE AND SERVICE ACTIVITIES

International

2018 – 2019	Council, International Society for the Study of Xenobiotics *(elected)*
2017 – 2019	Bernard B. Brodie Award in Drug Metabolism Selection Committee *(invited)*
2015 – present	International Advisory Committee, International Conferences on Cytochrome P450 *(invited)*
2014 – present	Microsomes and Drug Oxidations International Scientific Advisory Board *(invited)*

2014 – present	Awards Committee, International Society for the Study of Xenobiotics *(invited)*
2014	Herbert Tabor Award Young Investigator Award Committee, 20th International Symposium on Microsomes and Drug Oxidations, Stuttgart, Germany *(invited)*
2014	Session co-chair, Novel Insights into Structure and Function of Drug Metabolizing Enzymes, 20th International Symposium on Microsomes and Drug Oxidations, Stuttgart, Germany *(invited)*
2014	Selection Committee for the Asia Pacific Scientific Achievement Award and the Asia Pacific New Investigator Award, International Society for the Study of Xenobiotics *(invited)*
2013	Plenary Session Chair, Drug-Metabolizing Enzymes as Potential Therapeutic Targets, 10th International Society for the Study of Xenobiotics Meeting, Toronto, Canada *(invited)*
2013	Session Co-chair, Structural Biology of Cytochromes P450, 18th International Conference on Cytochrome P450, Seattle, WA *(invited)*
2011	Session Co-chair, P450 Structure and Function, 17th International Conference on Cytochrome P450, Manchester, UK *(invited)*
2010	Session chair, P450 Structure and Function I: Structure and Conformation, 18th International Symposium on Microsomes and Drug Oxidations, Beijing, China (*invited*)
2005	Poster Judge, 14th International Congress of Cytochromes P450, Dallas, TX *(invited)*

National

2016 – 2019	Electorate Nomination Committee, American Association for the Advancement of Science *(elected)*
2015 – 2017	Program Committee, American Society of Pharmacology and Experimental Therapeutics *(elected)*
2014 – 2017	Chair (Elect, Current, Past), Drug Metabolism Division, American Society of Pharmacology and Experimental Therapeutics *(elected)*
2013, 2017	Selection Committee, Early Career Achievement Award, Drug Metabolism Division, American Society of Pharmacology and Experimental Therapeutics *(invited)*
2007 – 2009, 2011 – 2017	Best Poster Judge, Drug Metabolism Division, American Society of Pharmacology and Experimental Therapeutics Annual Meeting
2013	Selection Committee, Award for Outstanding Achevement in Chemistry in Cancer Research, American Association for Cancer Research *(invited)*
2013	Session organizer and chair, Correlating Structure and Function of Drug Metabolizing Enzymes: An Ongoing Challenge, American Society of Pharmacology and Experimental Therapeutics Annual Meeting, Boston, MA *(selected)*
2009 – 2012	Secretary/Treasurer (Elect, Current, Past), Drug Metabolism Division, American Society for Pharmacology and Experimental Therapeutics *(elected)*
2009	Session co-chair, Targeting Drug Metabolizing Enzymes for Effective Chemopreventative Approaches, American Society of Pharmacology and Experimental Toxicology, New Orleans, LA *(invited)*
2006 – 2008, 2010 – 2013	Selection Committee, James R. Gillette Best Paper in *Drug Metabolism and Disposition* Award, Drug Metabolism Division, American Society of Pharmacology and Experimental Therapeutics
2006 – 2009	Councilor, Drug Metabolism Division, American Society for Pharmacology and Experimental Therapeutics *(invited)*

Regional

2006	Session chair, Substrate Protein Interactions, 5th Southwest P450 Meeting, Navasota, TX *(invited)*
2001 – 2002	Organizing Committee Member, 2nd Annual Southwest P450 Meeting *(invited)*

University of Michigan

University-wide

2017 –	Rackham Predoctoral Fellowship Committee
2017 -	NMR Renovations and Governing Committee
2016 –	Chemical Biology Program
2016 –	Cancer Center

College of Pharmacy

2017 –	Executive Committee
2016 –	Bachelors of Science in Pharmaceutical Science Curriculum Committee
2016 –	Research Resources Committee

University of Kansas

University-wide

2015 – 2016	Higuichi Biosciences Center Internal Advisory Board
2015 – 2016	Chemical Biology Training Grant Steering Committee
2014 – 2015	Funding Innovations Committee, Graduate Studies
2014 – 2016	Leadership Committee, NIH Center of Biomedical Research Excellence (COBRE) Program in Protein Structure and Function
2013 – 2015	Faculty Advisor, KU Postdoctoral Association
2012	Panelist, Preparing Future Faculty Series, Office of Graduate Studies
2011 – 2012	Chair, Scholarly Misconduct Investigation Committee
2011 – 2012	Doctoral Education Work Group
2011	Postdoctoral Task Force
2010	Internal Review Committee, KU X-ray Crystallography Lab and Director
2009	KU Biosafety and Recombinant DNA Committee
2009	Search Committee, Director of the KU Protein Structure Lab
2007 – 2016	Chair, Steering Committee, KU Protein Structure Lab
2007	Faculty Evaluator, Assessment of General Education
2007	Faculty Mentor, Honors Research Development Program
2007	Search Committee for Director, Biochemical Research Services Laboratory
2006, 2007	Interviewee, Women in Science Learning Community

School of Pharmacy

2015 – 2016	Executive Committee
2015 – 2016	Academic and Professional Conduct Committee
2010 – 2011	Search Committee for Associate Dean
2007 – 2016	Selection Committee, Ron Borchardt Family Pharmaceutical Sciences Scholarships
2006 – 2010	Design and Installation Oversight of new Medicinal Biochemistry Laboratories for Pharm.D. students on Lawrence and Wichita Campuses
2006 – 2013	School of Pharmacy Curriculum Planning Committee

Department of Medicinal Chemistry

2012	Selection Committee, Lester and Betty Mitscher Prize for Excellence
2010 – 2016	Committee for the Edward E. Smissman Memorial Lecture Series
2010	Chair, Search Committee for Medicinal Biochemistry Laboratory coordinators for Lawrence and Wichita campuses
2010 – 2011	Search Committee for Assistant/Associate Professor

2009	Department Liason, Research Computing and IT Planning
2008 – 2013, 2015 – 2016	Graduate Admissions Committee, Department of Medicinal Chemistry
2008	Chair, Search Committee for Lecturer in MDCM 601 and 603, Department of Medicinal Chemistry
2006 – 2007	Search Committee for Associate/Full Professor
2006 – 2007	Coordinator, Department of Medicinal Chemistry Seminar Series
2005 – 2007	Coordinator, Departmental Research Experience for Undergraduates Program
2005 – 2013	Faculty Coordinator, Medicinal Chemistry Meeting in Miniature (MIKI) Meeting
2004 – 2013, 2014 - 2016	Ambassador, Committee for Teaching Excellence
2004 – 2006, 2012	Irsay Dahle Award Committee

Other University of Kansas Departments

2014 – 2015	Search Committee for Ronald T. Borchardt Global Health Education Distinguished Professor, Department of Pharmaceutical Sciences
2012 – 2013	Search Committee for Assistant Professor, Department of Pharmacology and Toxicology
2007 – 2008	Search Committee for Analytical Chemistry Faculty, Department of Chemistry
2005	Search Committee for Assistant Professor, Department of Pharmacology and Toxicology

University of Texas Medical Branch

2004	Search Committee for Research Assistant Professor, Department of Pharmacology and Toxicology
2004	Panelist, Negotiation Skills Roundtable, Committee for Career Development, Graduate School of Biomedical Sciences
2001 – 2002	President, Organization of Postdoctoral Scientists at UTMB

TEACHING

Teaching Development

2015	Best Practices Institute Award, Center for Teaching Excellence
2012	Peer Teaching Triad, Center for Teaching Excellence
2012	Piloted online book and quizzes, online lectures, and partially flipped classroom for Medicinal Biochemistry
2011	Adapted Medicinal Biochemistry for synchronous distance students
2004 – 2016	Ambassador to Center for Teaching Excellence

Courses Taught (* indicates course coordinator)

	Course	Credits	# Students
University of Michigan, Graduate Courses			
2016	Bioorganic Principles of Medicinal Chemistry	3	10
University of Kansas, Undergraduate Courses			
2005 – 2012, 2014	Medicinal Biochemistry (*since 2007)	4 – 5	105 – 170
2015		3	155
2005 – 2010	Medicinal Biochemistry Laboratory*	1	105 – 150
2006	Medicinal Biochemistry II	3	105

University of Kansas, Graduate Courses

2015	Principles and Practice of Chemical Biology	3	~20
2010 – 2012, 2014	Organic Chemistry of Biological Pathways	2	8 – 15
2010 – 2016 (even years)	Issues in Scientific Integrity	1	~40
2006 – 2012	Biomedicinal Chemistry*	3	1 – 6
2009	Advanced Lab Techniques	2	6
2008 – 2012 (even years)	Modern Biochemical and Biophysical Methods	4	10 – 25
2007	Seminar in Medicinal Chemistry	1	7
2007	Introduction to Chemical Biology	guest lectures	10

University of Texas Medical Branch, Graduate Courses

2004	Principles of Drug Action, Pharmacokinetics and Biotransformation	guest lecture	~35

University of Texas A&M at Galveston, Undergraduate Courses

1997	Marine Invertebrate Zoology Laboratory*	1	~35

RESEARCH TRAINEES

Undergraduate Students

2017	Anne Grech, Trey Shupp
2016	Nicholas Martinez, Cara Davis, Eder Davila-Contreras
2015	Tyler Stone, Nicholas Martinez, Cara Davis, Eder Davila-Contreras
2014	Aaron Bart
2013	Aaron Bart, Lindsay Astleford, Anne Reed-Weston
2012	Aaron Bart, Lindsay Astleford, Anne Reed-Weston, Michelle Jackson
2011	Aaron Bart, Lindsay Astleford, Michelle Jackson, Wan To Poon
2010	Eric Carillo, Aaron Bart, Lindsay Astleford, Melbien Tinio
2009	Eric Carillo, Aaron Bart, Saleh Darkhalil
2008	Eric Carillo
2007	Eric Carillo, Molly Christian, Naseem Nikeem
2006	Naseem Nikeem, Jordan Christian, Christopher Wood
2005	Christopher Wood, Jenilee Morrison

Graduate Students

2017 –	Julie Philippe, Ph.D. (Department of Pharmacology rotation student)
2017 –	Sarah Burris, Ph.D. (Department of Medicinal Chemistry rotation student)
2016 –	Aaron Bart, Ph.D. (Biophysics Program)
2014 – 2016	Aaron Bart, Ph.D. (Department of Molecular Biosciences)
2015	Elyse Petrunak, Ph.D. (Department of Medicinal Chemistry), currently postdoctoral fellow, University of Pittsburgh
2014	Charlie Fehl, Ph.D. (co-mentored with Jeff Aubé, Department of Medicinal Chemistry), currently postdoctoral fellow, University of Oxford
2012	Eva Stephens, M.S. (Department of Medicinal Chemistry), currently Clinical Communications Specialist, United BioSource Corporation
2012	Linda Blake, Ph.D., Pharm.D. (Department of Medicinal Chemistry), currently Inpatient Resident, Oregon Health and Science University
2011	Natasha (Michno) DeVore, Ph.D. (Department of Molecular Biosciences), currently Associate Professor, Department of Natural and Applied Sciences, Evangel University

2009	Patrick Porubsky, M.S. (Department of Medicinal Chemistry), currently Forensic Scientist, Kansas Bureau of Investigation
2009	Megen (Miller) Culpepper, Ph.D. (Department of Chemistry, co-mentored with Dr. Julian Limburg), currently Assistant Professor, Appalachian State University
2008	Timothy Reed, Ph.D. (Department of Chemistry, co-mentored with Dr. Julian Limburg), currently Microbiologist, Astrix Technology Group
2008	Natasha Michno, M.S. (Department of Medicinal Chemistry), currently Associate Professor, Department of Natural and Applied Sciences, Evangel University
2008	Melanie Blevins, M.S. (Department of Medicinal Chemistry), currently postdoctoral fellow, University of Colorado Anschutz Medical Campus
2005	Jason Sanders (Department of Medicinal Chemistry), Instructional Technologist, Northwest High School

Postdoctoral Fellows

2017 –	Simone Brixus-Anderko
2015 –	Rahul Yadav
2015 –	Malika Godamudunge
2011 – 2016	D. Fernando Estrada (NRSA Postdoctoral Fellow, K99/R00 recipient), currently Assistant Professor, University at Buffalo
2014 – 2015	Elyse Petrunak, currently Research Laboratory Technician, University of Michigan
2012 – 2015	Youbin Tu, currently Postdoctoral Fellow, University at Buffalo
2012 – 2013	Vickie Jasion, currently Medical Science Liaison, AbbVie
2011 – 2012	Natasha DeVore, currently Associate Professor, Department of Natural and Applied Sciences, Evangel University
2009 – 2011	Andria Skinner, currently Scientist, Regeneron Pharmaceuticals
2009	Megen Culpepper, currently Assistant Professor, Appalachian State University
2008 – 2010	Kathy Meneely, currently Research Associate, University of Kansas
2007 – 2016	Agnes Walsh, currently research assistant, University of Kansas
2006	Jelena Zaitseva, currently Senior Scientist, Bayer CropScience

Research Staff

2016	Archana Mishra, Ph.D.
2007 – 2008	Anuradha Meta Roy, Ph.D., currently Director, KU High-Throughput Screening Laboratory
2005 – 2007	Brian Smith, currently Director of Laboratory Operations, Quintiles

Visiting Scientists

2015 – 2016	Dhanushka Weerasekara, M.S., Department of Biochemistry and Molecular Biology, University of Colombo, Sri Lanka
2015	Silvia Bonomo, visiting Ph.D. student, Department of Pharmaceutical Sciences, University of Copenhagen, Denmark
2014	Malika Godamudunge, visiting Ph.D. student, Department of Chemistry and Biochemistry, New Mexico State University
2014	Allison Colthart, visiting Ph.D. student, Department of Chemistry, Brandeis University
2013	Jeanine Chan, Ph.D., Assistant Professor sabbatical, Department of Chemistry, Pacific University Oregon