

Curriculum Vitae

Terry W. Moore, Ph.D.

Assistant Professor

University of Illinois at Chicago

Department of Medicinal Chemistry and Pharmacognosy

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My Bibliography: <http://www.ncbi.nlm.nih.gov/myncbi/collections/bibliography/45497423>

Google Scholar: <http://scholar.google.com/citations?user=VvobtmoAAAAJ&hl=en>

ResearchGate: https://www.researchgate.net/profile/Terry_Moore7

LinkedIn: <http://www.linkedin.com/pub/terry-moore/5/70/2b1>

ORCID: <http://orcid.org/0000-0002-5410-306X>

Education:

University of Illinois at Urbana-Champaign

Ph.D. in chemistry

Thesis title: Chemical approaches to inhibiting the estrogen receptor/steroid receptor coactivator interaction (Thesis adviser: John Katzenellenbogen)

December 2008

Abilene Christian University; Abilene, Texas

Bachelor of Arts in biochemistry, *Summa cum Laude*

May 2000

Publications (* = corresponding author publications):

27) Popovich, N. G.; Okorie-Awe, C.; Crawford, S. Y.; Balcazar, F. E.; Vellurattil, R. P.; **Moore, T. W.**; Schriever, A. E. "Assessing Students' Impressions of the Cultural Awareness of College of Pharmacy Faculty and Students," Accepted for publication at *American Journal of Pharmaceutical Education*.

26) Yao, Y.; Kong, C.; Yin, L.; Jain, A. D.; Ratia, K.; Thatcher, G. R.; **Moore, T. W.**; Driver, T. G.; Miller, L. W. Time-gated detection of cystathionine γ -lyase activity and inhibition with a selective, luminogenic hydrogen sulfide sensor. *Chemistry – A European Journal*, **2017**, *23*, 752-756. doi: 10.1002/chem.201604786. PMID: 27734530. (Peer-reviewed journal article)

- Artwork selected for Frontispiece (See doi: 10.1002/chem.201604786)

25) Speltz, T. E.; Fanning, S. W.; Mayne, C. G.; Fowler, C.; Tajkhorshid, E.; Greene, G. L.; **Moore, T. W.*** Stapled Peptides with γ -Methylated Hydrocarbon Chains for the Estrogen Receptor/Coactivator Interaction. *Angewandte Chemie International Edition* **2016**, *55*, 4252-4255. doi: 10.1002/anie.201510557 and 10.1002/ange.201510557. PMID: 26928945. (Peer-reviewed journal article)

- Chosen by editors as “Hot Paper” for “importance in a rapidly evolving field of high current interest”
- Artwork selected for Inside Cover (See doi: 10.1002/anie.201601641)

24) Xiong, R.; Patel, H.; Gutgesell, L.; Zhao, J.; Delgado-Rivera, L.; Pham, T.; Zhao, H.; Carlson, K. E.; Martin, T. F.; Katzenellenbogen, J. A.; **Moore, T. W.**; Tonetti, D.; Thatcher, G. R. J. Selective human Estrogen Receptor Partial Agonists (ShERPAs) for Tamoxifen-Resistant Breast Cancer. *Journal of Medicinal Chemistry* **2016**, *59*, 219-237. doi: 10.1021/acs.jmedchem.5b01276. PMID: 26681208. (Peer-reviewed journal article)

23) Jain, A. D.; Potteti, H.; Richardson, B. G.; Kingsley, L.; Luciano, J. P.; Ryuzoji, A. F.; Lee, H.; Kronic, A.; Mesecar, A. D.; Reddy, S. P.; **Moore, T. W.*** Probing the Structural Requirements of Non-electrophilic Naphthalene-Based Nrf2 Activators. *European Journal of Medicinal Chemistry* **2015**, *103*, 252-268. doi:10.1016/j.ejmech.2015.08.049. PMID: 26363505. (Peer-reviewed journal article)

22) Richardson, B. G.; Jain, A. D.; Speltz, T. E.; **Moore, T. W.*** Non-electrophilic modulators of the canonical Keap1/Nrf2 pathway. *Bioorganic and Medicinal Chemistry Letters* **2015**, *25*, 2261-2268. doi:10.1016/j.bmcl.2015.04.019. PMID: 25937010. (Peer-reviewed literature review)

21) Zhu, S.; Kisiel, W.; Lu, Y. J.; Petersen, L. C.; Ndungu, J. M.; **Moore, T. W.**; Parker, E. T.; Sun, A.; Sarkaria, J. N.; Snyder, J. P.; Liotta, D. C.; Brat, D. J.; El-Rayes, B. F.; Shoji, M. Visualizing cancer and response to therapy in vivo using Cy5.5-labeled factor VIIIa and anti-tissue factor antibody. *Journal of Drug Targeting* **2014**, *23*, 257-265. doi: 10.3109/1061186X.2014.988217. PMID: 25510254. (Peer-reviewed journal article)

20) Zhu, S.; Kisiel, W.; Lu, Y. J.; Petersen, L. C.; Ndungu, J. M.; **Moore, T. W.**; Parker, E. T.; Sun, A.; Liotta, D. C.; El-Rayes, B. F.; Brat, D. J.; Snyder, J. P.; Shoji, M. Tumor angiogenesis therapy using targeted delivery of paclitaxel to the vasculature of breast cancer metastases. *Journal of Drug Delivery* **2014**, *2014*, Article ID 865732, 12 pages. doi: 10.1155/2014/865732. PMID: 25574399. PMCID: PMC4273585. (Peer-reviewed journal article)

19) Grimmer, C.; **Moore, T. W.**; Padwa, A.; Prussia, A.; Wells, G.; Wu, S.; Sun, A.; Snyder, J. P. Antiviral Atropisomers: Conformational Energy Surfaces by NMR for Host-Directed Myxovirus Blockers. *Journal of Chemical Information and Modeling* **2014**, *54*, 2214-2223. doi: 10.1021/ci500204j. PMID: 25058809. (Peer-reviewed journal article)

18) **Moore, T. W.**; Gunther, J. R.; Katzenellenbogen, J. A. Estrogen receptor alpha/co-activator interaction assay - TR-FRET. In *PROTEIN-PROTEIN INTERACTIONS: Methods and Applications; Second Edition*. Methods in Molecular Biology; C. Meyerkord and H. Fu, Eds.; Humana Press: New York, 2015, Vol. 1278, p. 545-553. doi: 10.1007/978-1-4939-2425-7_36. PMID: 25859975. (Book chapter)

17) Zhu, S.; **Moore, T. W.**; Morii, N.; Howard, R. B.; Culver, D.; Arrendale, R. F.; Reddy, P.; Evers, T. J.; Zhang, H.; Sica, G.; Sun, A.; Fu, H.; Khuri, F. R.; Shin, D. M.; Snyder, J. P.; Shoji, M. Synthetic Curcumin Analog UBS109 Inhibits the Growth of Head and Neck Squamous Cell Carcinoma

- Xenografts. *Current Cancer Drug Targets* **2014**, *14*, 380-393. doi: 10.2174/1568009614666140312163524. PMID: 24628271. (Peer-reviewed journal article)
- 16) Yamaguchi, M.; Zhu, S.; Zhang, S.; Wu, D.; **Moore, T. M.**; Snyder, J. P.; Shoji, M. Curcumin Analogue UBS109 Prevents Bone Loss in Breast Cancer Bone Metastasis Mouse Model: Involvement in Osteoblastogenesis and Osteoclastogenesis. *Cell and Tissue Research* **2014**, *357*, 245-252. doi: 10.1007/s00441-014-1846-4. PMID: 24723227. (Peer-reviewed journal article)
- 15) **Moore, T. W.**; Zhu, S.; Randolph, R.; Shoji, M.; Snyder, J. P. Liver S9 Fraction-Derived Metabolites of Curcumin Analog UBS109. *ACS Medicinal Chemistry Letters* **2014**, *5*, 288-292. doi: 10.1021/ml4002453. PMID: 24900828. PMCID: PMC4027781. (Peer-reviewed journal article)
- 14) **Moore, T. W.**; Sana, K.; Yan, D.; Krumm, S. A.; Thepchatri, P.; Snyder, J. P.; Marengo, J.; Arrendale, R. F.; Prussia, A. J.; Natchus, M. G.; Liotta, D. C.; Plemper, R. K.; Sun, A. Synthesis and Metabolic Studies of Host-Directed Inhibitors for Anti-Viral Therapy. *ACS Medicinal Chemistry Letters* **2013**, *4*, 762-767. doi: 10.1021/ml400166b. PMID: 23956816. PMCID: PMC3743129. (Peer-reviewed journal article)
- 13) Brown, A.; Shi, Q.; **Moore, T. W.**; Yoon, Y.; Prussia, A.; Maddox, C.; Liotta, D. C.; Shim, H.; Snyder, J. P. Monocarbonyl Curcumin Analogs: Heterocyclic Pleiotropic Kinase Inhibitors that Mediate Anti-Cancer Properties. *Journal of Medicinal Chemistry* **2013**, *56*, 3456-3466. doi: 10.1021/jm4002692. PMID: 23550937. PMCID: PMC3927397. (Peer-reviewed journal article)
- 12) **Moore, T. W.**; Sana, K.; Yan, D.; Thepchatri, P.; Ndungu, J. M.; Saindane, M. T.; Natchus, M. G.; Liotta, D. C.; Plemper, R. K.; Snyder, J. P.; Sun, A. Asymmetric Synthesis of Host-Directed Inhibitors of Myxoviruses. *Beilstein Journal of Organic Chemistry* **2013**, *9*, 197-203. doi: 10.3762/bjoc.9.23. PMID: 23400228. PMCID: PMC3566758. (Peer-reviewed journal article)
- 11) Yamaguchi, M.; **Moore, T. W.**; Sun, A.; Snyder, J. P.; Shoji, M. Novel curcumin analogue UBS109 potently stimulates osteoblastogenesis and suppresses osteoclastogenesis in vitro. *Integrative Biology* **2012**, *4*, 905-913. doi: 10.1039/c2ib20045g. PMID: 22751853. (Peer-reviewed journal article)
- 10) Zhu, S.; **Moore, T. W.**; Lin, X.; Morii, N.; Mancini, A.; Howard, R. B.; Culver, D.; Arrendale, R. F.; Reddy, G. P.; Evers, T. J.; Zhang, H.; Sica, G.; Chen, Z. G.; Sun, A.; Fu, H.; Khuri, F. R.; Shin, D. M.; Snyder, J. P.; Shoji, M. Synthetic curcumin analog EF31 inhibits the growth of head and neck squamous cell carcinoma xenografts. *Integrative Biology* **2012**, *4*, 633-640. doi: 10.1039/c2ib20007d. PMID: 22532032. PMCID: PMC3734847. (Peer-reviewed journal article)
- 9) Olivera, A.; **Moore, T. W.**; Sun, A.; Hu, F.; Liotta, D. C.; Snyder, J. P.; Shim, H.; Marcus, A. I.; Miller, A. H.; Pace, T. W. W. Inhibition of the NF- κ B signaling pathway by the curcumin analog, 3,5-Bis(2-pyridinylmethylidene)-4-piperidone (EF31): anti-inflammatory and anti-cancer properties. *International Immunopharmacology* **2012**, *12*, 368-377. doi: 10.1016/j.intimp.2011.12.009. PMID: 22532032. PMCID: PMC3734847. (Peer-reviewed journal article)
- 8) Sun, A.; **Moore, T. W.**; Gunther, J. R.; Kim, M. S.; Rhoden, E.; Du, Y.; Fu, H.; Snyder, J. P.; Katzenellenbogen, J. A. Discovering Small Molecule Estrogen Receptor α /Coactivator Binding Inhibitors: High-Throughput Screening, Ligand Development, and Models for Enhanced Potency. *ChemMedChem* **2011**, *6*, 654-666. doi: 10.1002/cmdc.201000507. PMID: 21365764. PMCID: PMC3177402. (Peer-reviewed journal article)

- 7) **Moore, T. W.**; Gunther, J. R.; Katzenellenbogen, J. A. Probing the Topological Tolerance of Multimeric Protein Interactions: Evaluation of an Estrogen/Synthetic Ligand for FK506 Binding Protein Conjugate. *Bioconjugate Chemistry* **2010**, *21*, 1880-1889. doi: 10.1021/bc100266v. PMID: 20919698. PMCID: PMC2967433. (Peer-reviewed journal article)
- 6) **Moore, T. W.**; Mayne, C. G.; Katzenellenbogen, J. A. Not picking pockets: Nuclear Receptor Alternate-site Modulators (NRAMs). *Molecular Endocrinology* **2010**, *24*, 683-695. doi: 10.1210/me.2009-0362. PMID: 19933380. PMCID: PMC2852352. (Peer-reviewed literature review)
- Artwork was selected by Editor for Cover
- 5) **Moore, T. W.**; Katzenellenbogen, J. A. Inhibitors of nuclear hormone receptor/coactivator interactions. *Annual Reports in Medicinal Chemistry* **2009**, *44*, 443-457. doi:10.1016/S0065-7743(09)04421-2. (Book chapter)
- 4) Gunther, J. R.; Du, Y.; Rhoden, E.; Lewis, I.; Revenaugh, B.; **Moore, T. W.**; Kim, S. H.; Dingleline, R.; Fu, H.; Katzenellenbogen, J. A. A set of time-resolved fluorescence resonance energy transfer assays for the discovery of inhibitors of estrogen receptor-coactivator binding. *Journal of Biomolecular Screening* **2009**, *14*, 181-193. doi: 10.1177/1087057108329349. PMID: 19196699. PMCID: PMC2731238. (Peer-reviewed journal article)
- 3) Gunther, J. R.; **Moore, T. W.**; Collins, M. L.; Katzenellenbogen, J. A. Amphipathic benzenes are designed inhibitors of the estrogen receptor α /steroid receptor coactivator interaction. *ACS Chemical Biology* **2008**, *3*, 282-286. doi: 10.1021/cb800056r. PMID: 18484708. PMCID: PMC2427189. (Peer-reviewed journal article)
- 2) Clews, P. K.; Douthwaite, R. E.; Kariuki, B. M.; **Moore, T.**; Taboada, M. Layered compounds incorporating 9,9'-spirobifluorene: Hydrogen-bonded and metal-organic networks derived from 9,9'-spirobifluorene-2,2',7,7'-tetracarboxylic acid. *Crystal Growth and Design* **2006**, *6*, 1991-1994. doi:10.1021/cg060007d. (Peer-reviewed journal article)
- 1) **Moore, T.**; Kiely, C.; Reeves, P. C. Electronic properties of the trimethylenemethaneiron tricarbonyl group. *Journal of Organometallic Chemistry* **2001**, *620*, 308-312. doi:10.1016/S0022-328X(00)00812-3. (Peer-reviewed journal article)

Presentations:

Moore, T. W. Functionalized Stapled Peptides for the Estrogen Receptor/Coactivator Interaction. Poster presented at American Peptide Society Symposium, Whistler, BC, 06/21/2017.

Moore, T. W. Functionalized Stapled Peptides for the Estrogen Receptor/Coactivator Interaction. Poster presented at Bioorganic Chemistry Gordon Research Conference, Andover, NH, 06/14/2017.

Moore, T. W. Tether-functionalized Stapled Peptides for the Estrogen Receptor/Coactivator Interaction. Invited Talk presented at Cambridge Healthtech Institute Macrocycles in Drug Discovery Conference, San Diego, CA, 04/26/2017.

Moore, T. W. Development of chemical probes for transcription factor interactions. Invited Talk presented at Northern Illinois University Department of Chemistry, Dekalb, IL, 04/17/17.

Jain, A. D.; Richardson, B. G.; Potteti, H. R.; Reddy, S. P.; *Moore, T. W.* Non-Electrophilic Activators of Nrf2. Poster Presented at the 2016 Medicinal Chemistry Gordon Research Conference. New London, NH 08/2016.

Moore, T. W.; Speltz, T. E. Engineering Natural Functional Groups from Leucine and Isoleucine into Stapling Amino Acids. Poster presented at the Gordon Research Conference in Peptide Chemistry, Ventura, CA 02/2016.

Moore, T. W. Branching Out: γ -Methylated Hydrocarbon Stapled Peptides for the Estrogen Receptor/Coactivator Interaction. Invited Talk presented at University of Wisconsin-Milwaukee Department of Chemistry, 01/29/2016.

Moore, T. W. Medicinal Chemistry Approaches to Inhibiting Protein-Protein Interactions. Invited Talk presented at DePaul University Department of Chemistry, 11/10/2015.

Richardson, B. B.; Jain, A. D.; *Moore, T. W.* Development of photoaffinity probes for non-covalent activation of Nrf2. Poster presented at the 250th Meeting of the American Chemical Society, Boston, MA 08/2015.

Moore, T. W.; Speltz, T. E. Engineering Natural Functional Groups from Leucine and Isoleucine into Stapling Amino Acids. Poster presented at the 250th Meeting of the American Chemical Society, Boston, MA 08/2015.

Moore, T. W.; Speltz, T. E. Engineering Natural Functional Groups from Leucine and Isoleucine into Stapling Amino Acids. Poster presented at the Gordon Research Conference in Bioorganic Chemistry, Andover, NH 06/2015.

Moore, T. W. Naphthalene-based Activators of the Transcription Factor Nrf2. UIC Rockford College of Pharmacy Research Colloquium, Rockford, IL 04/2015.

Jain, A. D.; Richardson, B. G.; Potteti, H. R.; Ryuzoji, A.; Mesecar, A. D.; Reddy, S. P.; *Moore, T. W.* A scaffold-hopping approach to discovery Nrf2/Keap1 Inhibitors. Poster Presented at the 2015 Protein-Protein Interactions Conference (Cambridge Healthtech) San Diego, CA 04/2015.

Jain, A. D.; Richardson, B. G.; Potteti, H. R.; Reddy, S. P.; *Moore, T. W.* Non-Electrophilic Activators of Nrf2. Poster Presented at the 2014 Medicinal Chemistry Gordon Research Conference. New London, NH 08/2014.

Moore, T. W.; Sun, A.; Ndungu, J. M.; Sana, K.; Yan, D.; Krumm, S.; Thepchatrri, P.; Prussia, A.; Saindane, M.; Lockwood, M.; Liebeskind, L. S.; Arrendale, R.; Howard, R.; Culver, D.; Natchus, M. G.; Snyder, J. P.; Painter, G.; Plemper, R.; Liotta, D. C. Synthesis and Biological Evaluation of Broadly Active Myxovirus Inhibitors. Poster presented at the 2012 Bioorganic Gordon Research Conference. Andover, NH.

Moore, T. W.; Zhu, S.; Saindane, M.; Arrendale, R. F.; Shoji, S.; Liotta, D. C.; Snyder, J. P. (June 2011) The Unusual S9 Fraction-Derived Metabolites of the Curcumin Analog UBS-109. Poster presented at the 2011 Georgia Life Sciences Summit. Atlanta, GA. (Winner of The Anthony Shuker Scientific Poster Award)

Moore, T. W.; Zhu, S.; Saindane, M.; Arrendale, R. F.; Shoji, S.; Liotta, D. C.; Snyder, J. P. (June 2011) The Unusual S9 Fraction-Derived Metabolites of the Curcumin Analog UBS-109. Poster presented at the 2011 Gordon Research Conference in Bioorganic Chemistry. Andover, NH.

Moore, T. W.; Mancini, A.; Sun, A.; Shoji, M.; Zhu, S.; Bommarius, B.; Kalman, D.; Hoppe, H. C.; Louw, B.; Tselanyane, M.; Culver, D.; Liotta, D. C.; Snyder, J. P. (October 2010) Curcumin mimics in human disease. Poster presented at the 2010 Georgia Life Sciences Summit. Atlanta, GA.

Gunther, J. R.; Moore, T. W.; Parent, A. A.; LaFrate, A. L.; Collins, M. L.; Sun, A.; Katzenellenbogen, J. A.; (November, 2008). Structural Motifs for Developing Coactivator Binding Inhibitors for the Estrogen Receptor. Poster presented at the annual Illinois Organic Chemistry Allerton Conference. Monticello, IL.

Moore, T. W.; Gunther, J. R.; Katzenellenbogen, J. A.; (March, 2007). Estrogen Receptor (ER) Ligands that Recruit FK506 Binding Proteins: A Novel Mechanism of ER Antagonism? Poster presented at the 233rd American Chemical Society National Meeting. Chicago, IL.

Moore, T. W.; Gunther, J. R.; Katzenellenbogen, J. A.; (October, 2006). Estrogen Receptor (ER) Ligands that Recruit FK506 Binding Proteins: A Novel Mechanism of ER Antagonism? Talk presented at the Pfizer Symposium Celebrating Diversity in Organic Chemistry. Groton, CT.

Moore, T. W.; Katzenellenbogen, J. A.; (September, 2005). Benzimidazolones as Potential Estrogen Receptor Coactivator Binding Inhibitors. Poster presented at the Pfizer Symposium Celebrating Diversity in Organic Chemistry. Groton, CT.

Moore, T. W.; Collins, M. L.; Katzenellenbogen, J. A.; (October, 2004). Benzimidazolones as Potential Estrogen Receptor Coactivator Binding Inhibitors. Poster presented at the annual Illinois Organic Chemistry Allerton Conference. Monticello, IL.

Funded Research:

Active

1R01AR069541-01A1 (Moore, PI)	04/01/17 - 03/31/20	1.35 academic
National Institutes of Health, NIAMS	\$175,000 (TWM p.a. directs)	0.38 summer
Non-covalent Nrf2 activators for the treatment of chronic wounds		

The central hypothesis is that pharmacologic activation of Nrf2 with non-covalent small molecules will accelerate wound healing, which could lead to new therapeutics to treat chronic wounds.

1R01 CA188017-01A1 (Thatcher, PI; Moore, Co-I)	04/06/15 - 03/31/18	0.50 academic
National Institutes of Health, NCI	\$13,488 (TWM p.a. directs)	0.14 summer
Partial Agonist at Estrogen Receptor Alpha for Breast Cancer Therapy		

Pharmacological partial agonists and allosteric modulators of estrogen receptor function will be developed as novel therapeutics with widespread use in women's health and beyond and immediate potential benefit in breast cancer.

(Moore)	04/01/17 – no expiration	No set effort
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Vahlteich Research Award (UIC Internal) \$50,000
Selective Peptide Antagonists of a Mutant Estrogen Receptor

This is an internal award in the UIC College of Pharmacy to support new and junior faculty.

COMPLETED

03/01/15 – 02/28/17 Chicago Biomedical Award Catalyst Grant

Funding Agency: Chicago Biomedical Consortium
Project Title: Photoaffinity-based Protein Profiling Approach to Discover Estrogen Receptor/Coactivator Inhibitors
Project Number: CBC C-057
Role: MPI with Greene and Frasor
First year direct costs: \$36,244 (TWM p.a. directs)
0.18 academic

Goals: The goal of this project is to develop a proteomics-driven approach to develop high-affinity, high-potency ER/coactivator inhibitors and to define the mechanism of these inhibitors in wild-type and resistant forms of ER and compare their activity to tamoxifen.

09/14-06/16 Centers for Advanced Diagnostics and Experimental Therapeutics Grant (UH2)

Funding Agency: NIH (NHLBI) flowthrough from University of Chicago
Project Title: Therapeutic targeting of carotid body for sleep-disordered breathing
Project Number: 1UH2HL123610-01
Role: Co-I (Prabhakar, PI); Co-I in charge of secondary/confirmatory screening
First-year direct costs: \$493,644

Goals: We will perform all HTS (Core 4) using chemical and natural product libraries unique to UIC (Core 3) to identify novel inhibitors of cystathione- γ -lyase (CSE). We will also perform secondary confirmatory assays by measuring H₂S production (Core 2 and Core 4) in the presence of CSE. De novo structure-based design using combined in silico (CAMD) and structural (NMR, X-ray crystallography) will be performed in parallel (Core 2). In addition, we will perform mechanism-based design from L-PAG as a lead compound guided by CAMD.

04/15-09/15 Ventricular Inception Grant

Funding Agency: UICentre for Drug Discovery (Internal)
Project Title: Discovery and Optimization of Nrf2 Pathway Modulators
Project Number: 2015-I01
Role: Multi-PI (with Reddy)
First-year direct costs: \$15,000

Goals: The goal of this project is to develop a high-content screen for Nrf2/Keap1 localization, function and degradation. Dr. Moore

will support the PI, Dr. Reddy, in providing any compounds that might be necessary for the successful completion of this project.

- 01/14-12/14 HTS SUPPLEMENTAL GRANT PROGRAM
Funding Agency: Chicago Biomedical Consortium
Project Title: Inhibition of cystathionine γ lyase as a therapeutic approach for relief of sleep disordered breathing
Project Number: N/A
First-year direct costs: \$20,000
- 01/14-12/14 NEW INVESTIGATOR AWARD
Funding Agency: American Association of Colleges of Pharmacy
Project Title: "Tucked" Stapled Peptides for the Estrogen Receptor/Coactivator Interaction
Project Number: 2014-01156-00-00
First-year direct costs: \$10,000
- 02/11-05/12 CAREER DEVELOPMENT AWARD
Funding Agency: Emory University Head and Neck Cancer Specialized Program of Research Excellence (SPORE)
Project Title: Development of Nrf2 Activators as Oral Cancer Chemopreventive Agents
First-year direct costs: \$35,000
- 08/05-08/06 FELLOWSHIP SUPPORTING DIVERSITY IN ORGANIC CHEMISTRY
Funding Agency: Pfizer, Inc.
Project Title: Development of Coactivator Binding Inhibitors for the Estrogen Receptor
First-year direct costs: \$26,000

Research Experience:

- 09/14-present MEDICINAL CHEMISTRY CORE CO-DIRECTOR
University of Illinois Collaborative Engagement in Novel Therapeutic Research and Enterprise (UICentre)
- 08/14-present RESEARCH ASSOCIATE
Building Interdisciplinary Research Careers in Women's Health (BIRCWH)
University of Illinois at Chicago
- 08/13-present ASSISTANT PROFESSOR
Department of Medicinal Chemistry and Pharmacognosy
University of Illinois at Chicago
- 12/09-06/13 POSTDOCTORAL RESEARCH ASSOCIATE
Chemistry Department and Emory Institute for Drug Development
Emory University
Advisers: Dennis Liotta and James Snyder

- Designed, synthesized, and characterized curcumin analogs and metabolites for *in vivo* and *in vitro* studies, with particular attention to aqueous solubility
- Designed, synthesized, and characterized series of novel heterocyclic host-directed inhibitors of myxoviruses
- Contributed significantly to development of a Phase 0 human microdosing oncology candidate and preparation of FDA briefing document
- Analyzed toxicity, metabolism, pharmacokinetics, protein binding, aqueous solubility, oral bioavailability, tumor xenograft efficacy, *in vitro* potency, Ames, and hERG data

08/03-11/09

RESEARCH ASSISTANT/GRADUATE STUDENT

Chemistry Department

University of Illinois at Urbana-Champaign

Adviser: John Katzenellenbogen

- Conceptualized, synthesized and characterized small molecule peptidomimetics to inhibit estrogen receptor/steroid receptor coactivator protein-protein interaction
- Analyzed *in vitro* and *ex vivo* biological data
- Contributed significantly to writing journal articles, grant proposals, book chapters, and review articles

02/02-08/03

ASSOCIATE SCIENTIST

Research and Development

ArQule, Inc.; Woburn, MA

- Prepared small, pre-production combinatorial libraries of small molecule compounds
- Ensured high purity and yield of production-scale libraries by developing robust chemical reactions and analyzing large amounts of LC-MS data
- Operated and troubleshot proprietary software and automation

06/01-12/01

RESEARCH ASSISTANT

Chemistry Department

University of Birmingham; Birmingham, England

Adviser: Richard Douthwaite

- Synthesized and characterized monomer for a novel coordination polymer
- Contributed to other research projects (novel palladium ligands and room-temperature ionic liquids)
- [Note: six months is the maximum amount of time a visitor may legally spend in the United Kingdom on a tourist visa]

05/98-08/00

RESEARCH ASSISTANT/UNDERGRADUATE STUDENT

Department of Chemistry and Biochemistry

Abilene Christian University; Abilene, Texas

Advisers: Greg Powell and Perry Reeves

- Prepared rhenium dimers (05/00-07/00) and various organic/organometallic compounds (05/98-05/00)
- Characterized compounds using NMR, IR, and UV/Vis

- Established σ values for trimethylenemethaneiron tricarbonyl substituent by creating Hammett plot

Teaching Experience:

08/13-present

ASSISTANT PROFESSOR

Department of Medicinal Chemistry and Pharmacognosy

University of Illinois at Chicago

- Taught in team-taught courses
 - PHAR 331: Fundamentals of Drug Action I
 - MDCH 561: Principles of Medicinal Chemistry
 - MDCH 571: Organic Medicinal Chemistry II
 - MDCH 507: Drug Discovery, Design and Development
 - PMPR 355: Seminar in Pharmacy Research
 - MDCH 594: Special Topics in Medicinal Chemistry
- Courses coordinated
 - MDCH 595: Seminar in Medicinal Chemistry
 - MDCH 561: Principles of Medicinal Chemistry
- Graduate students mentored
 - Thomas Speltz
 - Benjamin Richardson
 - Brian David
- Postdoctoral fellows mentored
 - Atul Jain (currently Staff Scientist at Northwestern University)
 - Liang Yin
- Graduate student preliminary exam committees
 - Hitisha Patel (2014; adviser: Greg Thatcher)
 - Rui Xiong (2014; adviser: Greg Thatcher)
 - Shuai Wang (2014; adviser: Judy Bolton)
 - Thomas Hanigan (2015; adviser: Pavel Petukhov)
 - Emily Thayer (2015; adviser: Greg Thatcher)
 - Benjamin Richardson (2016; adviser: Terry Moore)
 - Sue Lee (2016; adviser: Greg Thatcher)
 - Laura Rodgers (2016; adviser: Joanna Burdette)
 - Thomas Speltz (2016; adviser: Terry Moore)
- Graduate student dissertation committees
 - Engin Yapici (Ph.D., chemistry, 2014; adviser: Larry Miller)
 - Quyen Nguyen (Ph.D., chemistry, 2014; adviser: Tom Driver)
 - May Fern Toh (Ph.D., pharmacognosy, 2014; adviser: Joanna Burdette)
 - Hao Lei (Ph.D., medicinal chemistry, 2015; adviser: Michael Johnson)
 - Chen Kong (Ph.D., chemistry, 2015; adviser: Tom Driver)
 - Hitisha Patel (Ph.D., medicinal chemistry, 2016; adviser: Greg Thatcher)

- Ronak Gandhi (Ph.D., medicinal chemistry, 2016; adviser: Greg Thatcher)
- Wiktorina Pace (Ph.D., chemistry, 2016, adviser: Laura Anderson)
- Xiaoguang Liu (Ph.D., chemistry, 2016, adviser: Justin Mohr)
- Rui Xiong (Ph.D., medicinal chemistry, 2016, adviser: Greg Thatcher)
- Navendu Jana (Ph.D.; chemistry, 2016, adviser: Tom Driver)
- Research rotation students mentored
 - Daniel Nosal (Spring 2014)
 - Obinna Mbachu (Fall 2014)
 - Ammar Jastiniah (Spring 2015)
 - Ryan DiFalco (Fall 2015)
 - Zamia Siddiqui (Fall 2016)
- Summer undergraduate research fellows (SURF) mentored
 - Ishmael Ochir (Summer 2015 ASPET SURF program, currently Pharm.D. student at Roosevelt University)
 - Ewelina Choma (Summer 2015, 2016 Riback Fellows program, currently Pharm.D. student at UIC)
 - Zamia Siddiqui (Summer 2016, currently Pharm.D./Ph.D. student at UIC)
- Undergraduate research students mentored
 - Patrick Nwanah (2016-present)
- Honors College Thesis students mentored
 - Kirthi Bellamkonda (B.S., 2015, completed M.Sc. at Oxford University; currently M.D. student at Yale University)
- Volunteer students mentored
 - Ewelina Choma (currently PharmD student at UIC College of Pharmacy)
- Honors College Faculty Fellow Mentees
 - Samar Ashrafi (2016-present)
 - Kevin Bueno (2014-2015)
 - Kevin Chung (2014-present)
 - Colin Collery (2016-present)
 - Iliana Guzman (2015-present)
 - Brian Kim (2014-present)
 - Zamia Siddiqui (2015-2016)
 - Vassilena Tsoleva (2015-present)
 - Junhui Zhou (2014-2015)
- Odyssey Scholars
 - Tahnee Muller (Spring, Summer 2016; currently undergraduate student at University of Chicago)
- ResearchHStart Scholars

- Rohit De (Summer 2016; currently Senior student at Whitney Young High School)

- Work study students supervised
 - Andriana Scencirro (2013)
 - Karolina Blasczcuk (2014)

08/03-05/05

GRADUATE TEACHING ASSISTANT

University of Illinois at Urbana-Champaign

- Taught students in General Chemistry I lab and Organic Chemistry I lab
- Tutored in Chemistry Learning Center
- Graded tests, reports and quizzes

08/00-05/01

LABORATORY COORDINATOR

Abilene Christian University; Abilene, Texas

- Collaborated with university professors as co-instructor of first-year chemistry lab courses
- Supervised undergraduate teaching assistants
- Gave pre-lab lectures, chose curricula, wrote tests and quizzes, answered student's questions

08/98-08/99

UNDERGRADUATE TEACHING ASSISTANT

- Prepared laboratories for first and second-year students
- Supervised students in the lab
- Graded quizzes, tests, and reports

Honors/Awards:

- NIGMS Workshop for New Faculty in Organic and Biological Chemistry
- UIC College of Pharmacy P1 Teacher of the Semester (Fall 2014)
- American Association of Colleges of Pharmacy New Investigator Award (2014)
- The Anthony Shuker Scientific Poster Award at the Georgia Life Sciences Summit (2011)
- Emory Specialized Program of Research Excellence (SPORE) in Head and Neck Cancer Career Development Award (2011)
- Pfizer Fellowship Supporting Diversity in Organic Chemistry (2005)
- The Incomplete List of Teachers Ranked as Excellent by Their Students (Fall 2003, Spring 2005)
- University of Illinois Roger Adams Fellowship (2003)
- Abilene Christian University Tommy J. McCord Scholarship for Chemical Research (2000)
- Abilene Christian University Paul C. Witt Award for Chemistry (2000)
- Abilene Christian University Richard Thompson Memorial Scholarship (2000)
- Alpha Chi Honor Society (2000)
- United States Department of Education Robert C. Byrd Honors Scholarship (1996-2000)
- Abilene Christian University Presidential Scholarship (1996-2000)
- Phi Eta Sigma Freshman Honor Society (1996)

Service:

To the Department:

Strategic Plan Committee (2014 ad hoc)
Assistant Professor Hiring committee (2015 ad hoc)
Advisory Committee (2015-2017)
MCP Seminar coordinator (2014)

To the College:

Committee on committees (2014-present)
Diversity Strategic Thinking and Planning Committee (2014-present)
Staff and Faculty Giving Campaign Committee (2014 ad hoc)
Poster Judge for COP Research Day (2014, 2015)
Riback Fellowship proposal reviewer (2014)

To the University:

Graduate College Awards Committee (2015-present)
UICentre leadership team (2013-present)
Honors College Fellow grant proposal reviewer (2015)
Honors College Faculty Fellow (2014-present)
Poster Judge for Undergraduate Research Day (2014, 2015)

To the Profession:

National Medicinal Chemistry Symposium Programming Committee
(2015-2016)

Editorial Board, *AACR Chemistry in Cancer Research* (2016-2019)

Ad hoc manuscript reviewer

- *ACS Combinatorial Science*
- *ACS Medicinal Chemistry Letters*
- *Angewandte Chemie, International Edition*
- *Bioconjugate Chemistry*
- *Bioorganic and Medicinal Chemistry*
- *Bioorganic and Medicinal Chemistry Letters*
- *Biopolymers: Peptide Science*
- *Chembiochem*
- *Chemical Biology and Drug Design*
- *The Chemical Record*
- *Chemical Research in Toxicology*
- *Chemistry - A European Journal*
- *Chemistry Central Journal*
- *ChemistrySelect*
- *Chemmedchem*
- *Drug Discovery Today: Technologies*
- *European Journal of Medicinal Chemistry*
- *Expert Opinion on Therapeutic Patents*
- *Journal of the American Chemical Society*
- *Journal of Medicinal Chemistry*
- *MedChemComm*
- *Medicinal Research Reviews*
- *Scientific Reports*

- *Steroids*

Proposal reviewer, U54 Contraception Centers, ZHD1 DSR-L 50 (04/2017)

Proposal reviewer, Breast Cancer Now (UK) (2015)

Proposal reviewer, Chicago Biomedical Consortium Catalyst Grants (2016)

Proposal reviewer, University of Wisconsin at Milwaukee Research Grant Initiative (2017)

Proposal reviewer, Florida Department of Health Bankhead Coley Research Grants (2016)

Poster Judge MIKI meeting-in-miniature (2014, 2015)

Prior to UIC:

“Encouraging Tomorrow’s Chemists” Chemistry Demonstration group (2007)

Co-chair, Illinois Organic Chemistry Allerton Conference (2006)

Organizing Committee member, Frontiers Symposium in Organic Chemistry (2006)

Organizing Committee member, Illinois Organic Chemistry Allerton Conference (2005)

Planning Committee member, Illinois Organic Area Summer Picnic (2005)

Hiring Committee member, ArQule (2003)

Memberships:

American Association for Cancer Research

American Association of Colleges of Pharmacy

American Association of Pharmaceutical Scientists

American Chemical Society

American Peptide Society

American Society for Pharmacology and Experimental Therapeutics

Rho Chi Pharmacy Honor Society