CURRICULUM VITAE (updated on 06/15/2021)

Guangrong Zheng, PhD

CONTACT INFORMATION

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EDUCATION

1991 - 1995 BS, Medicinal Chemistry
School of Pharmacy, Fudan University, Shanghai, China
Advisor: Dr. Peng Xia

1995 - 2000 PhD, Organic Chemistry
Shanghai Institute of Materia Medica, Chinese Academy of Sciences, Shanghai, China
Advisor: Dr. Junchao Cai

POSTGRADUATE TRAINING

2000 - 2003 Postdoctoral Fellow
Department of Pharmaceutical Sciences, University of Kentucky
Advisor: Dr. Peter A. Crooks

ACADEMIC APPOINTMENTS

2018 - Associate Professor
Department of Medicinal Chemistry, College of Pharmacy, University of Florida

2018 - Member, UF Health Cancer Center, University of Florida

2017 - 2018 Associate Professor
Department of Pharmaceutical Sciences, University of Arkansas for Medical Sciences

2016 - 2018 Member, Host Response and Radiation Sciences Program, Winthrop P. Rockefeller Cancer Institute, University of Arkansas for Medical Sciences

2011 - 2017 Assistant Professor
Department of Pharmaceutical Sciences, University of Arkansas for Medical Sciences

2006 - 2011 Research Assistant Professor
Department of Pharmaceutical Sciences, University of Kentucky

2003 - 2006 Research Associate
Department of Pharmaceutical Sciences, University of Kentucky

AWARDS AND HONORS

1991, 1992 Shanghai Medical University Scholarship
1993 LiZhu Pharmaceuticals Fellowship

1994	Sina-US Squibbs Fellowship
1998, 1999	Outstanding Graduate Student Award
1999	DI-AO Fellowship for PhD candidates of Chinese Academy of Sciences (CAS)
2000	Procter & Gamble Fellowship
2000	CAS Shanghai Branch Graduate Student Academic Symposium Excellent Paper Award
2000	CAS Presidential Award
2009	NIH/NIDA Early Career Award in Chemistry of Drug Abuse and Addiction

PROFESSIONAL ORGANIZATIONS

American Chemical Society (Organic Chemistry and Medicinal Chemistry)
International Cell Senescence Association (ICSA)

TEACHING RESPOSIBILITIES

University of Florida

2021	Coordinator and Instructor, New Approaches in Drug Discovery (PHA 6935)
2020	Instructor, Seminar in Pharmacy Research (PHA 5930)
2019-	Coordinator and Instructor, Drug Design I (PHA 6447)
2018-	Instructor, Principles of Medicinal Chemistry and Pharmacology I (PHA 5439)
	Instructor, Patient Care 2: Introduction to Infectious Disease and Hematology/Oncology (PHA 5782C)
	Instructor, Patient Care 3: Introduction to Cardiovascular and Pulmonary Disease (PHA 5878C)
	Instructor, Drug Design I (PHA 6447)
2018	Coordinator, Seminar in Medicinal Chemistry (PHA 6934)

University of Arkansas for Medical Sciences

2012 - 2017	Instructor, Medicinal and Natural Product Chemistry (PHSC 4254) Pharmacy curriculum
2014 - 2017	Instructor, Pharmacology II (PHSC 4134) Pharmacy curriculum
2017	Instructor, Biological and Cellular Chemistry Medicinal Chemistry (PHSC 7102) Pharmacy curriculum
2012 - 2017	Instructor, Medicinal Chemistry (PSGP 5013) Pharmaceutical Sciences Graduate Course
2017	Instructor, Practice in Drug Discovery and Development (PSGP 6114) Pharmaceutical Sciences Graduate Course
2014 - 2015	Instructor, Clinical and Pharmaceutical Analysis (PSGP 6313) Pharmaceutical Sciences Graduate Course

UNIVERSITY SERVICE

2011-2014	Member of Student Research Committee (UAMS)
2014-2015	Member of Faculty Search Committee (Drug Discovery and Design Position) (UAMS)
2011-2018	Drug Discovery Lab NMR facility Management and Training (UAMS)

2012-2018	Member of Patent and Copyright Committee (UAMS)
2012-2018	Member of Pharmaceutical Sciences Graduate Program Advisory Committee (UAMS)
2017-2018	Member of Admissions Committee (UAMS)
2019-	Member of Admissions Committee (UF)

PROFESSIONAL SERVICE

NIH Review

NIA Special Emphasis Panel Member	ZAG1 ZIJ-8 (J1), Cellular Senescence, Sep 06, 2018
NCI Special Emphasis Panel Member	ZCA1 TCRB-V (M1), SEP-4: NCI Clinical and Translational R21 and Omnibus R03 Review, Mar 04/05, 2021
NCI Special Emphasis Panel Member	ZCA1 TCRB-V (O1) R: NCI Clinical and Translational R21 and Omnibus R03 Review, Jun 10/11, 2021

Review manuscripts for scientific journals

ACS Medicinal Chemistry Letters, Advanced Synthesis and Catalysis, Bioorganic Chemistry, Bioorganic & Medicinal Chemistry, Bioorganic & Medicinal Chemistry Letter, Chemical Biology & Drug Design, Chemical Communication, Chemical Reviews, ChemMedChem, Dyes and Pigments, European Journal of Medicinal Chemistry, Frontiers Cell and Developmental Biology, Future Medicinal Chemistry, Green Chemistry, Journal of Agricultural and Food Chemistry, Journal of Heterocyclic Chemistry, Journal of Medicinal Chemistry, Journal of Molecular Graphics and Modelling, Journal of Natural Product, Journal of Organic Chemistry, Journal of Pharmaceutical Technology & Drug Research, MedComm, Medicinal Chemistry Communication, Medicinal Chemistry Research, Molecular Diversity, Molecular Therapy-Oncolytics, Nature Reviews Chemistry, Reaction Chemistry & Engineering, Royal Society Open Science, Synthetic Communication, Tetrahedron, Tetrahedron Letter, Trends in Pharmacological Sciences.

External Examiner for PhD Thesis: Andhra University, India 2008-present

Editorial Board:
Exploration of Targeted Anti-tumor Therapy

Regional Medicinal Chemistry Society of the American Chemical Society

2013	Member of the Organization Committee, 40th Annual MALTO Medicinal Chemistry-Pharmacognosy Meeting

Central Arkansas Section of the American Chemical Society

2014	Member of the Program Committee
2015-2017	Chair of the Awards Committee

CONSULTANCY and ENTREPRENEURSHIP

2014-2018	Unity Biotechnology, San Francisco, CA (consultant)
2018-	Dialectic Therapeutics, Dallas, TX (co-founder and scientific advisor)

GRANTS AND CONTRACTS

Active

Sponsored Research Agreement | Role: PI | 04/01/2021-03/31/2022
Dialectic Therapeutics | $300,000 (total) | 5% effort
Project Title: Selecting a drug development candidate for cancer treatment

R01 CA260239 | Role: MPI (with Zhang/Zhou) | 04/01/2021-03/31/2026
NIH/NCI | $2,067,494 (direct) | 10% effort
Project Title: Proteolysis-targeting chimera against BCL-X_L inhibits breast cancer metastasis
This project is to evaluate BCL-X_L PROTAC degraders in breast cancer metastasis models.

W81XWH2110005 | Role: PI (partnering with Zhang) | 01/01/2021-12/31/2023
US Army Med Res Acquisition | $1,142,900 (total) | 10% effort
Project Title: Developing novel PROTAC degraders for breast cancer therapy
This project is to carry out structure-activity relationship studies to improve the potency and selectivity of PROTAC degraders targeting tumor infiltrating Tregs.

Sanofi - iAward | Role: Co-PI | 01/01/2021-12/31/2021
Sanofi | $125,000 (total) | 3% effort
Project Title: Validating NR4A1 as a cancer target

R56 AG065635 | Role: PI | 09/30/2020-08/31/2021
NIH/NIA | $378,140 (total) | 16% effort
Title: Identifying Novel Senolytic Agents and Molecular Targets
This project is to develop novel senolytic agents and identify molecular targets that are important for survival of senescent cells.

U19 AI150574 (UF subaward) | Role: Co-I | 06/20/2020-05/31/2025
NIH/NIAID | $723,404 (total) | 5% effort
Project Title: Intercollaborative Radiation Countermeasure (INTERACT) consortium for advanced development of medical countermeasures to mitigate/treat acute and delayed radiation syndromes
This project is to evaluate whether senolytics can effectively mitigate and treat acute and delayed radiation syndromes.

R01 CA241191 | Role: MPI (with Zhou/Konopleva) | 04/01/2020-03/31/2025
NIH/NCI | $2,541,700 (total) | 12% effort
Project Title: Inhibition of Bcl-xL by targeted degradation
This project is to carry out structure-activity relationship studies to improve the potency and safety profile of Bcl-xL PROTAC degraders as potential treatment of T-cell acute lymphoblastic leukemia; and to optimize the linker unit of the lead Bcl-xL PROTACs to improve physicochemical and pharmacokinetic properties.

R01 CA242003 | Role: MPI (with Zhou/Trevino) | 09/01/2019-06/30/2024
NIH/NCI | $2,628,320 (total) | 12% effort
Project Title: Use of Bcl-xL proteolysis targeting chimeras to treat pancreatic cancer
This project is to investigate the therapeutic potential of platelet-sparing BCL-xL PROTAC degraders for the treatment of drug resistant pancreatic cancer

R01 AG063801 Role: MPI (with Zhou/Elisseeff) 07/01/2019-06/30/2024
NIH/NIA $2,541,687 (total) 12% effort
Project Title: Develop Bcl-xL proteolysis targeting chimeras as safer and better senolytics
This project is to develop BCL-XL PROTAC degraders as senolytic agents for the treatment of osteoarthritis.

R01 CA219836 Role: Co-I (Zhou, PI) 07/01/2017-06/30/2022
NIH/NCI $1,997,367 (total) 16% effort
Project Title: Role of Senescent Cells in Radiation-Induced Pulmonary Fibrosis
This project is to study the mechanism of radiation-induced pulmonary fibrosis (RIPF) and develop novel senolytic agents to prevent or treat RIPF.

Pending

R01 Role: Co-I (Zhang, PI) 04/01/2022-03/31/2027
NIH/NCI $3,049,334 (total) 3% effort
Project Title: Exploring novel therapeutic strategies for combinatory therapy (Submitted on 06/07/2021)

R01 Role: Co-I (Cui/Zhang, MPI) 04/01/2022-03/31/2027
NIH/NCI $3,694,109 (total) 3% effort
Project Title: Chemical tracing of senescence during metastasis (Submitted on 06/07/2021)

DOD Concept Award Role: Collaborator (Khan, PI) 09/01/2021-08/31/2022
US Army Med Res Acquisition $152,500 (direct) 0% effort
Project Title: Co-targeting Bcl-xL and KRAS(G12C) for enhanced therapeutic efficacy in non-small cell lung cancer (Submitted on 04/20/2021)

DOD Breakthrough Award Level II Role: PI (partnering with Liao) 09/30/2021-09/29/2024
US Army Med Res Acquisition $1,500,000 (direct) 15% effort
Project Title: Development of first-in-class HDAC3 selective degraders for treating breast cancer (Submitted on 03/25/2021)

DOD Breakthrough Award Level II Role: Co-I (Cui/Zhang, partnering PIs) 09/30/2021-09/29/2024
US Army Med Res Acquisition $1,500,000 (direct) 3% effort
Project Title: Chemical tracing of therapy-induced senescence during breast cancer metastasis (Submitted on 03/25/2021)

U54 (UF subaward) Role: Co-I (Zhou, PI) 12/01/2021-11/30/2026
NIH/NIA $731,593 (total) 5% effort
Project Title: An atlas of human cellular senescence in the musculoskeletal system (Submitted on 03/12/2021)

Completed

R21 CA223371 Role: PI 09/01/2018-08/31/2020
NIH/NCI $364,857 (total) 20% effort
Project Title: Development of Small Molecule Bcl-2 Protein Degraders for Cancer Treatment
This project was to employ an emerging drug discovery technology, PROTAC, coupled with an innovative

concept of E3 ligase-based tissue specific induction of targeted protein degradation, to overcome the dose-limiting thrombocytopenia associated with Bcl-2/Bcl-xL inhibitors.

R56 AG056372-01 Role: PI 09/01/2017-08/31/2019
NIH/NIA $371,250 (total) 25% effort
Project Title: Discovery and Target Identification of Senolytic Agents
This project was to develop novel senolytic agents and identify molecular targets that are important for survival of senescent cells.

P20GM109005 Role: Project Leader 04/01/2015-03/31/2018
COBRE--Center for Studies of Host Response to Cancer Therapy (Hauer-Jensen, Director)
NIH/NIGM $1,341,000 (total to my lab) 50% effort
Project Title: Development of Novel Tocotrienol-Based Radioprotective Agents
This project proposed to design and synthesize tocotrienol-based analogues with improved bioavailability and metabolic stability as radioprotective agents.

Development Enhancement Awards Role: PI 05/01/2017-04/30/2018
UAMS Research Foundation $25,000
This intramural grant was to assist us with the collection of additional data that directly responds to reviewers' comments in order to increase the competitiveness of our revised R01 application.

Sponsor Research Agreement Role: Co-PI (Zhou, PI) 11/01/2014-02/28/2018
UNITY Biotechnology $1,750,000 (total) 10% effort
Project Title: Development of Senolytic Agents
In collaborating with industry partner, this project is to discover and develop senolytic agents, referring to small molecules that can selectively kill senescent cells, as potential "anti-aging" drug.

U01 DA013519 Role: Co-I (Dwoskin, PI) 09/01/2012-06/30/2017
NIH/NIDA $3,173,663 (total) 40%-10% effort
Project Title: Development of Novel Therapies for Methamphetamine Abuse
This project proposed to optimize our lead compound GZ-793A with the goal of identifying analogs with the required pharmacological properties, druggability, increased oral bioavailability, and acceptable pharmacokinetic profile.

AR Med Res Endowment Award Role: PI 01/01/2014-06/30/2015
UAMS Foundation $10,000
Project Title: Development of Tocotrienol Analogues with Increased Metabolic Stability

R01 10620468 Role: Co-I (Crooks, PI) 07/01/2011-06/30/2016
NIH/NCI $1,286,519 (total) 30%-10% effort
Project Title: Novel Melampomagnolide B-Based Prodrugs for the Treatment of Leukemia

R21 DA030667 Role: PI 07/01/2011-05/31/2014
NIH/NIDA $383,812 (total) 20% effort
Project Title: Development of M5 Selective Muscarinic Antagonists

R44 AT003365 Role: Co-I (Beavers, PI) 09/01/2012-08/31/2013
NIH/NCCAM $463,486 (total) 5% effort
Project Title: Development of Research Grade Goldenseal Phase II

R03 DA025948 Role: PI 02/15/2009-01/31/2012
NIH/NIDA $364,419 (total) 50% effort
Project Title: Development of M_5 Muscarinic Acetylcholine Receptor Antagonists

Pilot Project Role: PI 07/01/2008-06/30/2009
University of Kentucky Center for Drug Abuse Research Translation $20,000
Project Title: Antagonists for Muscarinic Acetylcholine Receptors

Contract Research Role: PI 03/01/2011- 06/30/2011
NeoCytex BioPharma, Inc $7,000
Project Title: Synthesis of Neuroregenerative Compounds

PEER-REVIEWERED PUBLICATIONS

1. Lu, W.; **Zheng**, **G**.; Cai, J.* First total synthesis of panaxytriol, a potent antitumor agent isolated from *Panax ginseng*. *Synlett.* **1998**, 737-738. 10.1002/chin.199912252
2. Lu, W.; **Zheng**, **G**.; Gao, D.; Cai, J.* Stereoselective synthesis of 3(*R*)- and 3(*S*)-hydroxyeicos-4(*E*)-en-1-yne, a component of the marine sponge *Cribrochalina Vasculum*. *Chin. Chem. Lett.* **1998**, *9*, 365-367.
3. Lu, W.; **Zheng**, **G**.; Haji, A. A.; Cai, J.* Synthesis of 3(*R*)-(*t*-butyldiphenylsilyloxy)-1-penten-4-yne, via an improved procedure for aldehyde-to-alkyne homologation. *Chin. Chem. Lett.* **1998**, *9*, 621-623.
4. **Zheng**, **G**; Lu, W; Haji, A. A.; Cai, J.* Total synthesis of 3(*R*)-panaxynol. *Chin. Chem. Lett.* **1998**, *9*, 1079-1080.
5. Lu, W.; **Zheng**, **G**.; Haji, A. A.; Cai, J.* First total synthesis of optically active panaxydol, a potential antitumor agent isolated from *Panax ginseng*. *Tetrahedron Lett*. **1998**, *39*, 9521-9522. 10.1016/S0040-4039(98)02212-6
6. **Zheng**, **G**.; Lu, W.; Haji A. A.; Cai, J.* Absolute configuration of falcarinol, a potent antitumor agent commonly occurring in natural plants. *Tetrahedron Lett*. **1999**, *40*, 2181-2182. 10.1002/chin.199925224
7. **Zheng**, **G**.; Lu, W.; Cai, J.* Stereoselective total synthesis of (3*R*,8*S*)-falcarindiol, a common polyacetylenic compound from umbellifers. *J. Nat. Prod.* **1999**, *62*, 626-628. 10.1021/np980418z
8. Lu, W.; **Zheng**, **G**.; Cai, J.* Syntheses of two enantiomers of eicos-(4*E*)-en-1-yn-3-ol, a bioactive component of the marine sponge *Cribrochalina vasculum. Tetrahedron* **1999**, *55*, 4649-4654. 10.1016/S0040-4020(99)00163-5
9. Lu, W.; **Zheng**, **G**.; Shen, J.; Cai, J.* Synthesis of the (3*R*,9*S*,10*S*)-diastereoisomer of panaxytriol, a potent antitumor polyacetylene from *Panax ginseng. Chin. Chem. Lett.* **1999**, *10*, 201-204.
10. Lu, W.; **Zheng**, **G**.; Gao, D.; Cai, J.* Syntheses of two diastereoisomers of panaxytriol, a potent antitumor agent isolated from *Panax ginseng. Tetrahedron* **1999**, *55,* 7157-7168. 10.1016/S0040-4020(99)00352-X
11. Xu, L.; Wu, X.; **Zheng**, **G**.; Cai, J.* First total synthesis of optically active oplopandiol acetate, a potent antimycobacterial polyyne isolated from *Oplopanax horridus. Chin. Chem. Lett.* **2000**, *11*, 213-216.
12. **Zheng**, **G**.; Lu, W.; Cai, J.* Synthesis of the C5-C10 segment of taurospongin A. *Chin. Chem. Lett.* **2000**, *11*, 663-664.
13. Xu, L.; **Zheng**, **G**.; Xia, M.; Cai, J.* Synthesis of 2-methoxy-6-oxo-1,4-diazaphosphorinane-2-oxide, a new potential antitumor phosphorus heterocycle compound. *Chin. Chem. Lett.* **2000**, *11*, 665-666.
14. **Zheng**, **G**.; Lu, W.; Cai, J.* Synthetic study towards taurospongin A: Wittig olefination approach to the core structure. *Chin. Chem. Lett.* **2001**, *12*, 961-964.
15. **Zheng**, **G**.; Dwoskin, L. P.; Crooks, P. A.* The preparation of 2-arylmethylidene-8-methyl-8-azabicyclo [3.2.1]octan-3-ones. *Synth. Comm.* **2004**, *34*, 1931-1942. 10.1081/SCC-120037905
16. **Zheng**, **G**.; Parkin, S.; Dwoskin, L. P.; Crooks, P. A.* Two isomers of 2,4-dibenzyl-8-azabicyclo[3.2.1] octane-3-ol. *Acta Cryst. C*. **2004**, *C60*, o9-o11. 10.1107/s0108270103026520

17. Miller, D. K.; Crooks, P. A.; **Zheng**, **G**.; Grinevich, V. P.; Norrholm, S.; Dwoskin, L. P.* Lobeline analogs with enhanced affinity and selectivity for plasmalemma and vesicular monoamine transporters. *J. Pharmacol. Exp. Ther.* **2004**, *310*, 1035-1045. 10.1124/jpet.104.068098

18. **Zheng**, **G**.; Dwoskin, L. P.; Crooks, P. A.* Indirect trapping of the retroconjugate addition reaction intermediate involved in the epimerization of lobeline: application to the synthesis of (–)-sedamine. *J. Org. Chem.* **2004**, *69*, 8514-8517. PMCID: PMC3597091. 10.1021/jo048848j

19. **Zheng**, **G**.; Dwoskin, L. P.; Deaciuc, A. G.; Norrholm, S. D.; Crooks, P. A.* Defunctionalized lobeline analogues: structure-affinity of novel ligands for the vesicular monoamine transporter. *J. Med. Chem.* **2005**, *48*, 5551-5560. PMCID: PMC3617589. 10.1021/jm0501228

20. **Zheng**, **G**.; Dwoskin, L. P.; Deaciuc, A. G.; Zhu, J.; Jones, M. D.; Crooks, P. A.* Lobelane analogues as novel ligands for the vesicular monoamine transporter-2. *Bioorg*. *Med*. *Chem*. **2005**, *13*, 3899-3909. PMCID: PMC3593046. 10.1016/j.bmc.2005.04.013

21. Papke, R. L.;* **Zheng**, **G**.; Horenstein, N. A.; Dwoskin, L. P.; Crooks, P. A. The characterization of a novel rigid nicotine analog with α7-selective nAChR agonist activity and the modulation of agonist properities by boron inclusion. *Bioorg*. *Med*. *Chem*. *Lett*. **2005**, *15*, 3874-3880. PMCID: PMC3593044. 10.1016/j.bmcl.2005.05.118

22. **Zheng**, **G**.; Dwoskin, L. P.; Deaciuc, A. G.; Crooks, P. A.* Synthesis and evaluation of a series of tropane analogues as novel vesicular monoamine transporter-2 ligands. *Bioorg. Med. Chem. Lett.* **2005**, *15*, 4463-4466. PMCID: PMC3602420. 10.1016/j.bmcl.2005.07.032

23. **Zheng**, **G**.; Dwoskin, L. P.; Crooks, P. A.* Vesicular monoamine transporter 2: role as a novel target for drug development. "NIDA -AAPS Symposium: Mechanisms of Toxicity, Toxicokinetics and Medical Consequences of Drugs of Abuse" *AAPS J*. **2006**, *8*, E682-692. Invited paper. PMCID: PMC2751365. 10.1208/aapsj080478

24. **Zheng**, **G**.; Horton, D. B.; Deaciuc, A. G.; Dwoskin, L. P.; Crooks, P. A.* Des-keto lobeline analogs with increased potency and selectivity at dopamine and serotonin transporters. *Bioorg. Med. Chem. Lett.* **2006**, *16*, 5018-5021. PMCID: PMC3934794. 10.1016/j.bmcl.2006.07.070

25. Zheng, F.; **Zheng**, **G**.; Deaciuc, A. G.; Zhan C. G.; Dwoskin, L. P.; Crooks, P. A.* Computational neural network analysis of the affinity of lobeline and tetrabenazine analogs for the vesicular monoamine transporter-2. *Bioorg*. *Med*. *Chem*. **2007**, *15*, 2975-2992. PMCID: PMC2001191. 10.1016/j.bmc.2007.02.013

26. Dwoskin, L. P.;* Joyce, B. M.; **Zheng**, **G**.; Neugebauer, N. M.; Manda, V. K.; Lockmanc, P.; Papke, R. L.; Bardo, M. T.; Crooks, P. A. Discovery of a novel nicotinic receptor antagonist for the treatment of nicotine addiction: 1-(3-Picolinium)-12-triethylammonium-dodecane dibromide (TMPD). *Biochem. Pharmacol*. **2007**, *74*, 1271-1282. PMCID: PMC2104778. 10.1016/j.bcp.2007.07.021

27. **Zheng**, **G**.; Zhang, Z.; Pivavarchyk, M.; Deaciuc, A. G.; Dwoskin, L. P.; Crooks, P. A.* *bis*-Azaaromatic quaternary ammonium salts as antagonists at nicotinic receptors mediating nicotine-evoked dopamine release: an investigation of binding conformation. *Bioorg*. *Med*. *Chem*. *Lett*. **2007**. *17*, 6734-6738. PMCID: PMC3934791. 10.1016/j.bmcl.2007.10.052

28. **Zheng**, **G**.; Sumithran, S. P.; Deaciuc, A. G.; Dwoskin, L. P.; Crooks, P. A.* *tris*-Aazaaromatic quaternary ammonium salts: novel templates as antagonists at nicotinic receptors mediating nicotine-evoked dopamine release. *Bioorg*. *Med*. *Chem*. *Lett*. **2007**. *17*, 6701-6706. PMCID: PMC3954472. 10.1016/j.bmcl.2007.10.062

29. Papke, R. L.;* Dwoskin, L. P.; Crooks, P. A.; **Zheng**, **G**.; Zhang, Z.; McIntosh, J. M.; Stokes, C. Extending the analysis of nicotine receptor antagonists with the study of α6 nicotinic receptor subunit chimeras. *Neuropharmacol*. **2008**, *54*, 1189-1200. PMCID: PMC2494738. 10.1016/j.neuropharm.2008.03.010

30. **Zheng**, **G**.; Dwoskin, L. P.; Deaciuc, G.; Crooks, P. A.* Synthesis and evaluation of a series of homologues of lobelane at the vesicular monoamine transporter-2. *Bioorg*. *Med*. *Chem*. *Lett*. **2008**, *18*, 6509-6512. PMCID: PMC3652799. 10.1016/j.bmcl.2008.10.042

31. Zhang, Z.; **Zheng**, **G**.; Pivavarchyk, M.; Deaciuc, A. G.; Dwoskin, L. P.; Crooks, P. A.* *Tetrakis*-azaaromatic quaternary ammonium salts: Novel subtype-selective antagonists at neuronal nicotinic receptors that mediate nicotine-evoked dopamine release. *Bioorg*. *Med*. *Chem*. *Lett*. **2008**. *18*, 5753-5757. PMCID: PMC3437627. 10.1016/j.bmcl.2008.09.084

32. Zheng, F.; **Zheng**, **G**.; Deaciuc, A. G.; Zhan, C. G.; Dwoskin, L. P.; Crooks, P. A.* Computational neural network analysis of the affinity of N-n-alkyl nicotinium salts for the α4β2* nicotinic acetylcholine receptor. *J*. *Enzyme Inhib*. *Med*. *Chem*. **2009**, *24*, 157-168. PMCID: PMC3652805. 10.1080/14756360801945648

33. **Zheng**, **G**.; Dwoskin, L. P.; Deaciuc A. G.; Crooks, P. A.* Stereocontrolled synthesis and pharmacological evaluation of 2,6-cis-diphenyl-1-azabicyclo[2.2.2]octanes as lobelane analogues. *J. Org. Chem.* **2009**, *74*, 6072-6076. PMCID: PMC3954495. 10.1021/jo901082r

34. Lopez-Hernandez, G. Y.; Thinschmidt, J. S.; **Zheng**, **G**.; Zhang, Z.; Crooks, P. A.; Dwoskin, L. P.; Papke, R. L.* Selective inhibition of acetylcholine-evoked responses of alpha7 neuronal nicotinic acetylcholine receptors by novel tris- and tetrakis-azaaromatic quaternary ammonium antagonists. *Mol*. *pharmacol*. **2009**, *76*, 652-666. PMCID: PMC2730394. 10.1124/mol.109.056176

35. Nickell, J. R.; Krishnamurthy, S.; Norrholm, S.; Deaciuc, G.; Siripurapu, K. B.; **Zheng**, **G**.; Crooks, P. A.; Dwoskin, L. P.* Lobelane inhibits methamphetamine-evoked dopamine release via inhibition of the vesicular monoamine transporter-2. *J. Pharmacol. Exp. Ther.* **2010**, *332*, 612-621. PMCID: PMC2812121. 10.1124/jpet.109.160275

36. **Zheng**, **G**.; Parkin, S.; Dwoskin, L. P.; Crooks, P. A.* (2S,6S)-1-Methyl-2,6-trans-distyrylpiperidinium chloride. *Acta Crystal*. *Section E*: *Structure Reports Online.* **2010**, *E66*, o78. PMCID: PMC2980042. 10.1107/S1600536809049587

37. **Zheng**, **G**.; Parkin, S.; Dwoskin, L. P.; Crooks, P. A.* 1-Methyl-2,6-cis-distyrylpiperidine. *Acta Crystal*. *Section E*: *Structure Reports Online.* **2010**, *E66*, o77. PMCID: PMC2980188. 10.1107/S1600536809049617

38. **Zheng**, **G**.; Zhang, Z.; Lockman, P. R.; Geldenhuys, W. J.; Allen, D. D.; Dwoskin, L. P.; Crooks, P. A.* Bis-azaaromatic quaternary ammonium salts as ligands for the blood-brain barrier choline transporter. *Bioorg*. *Med*. *Chem*. *Lett*. **2010**, *20*, 3208-3210. PMCID: PMC3725989. 10.1016/j.bmcl.2010.04.098

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PATENT ACTIVITY

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25. Zhang, W.; **Zheng**, **G**.; Zhou, D.; Xiao, Y. Targeting NR4A1 using proteolysis targeting chimeras. Provisional patent filed on 08-28-2020. Appl. # 63/071,733.

Invited Talks (since joining UF)

"Discovery and target identification of piperlongumine-based senolytic agents." International Cell Senescence Association (ICSA) 2018 Conference, Montreal, Canada; 07-11-2018.

"Discovery of senolytic agents." The Eighth Symposium of Science, Engineering and Biomedicine (8th SSEBM), Clearwater, FL; 09-02-2018.

"Drug discovery based on PROTAC technology." University of Florida, UF Health Cancer Center, Cancer Therapeutics & Host Response (CTHR) Program Retreat; 10-23-2018.

"Bcl-xL proteolysis-targeting chimeras are potent senolytic and anti-cancer agents." University of Florida, College of Pharmacy, PharmTalk Presentation with Daohong Zhou (co-presenter of collaborative project within UF COP); 01-19-2019.

"Discovery of PROTAC Bcl-xL degraders." 3rd CNPD3 UF Drug Discovery Symposium, Gainesville, FL; 04-25-2019.

"Discovery of Bcl-xL degraders: a unique application of PROTAC technology." Shanghai Institute of Materia Medica, Chinese Academy of Sciences, Shanghai, China; 07-29-2019.

"Discovery of VMAT2 modulators as potential treatments for methamphetamine use disorders." Fall 2019 ACS National Meeting, San Diego, CA; 08-25-2019.

"Discovery of Bcl-xL degraders: a PROTAC strategy for tissue selective targeting" Expanding Chemical & Druggable Space, World Pharma Week, Boston, MA; June 2-4, 2020. Cancelled due to COVID-19.

"Discovery and development of senotherapeutic agents for clinical translation" NCI Workshop: Radiation, Senescence, and Cancer, NCI, Shady Grove, Aug 10-11, 2020. Virtual Event due to COVID-19.

"Discovery of Bcl-xL degraders: a PROTAC strategy for tissue selective targeting" Ubiquitin-Induced Targeted Protein Degradation. 15th Annual Drug Discovery Chemistry. San Diego, CA. Aug 25-28, 2020. Virtual Event.

"Expanding PROTAC applications by identifying cell- and disease-specific E3 ligases" 3rd Targeted Protein Degradation Summit. Oct 13, 2020. Virtual Event.

"Targeted degradation of Bcl-xL and beyond" 2020 Florida Academic Cancer Center Alliance (FACCA) Retreat. Oct 28-29, 2020. Virtual Event.

"Discovery of senolytics for clinical translation" University of Florida Institute on Aging. Feb 16, 2021.

"Using PROTAC approach to address the platelet toxicity associated with Bcl-xL inhibitors" Chemistry to the Clinic session, Part 1: Strategies in Developing Safer Oncology Drugs. AACR Annual Meeting. May 17-21, 2021. Virtual Event.

"Discovery and development of Bcl-xL PROTACs for cancer therapy" AAPS PharmSci 360 Conference. Philadelphia, PA. Oct 19, 2021.

PUBLISHED ABSTRACTS AND POSTER PRESENTATIONS

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