CURRICULUM VITAE

Timothy E. Long, Ph.D.
Associate Professor
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I. Education

12/2003	Ph.D. in Chemistry University of South Florida, Tampa, FL Advisor, Professor Edward Turos
08/1999	B.S. in Biology University of South Florida, Tampa, FL

II. Positions and Employment

04/2020-	Graduate Studies Director School of Pharmacy Marshall University, Huntington, WV
07/2019-	Associate Professor Department of Pharmaceutical Science & Research Marshall University, Huntington, WV
08/2014-	Adjunct Faculty Member Department of Biomedical Sciences Marshall University, Huntington, WV
08/2014-19	Research Staff Associate Huntington VA Medical Center Huntington, WV
05/2013-19	Assistant Professor Department of Pharmaceutical Science & Research Marshall University, Huntington, WV
08/2006-13	Assistant Professor Department of Pharmaceutical & Biomedical Sciences University of Georgia, Athens, GA
01/2004-06	Postdoctoral Fellow (Professor Marvin J. Miller) Department of Chemistry & Biochemistry University of Notre Dame, Notre Dame, IN
05/2002-03	Graduate Research Assistant (Professor Edward Turos) Department of Chemistry University of South Florida, Tampa, FL
08/1999-02	Graduate Teaching Assistant Department of Chemistry University of South Florida, Tampa, FL

III. Professional Affiliations

2015-17	American Association of Pharmaceutical Scientists (AAPS), member
2011-	Phi Delta Chi Professional Pharmacy Fraternity, member and advisor

2003-2015 American Chemical Society (ACS), member

IV. Recognitions

2020 Dean's Award for Research Excellence, Marshall School of Pharmacy
2018 Instructor of the Year Award, P2 Class, Marshall School of Pharmacy
2018 Course Team of the Year Award, P2 Class, Marshall School of Pharmacy
2017 Instructor of the Year Award, P2 Class, Marshall School of Pharmacy
2017 Course Team of the Year Award, P2 Class, Marshall School of Pharmacy
2016 Course Team of the Year Award, P2 Class, Marshall School of Pharmacy
2013 Faculty of the Year, Phi Delta Chi Professional Pharm. Fraternity, Alpha Iota Chapter
2012 Faculty of the Year, Phi Delta Chi Professional Pharm. Fraternity, Alpha Iota Chapter
2002 Fred L. & Helen M. Tharp Scholarship

V. Research Interests

My lab in the Marshall University School of Pharmacy is focused on discovering new treatment strategies for multidrug-resistant infections. We are currently investigating the repurposing potential of disulfiram (Antabuse) to treat vancomycin-resistant *Staphylococcus aureus* and fluconazole-resistant *Candida* infections. In *S. aureus*, it was discovered that disulfiram is able to lower the minimum inhibitory concentration (MIC) of vancomycin to increase it susceptibility to this first-line antibiotic for MRSA infections. Mechanistic studies have revealed that disulfiram functions as an antimetabolite and this action may counteract the vancomycin-resistance mechanism in *S. aureus*. In *Candida*, disulfiram was found to be a fungicidal agent and have synergism with copper, but through a fungistatic mechanism. The contrasting mechanisms are also being investigated through pharmacological studies.

VI. Teaching and Research Activities

a. Didactic Courses - Marshall University:

1. PHAR 542: Immunology and Medical Microbiology (2014 to present): First year Pharm.D. curriculum course taught every Fall semester. The course is divided into 2 sections: Medical Microbiology and Immunology. I am responsible for medical microbiology portion
2. PHAR 661/761: Therapeutics II/V (2013 to present): Team-taught second year Pharm.D. curriculum course. I have served as course coordinator between 2014-present and I teach on the pathophysiology of infectious diseases, medicinal chemistry, and the pharmacology of antimicrobials.
3. PHAR 641 Therapeutics I (OTC): First year Pharm.D. curriculum course taught every spring semester. In this team-taught course with clinical faculty, I teach the pathophysiology and pharmacology content related to illnesses that are treated with non-prescription therapies.
4. PHAR 730 Therapeutics 8: Third year Pharm.D. curriculum course taught every spring semester covering skin, eye and muscle diseases. I teach the pathophysiology and pharmacology content related to infections and inflammatory skin diseases.

b. Didactic Courses - University of Georgia:

1. PHRM 4180: Drug Therapy of Infectious Disease (2007-2012): Pharm.D. curriculum course that is taught every Fall semester. The class size ranges from 130-140 students and meets two times per week for 15 weeks. The course is divided into 3 sections: Medical Microbiology (5 weeks); Antimicrobials (5 weeks); and Clinical Microbiology (5 weeks). I was responsible for teaching the first two sections (22 lectures) and served as the course coordinator.
2. PHRM 8210: Methods in Synthetic Organic Chemistry, Advance Topics in the Pharmaceutical and Biomedical Sciences (2011): Journal-based discussion courses on modern methods of organic synthesis. I served as course coordinator and was responsible for the class lectures.
3. PHRM 8200: Graduate Seminar (2011): Seminar course required of all graduate students in the Pharmaceutical and Biomedical Sciences program. Team-taught course. My role during the spring 2011 semester was to assist in arranging outside speakers for the weekly seminar series.
4. PHRM 8010: Biochemical Targets of Drug Design (2009): Graduate lecture course that focused on the mechanism of actions of drugs. The class met two times per week for 15 weeks. I served as course coordinator and was responsible for the class lectures.

5. PHRM 8020/8030: Principles of Pharmaceutical and Biomedical Sciences (2008-2012): A departmental curriculum course taught by multiple faculty members that is taken by first-year graduate students every fall and spring as an introduction to pharmaceutical and biomedical sciences pertaining to drug development. My contributions were lectures on microbiology, immunology, target validation, binding affinity determination, combinatorial libraries, high throughput screening, and medicinal chemistry.

c. Major Professor for M.S. and Ph.D. Students:

1. Xiao Lu, Ph.D. student (01/08-08/12); Dissertation Title: "The Design and Synthesis of Heteroatom-Containing Small Molecule for the Chemotherapy of Infectious Diseases" (link); postdoctoral researcher in the laboratory of Dr. Raymond Schinazi at Emory University, Atlanta, GA (08/12-07/15) and currently a Research Associate in The National Center for Advancing Translational Science at NIH
2. Sravan Kumar Patel, M.S. student, University of Georgia, College of Pharmacy, (01/08-07/09); Thesis Title: "Synthesis of Vinylglycines and Haloenol Lactones" (link); went on to complete a Ph.D. at Duquesne University, Pittsburgh, PA and postdoctoral fellow at the University of Pittsburgh. Currently an Assistant Professor in the Department of Pharmaceutical Sciences and the Rohan Laboratory in the School of Pharmacy at the University of Pittsburgh
3. Ali Altharawi, M.S. student, University of Georgia, College of Pharmacy, (03/12-05/13); Thesis Title: "Design and synthesis of NADH mimics that target mitochondrial electron transport of plasmodium parasites (link)"; Completed his thesis research in my lab. Dr. Warren Beach was reassigned as major professor after I moved to Marshall University; continued graduate training in the Ph.D. program at Kings College London and is now an Assistant Professor in the College of Pharmacy at Prince Sattam Bin Abdulaziz University, Saudi Arabia.
4. Yogesh Meka, M.S. student, Marshall University, School of Pharmacy, (09/21-05/22) Thesis Title: "Pharmacology of disulfiram as an antibacterial agent" (link)
5. Surya Teja Naidu. M.S. student, Marshall University, School of Pharmacy, (09/22-12/23) Thesis Title: "Effects of disulfiram on the metabolome of MRSA (link)
6. Surya Karuturi, M.S. student, Marshall University, School of Pharmacy, (01/24-present)

d. Thesis and Dissertation Advisory Committee Member:

1. Parvathy (Eva) V Das, Ph.D. student, Marshall University, School of Medicine
2. Sarah Evans, Ph.D. student, Marshall University, School of Medicine
3. Swetha Peesari, M.S. student, Marshall University, School of Pharmacy
4. Denise Dawley, M.S. student, Marshall University, School of Pharmacy
5. Lexie Keding, Ph.D. student, Marshall University, School of Medicine
6. Roy Al Ahmar, Ph.D. student, Marshall University, School of Medicine
7. Laura Hanold, Ph.D. student, University of Georgia, College of Pharmacy
8. Cary McGinnis, Ph.D. student, University of Georgia, College of Pharmacy
9. Jason N. Mock, Ph.D. student, University of Georgia, College of Pharmacy
10. Feng Liang, Ph.D. student, University of Georgia, College of Pharmacy
11. Brigitte E. Townsend, M.S. student, University of Georgia, College of Pharmacy

e. Research Supervisor:

1. Emily Hissom, B.S. Biology student, 2023 WV-INBRE Summer Research Program, Charleston University, 5/23-8/23
2. Hayden Hess, B.S. Biology student, 2023 WV-INBRE Summer Research Program, West Virginia Wesleyan University 5/22-8/22.
3. Hannah Carreon, Pharm.D. student, Marshall University 5/21-8/21
4. Cameron Rice, Pharm.D. student, Marshall University, 7/20-8/20
5. Katie Watson, Pharm.D. student, Marshall University, 7/20-8/20
6. Taylor Riedel, Pharm.D. major, Marshall University, 1/20-3/20.
7. Claire Shanholtzer, Pharm.D./M.S. Pharm Sci major, Marshall University 8/20-5/21
8. Alex Lewis, Pharm.D. major, Marshall University, 1/20-3/20.
9. Kaitlyn Jobe, B.S. Chemistry student, Marshall University 1/20-04/21
10. Denise Dawley, B.S. Chemistry student, Marshall University 1/19-4/18
11. Jonah Moore, Pharm.D. student, APPE rotation student, Marshall University, 3/18-4/18
12. Tiffany M. Kummer, Pharm.D. student, Marshall University, 1/18-07/18
13. Michaela Meakin, Pharm.D. student, Marshall University, 1/18-07/18

14. Mikaela Earl, Pharm.D. student, Marshall University, 1/18-07/18
15. Keely Frazier, Pharm.D. student, Marshall University, 5/17-8/17
16. Jordan Sheppard, Pharm.D. student, Marshall University, 5/16-8/17
17. Demetria Lewis, Pharm.D. student, APPE rotation student, Marshall University, 7/15-8/15
18. Alexandria Carter, B.S. Biology student, University of Charleston, co-research mentor WV INBRE program 05/15-08/15.
19. Eric Slayton, Pharm.D./M.P.H. student, Marshall University, 05/14-08/14
20. Patricia Mihm, B.S. Chemistry, , capstone honors student, Marshall University, 01/14-12/14
21. Emily Nicole Hanson, Pharm.D. student, University of Georgia, 01/12-04/12
22. Keeko Villaveces, high school student, co-research mentor Young Scholars Program, 06/11-07/11.
23. John P. Taliaferro, B.S. graduate, CURO Honors student, University of Georgia, 08/08-05/10,
24. Vinh Dong, B.S. student, CURO Apprentice, University of Georgia, 01/09-12/09
25. Parag Kumar, Pharm.D. student, University of Georgia, 05/09-07/09
26. Navid Amlani, Pharm.D. student, 01/09-05/09
27. Brian Ferslew, Pharm.D. student, University of Georgia, 05/07-07/07

VII. Peer Reviewed Publications

1. Long, T.E.*, Naidu S.T.‡, Hissom E.G., Meka Y.‡, Chavva H., Brown K.C., Valentine M.E., Fan J., Denvir J., Primerano D.A., Yu H.D., Valentovic M.A. "Disulfiram induces redox imbalance and perturbations in central glucose catabolism and metal homeostasis to inhibit the growth of *Staphylococcus aureus*," *Sci Rep.* **2025**, *15*, 15658. link
2. Harrison S.; Verratti K.; Long T.E.; Meka Y.‡; Greytak E.M.; Necciai B.; Sozhamannan S.; Sparklin R.* "Draft genome assemblies of ciprofloxacin-resistant derivatives of *Bacillus cereus* strain ATCC14579," *Microbiol Resour Announc.* **2025**, 14:0:e00100-25. link
3. Evans, S.E.‡; Valentine, M.E.; Gallimore, F.; Meka, Y.‡; Koehler, S.I.; Yu, H.D.; Valentovic, M.A.; Long, T.E.* "Perturbations in the Gut Microbiome of C57BL/6J Mice by the Sobriety Aid Antabuse® (Disulfiram),"*J Appl Microbiol*. **2025**, *136*, 1:lxae305.. link
4. Chavva, H.; Meka, Y.‡; Long, T.E.* "Antimicrobial Pharmacodynamics of Vancomycin and Disulfiram (Antabuse®) in Staphylococcus aureus," *Front. Microbiol.* **2023,** 13:1092257. link
5. Blume L.; Long T.E.; Turos E.* "Applications and Opportunities in Using Disulfides, Thiosulfinates, and Thiosulfonates as Antibacterials." *Int J Mol Sci.* **2023**, *24*, 8659. link
6. Brown K.C.; Modi K.J., Light R.S.; Cox A.J.; Long T.E.; Gadepalli R.S.; Rimoldi J.M.; Miles S.L.; Rankin G.; Valentovic M.; Denning K.L.; Tirona M.T.; Finch P.T.; Hess J.A.; Dasgupta P.* "Anticancer Activity of Region B Capsaicin Analogs," *J Med Chem.* **2023,** 66, 4294–4323. link
7. Shanholtzer, C. N.†; Rice, C.†; Watson, K.†; Carreon, H.†; Long, T. E.* "Effect of Copper on the Antifungal Activity of Disulfiram (Antabuse®) in Fluconazole-resistant *Candida* Strains," *Med. Mycol.* **2022**, 60, link.
8. Adeluola, A.A.‡, Bosomtwe, N., Long, T.E., Amin, A.R.M. R. "Context-dependent Activation of p53 Target Genes and Induction of Apoptosis by Actinomycin D in Aerodigestive Tract Cancers," *Apoptosis*, **2022** link
9. Lewis, A.D.†; Riedel, T.M.†; Kesler, M.B.A.†; Varney, M.E.; Long, T.E.* "Pharmacological Evaluation of Disulfiram Analogs as Antimicrobial Agents and Their Application as Inhibitors of FosB-Mediated Fosfomycin Resistance," *J. Antibiot.* **2022** 75, 146–15. link
10. Custodio, M.; Sparks, J.; Long, T.E.* "Disulfiram: A Repurposed Drug in Preclinical and Clinical Development for the Treatment of Infectious Diseases," *Anti-Infect. Agents* **2022** link
11. Clay, T. B.*; Orwig, K. W.; Stevens, R. A.†; Davis, E. P.†; Jennings, T. M.†; Long, T. E.; Riley, B. L.; Hambuchen, M. B. "Correlation of MRSA Polymerase Chain Reaction (PCR) Wound Swab Testing and Wound Cultures in Skin and Soft Tissue Infections," *Diagn. Microbiol. Infect. Dis.* **2021**, 100, 115389. link
12. Cabal M.-P.;* Long T. E.; Turos E.; García A.-B.; Allen J. L.; Budny B. G.; Shaw L. N. "Spiropiperidyl Rifabutins: Expanded *In Vitro* Testing Against ESKAPE Pathogens and Select Bacterial Biofilms," *J. Antibiot.* **2020**, 868–872. link
13. Moore, J. A.†; Meakin, M.†; Earl, M. A.†; Kummer, T. M.†; McAleer, J. M.; Long, T. E.* "Effects of Caspofungin, Tolcapone, and Other FDA-Approved Medications on MRSA Susceptibility to Vancomycin," *J. Glob. Antimicrob. Resist.* **2020**, *22*, 283-289. link
14. Valentine, M.; Kirby, B.; Withers, T. R.; Johnson, S. L.; Long, T.; Hao, Y.; Lam, J.; Niles, R.; Yu, H.* "Generation of a Highly Attenuated Strain of *Pseudomonas aeruginosa* for Commercial Production of Alginate," *Microb. Biotechnol*. **2020**, *13*, 162-175. link

15. Geldenhuys, W. J.; Long, T. E.; Saralkar, P.; Iwasaki, T.; Nuñez, R. A.; Nair, R. R.; Konkle, M. E.; Menze, M. A.; Pinti, M. V.; Hollander, J. M.; Hazlehurst, L. A.; Robart, A. R. "Crystal Structure of the Mitochondrial Protein MitoNEET Bound to a Benze-sulfonide Ligand," *Commun. Chem. – Nature* **2019**, *2*, doi:10.1038/s42004-019-0172-x. link
16. Kirby, B.; Ahmar, R. A.; Withers, T. R.; Valentine, M.; Valentovic, M.; Long, T. E.; Gaskins, J.; Yu, H.* "Efficacy of Aerosolized Rifaximin Versus Tobramycin for the Treatment of *Pseudomonas aeruginosa* Pneumonia in Mice," *Antimicrob. Agents Chemother*. **2019**, *63*, pii: e02341-18; doi: 10.1128/AAC.02341-18. link
17. Geldenhuys, W. J.*; Skolik, R.; Konkle, M. E.; Menze, M. A.; Long, T. E.; Robart, A. E. "Binding of Thiazolidinediones to the Endoplasmic Reticulum Protein Nutrient-Autophagy Factor 1," *Bioorg. Med. Chem. Lett*. **2019**, *29*, 901-904 link
18. Frazier, K. R.†; Moore, J. A.†; Long T. E.* "Antibacterial Activity of Disulfiram and its Metabolites," *J. Applied Microbiol*. **2019**, *126*, 79-86. link
19. Sheppard, J. G.†; Frazier, K. R.†; Saralkar, P.; Hossain, M. F.; Geldenhuys W. J.; Long T. E.* "Disulfiram-based Disulfides as Narrow-spectrum Antibacterial Agents," *Bioorg. Med. Chem. Lett*. **2018**, *28*, 1298-1302. link
20. Sheppard, J. G.†; McAleer, J. P.; Saralkar, P.; Geldenhuys, W. J.; Long, T. E.* "Allicin-inspired Pyridyl Disulfides as Antimicrobial Agents for Multidrug-resistant *Staphylococcus aureus*," *Eur. J. Med. Chem.* **2018**, *143*, 1185-1195. link
21. Long T. E*. "Repurposing Thiram and Disulfiram as Antibacterial Agents for Multi-drug Resistant *Staphylococcus aureus* Infections," *Antimicrob. Agents Chemother*. **2017**, 61:e00898-17. link
22. Sheppard, J. G.†; Long, T. E.* "Allicin-Inspired Thiolated Fluoroquinolones as Antibacterials Against ESKAPE Pathogens," *Bioorg. Med. Chem. Lett.* **2016**, *26*, 5545-5549. link
23. Slayton, E. T.†; Hay, A. S.; Babcock, C. K.; Long, T. E.* "New Antibiotics in Clinical Trials for *Clostridium Difficile*," *Expert Rev. Anti. Infect. Ther*. **2016**, *14*, 789-800. link
24. Long, T. E.*; Keding, L. C. ‡; Lewis, D.†; Anstead, M. I.; Withers, T. R.; Yu, H. D. "Anionic Fluoroquinolones as Antibacterials Against Biofilm-producing *Pseudomonas aeruginosa*," *Bioorg. Med. Chem. Lett.* **2016**, *26*, 1305-1309. link
25. Long, T. E.*; Williams, J. "Cephalosporins Currently in Early Clinical trials for the Treatment of Bacterial Infections," *Expert Opin. Investig. Drugs* **2014**, *23*, 1375-1387. link
26. Lu, X.‡; Altharawi, A.‡; Gut, J.; Rosenthal, P. J.; Long, T. E.* "1,4-Naphthoquinone Cations as Antiplasmodial Agents: Hydroxy-, Acyloxy-, and Alkoxy-Substituted Analogs," *ACS Med. Chem. Lett.* **2012**, *3*, 1029-1033. link
27. Lu, X.‡; Altharawi, A.‡; Hansen, E. N.†; Long, T. E.* "Phase-Transfer Catalysts in the O-Alkylation of 2-Hydroxynaphthoquinones," *Synthesis* **2012**, *44*, 3225-3230. link
28. Mock, J.‡; N; Taliaferro, J. P.; Lu, X.‡; Patel, S. K.‡; Cummings, B. S.; Long, T. E.* "Haloenol Pyranones and Morpholinones as Antineoplastic Agents of Prostate Cancer," *Bioorg. Med. Chem. Lett.* **2012**, *22* 4854-4858. link
29. Long, T. E.*; Lu, X.‡; Galizzi, M.; Docampo, R.; Gut, J.; Rosenthal, P. J. "Phosphonium Lipocations as Antiparasitic Agents," *Bioorg. Med. Chem. Lett.* **2012**, *22*, 2976-2979. link
30. Lu, X.‡; Long, T. E.* "Asymmetric Synthesis of Monocyclic β-Lactams from L-Cysteine Using Photochemistry," *Tetrahedron Lett.* **2011,** *52*, 5051-5054. link
31. Lu, X.‡; Long, T. E.* "*o*-Nitrophenyl Sulfoxides: Efficient Precursors for the Mild Preparation of Alkenes," *J. Org. Chem.* **2010**, *75*, 249-252. link
32. Patel, S. K.‡; Long, T. E.* "Preparation of Vinylglycines by Thermolysis of Homocysteine Sulfoxides," *Tetrahedron Lett.* **2009,** *50*, 5067-5070. link

† Pharm.D. student
‡ Ph.D. or M.S. student
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From Postdoctoral and Graduate Studies:

33. Wencewicz, T.; Long, T. E.; Möllmann, U.; Miller, M. J.* "Trihydroxamate Siderophore Fluoroquinolone Conjugates are Selective Sideromycin Antibiotics that Target *Staphylococcus aureus*," *Bioconjugate Chem*. **2013**, *24*, 473-486.
34. Wencewicz, T. A.; Möllmann, U; Long, T. E.; Miller, M. J.* "Is Drug Release Necessary for Antimicrobial Activity of Siderophore-drug Conjugates? Syntheses and Biological Studies of the Naturally Occurring Salmycin "Trojan Horse" Antibiotics and Synthetic Desferridanoxamine-antibiotic Conjugates," *Biometals* **2009**, *22*, 633-648.
35. Chen, D; Falsetti, S. C.; Frezza, M.; Milacic, V.; Kazi, A.; Cui, Q. C; Long, T. E.; Turos, E.; Dou, Q.* "Anti-tumor Activity of *N*-Thiolated β-Lactam Antibiotics," *Cancer Lett.* **2008**, *268*, 63-69.

36. Revell, K. D.; Heldreth, B.; Long T. E.; Jang, S.; Turos, E.* "*N*-Thiolated β-Lactams: Studies on the Mode of Action and Identification of a Primary Cellular Target in *Staphylococcus aureus*," *Bioorg. Med. Chem.* **2007**, *15*, 2453-2467.
37. Turos, E.*; Long, T. E.; Heldreth B.; Leslie, J. M.; Reddy, G. S. K.; Wang. Y.; Coates, C.; Konaklieva, M.; Dickey, S.; Lim, D. V.; Gonzalez, A. E. "*N*-Thiolated β-Lactams: A New Family of Anti-Bacillus Agents. *Bioorg. Med. Chem. Lett.* **2006**, *16*, 2084-2090.
38. Heldreth B; Long T. E.; Jang, S.; Reddy, G.; Turos, E.*; Dickey, S.; Lim, D. " N-Thiolated beta-Lactam Antibacterials: Effects of the *N*-Organothio Substituent on Anti-MRSA Activity," *Bioorg Med Chem*. **2006**, *14*, 3775-3784.
39. Turos, E.*; Coates, C. M.; Shim, J.-Y.; Wang, Y.; Leslie J. M.; Long T. E.; Reddy, G. S. K.; Ortiz, A.; Culbreath, M.; Dickey, S.; Lim, D. V.; Alonso, E.; Gonzalez, J. "*N*-Methylthio β-Lactam Antibacterials: Effects of the C_3/C_4 Ring Substituents on Anti-MRSA Activity," *Bioorg. Med. Chem.* **2005**, *13*, 6289-6308.
40. Kazi, A.; Hill, R.; Long, T. E.; Kuhn, D. J.; Turos, E.; Dou, Q.* "Novel *N*-Thiolated β-Lactam Antibiotics Selectively Induce Apoptosis in Human Tumor and Transformed, But Not Normal or Nontransformed, cells," *Biochem. Pharmacol.* **2004**, *67*, 365-374.
41. Carr, J. A.; Al-Azemi, T. F.; Long, T. E.; Shim, J.-Y.; Coates, C. M.; Turos, E.; Bisht, K. S.* "Lipase-Catalyzed Resolution of 4-Aryl-Substituted β-Lactams: Effect of Substitution on the 4-Aryl Ring," *Tetrahedron* **2003**, *59*, 9147-9160.
42. Long, T. E.; Turos, E.*; Konaklieva, M.; Blum, A. L.; Amry, A.; Baker, E. A.; Suwandi, L. S.; McCain, M. D.; Rahman, M.; Dickey, S.; Lim, D. V.; "Effect of Aryl Ring Fluorination on the Antibacterial Properties of C_4 Aryl-Substituted *N*-Methylthio β-Lactams," *Bioorg. Med. Chem.* **2003**, *11*, 1859-1863.
43. Coates, C.; Long, T. E.; Turos, E.*; Dickey, S.; Lim, D. V. "*N*-Thiolated β-lactam Antibacterials: Defining the Role of Unsaturation in the C4 Side Chain," *Bioorg. Med. Chem.* **2003**, *11*,193-196.
44. Long, T. E.* "Recent Progress Toward the Clinical Development of New Anti-MRSA Antibiotics," *IDrugs* **2003**, *6*, 351-359. link
45. Smith, D.M.; Kazi, A.; Smith, L.; Long, T. E.; Heldreth, B.; Turos, E.; Dou, Q. P.* "A Novel β-Lactam Antibiotic Activates Tumor Cell Apoptotic Program by Inducing DNA Damage," *Mol. Pharmacol.* **2002**, *61*, 1348-1358.
46. Turos, E.*; Long, T. E.; Konaklieva, M. I.; Coates, C.; Shim J.-Y.; Dickey, S.; Lim, D. V.; Cannons, A. "*N*-Thiolated β-Lactams: Novel Antibacterial Agents for Methicillin-Resistant *Staphylococcus aureus*," *Bioorg. Med. Chem. Lett.* **2002**, *12*, 2229-2223.
47. Long, T. E.; Turos, E.* "*N*-Thiolated β–Lactams," *Curr. Med. Chem.: Anti-Infective Agents* **2002**, *1*, 251-268.

* Corresponding author

VIII. Public Presentations and Published Abstracts

1. Conley, K.B.; Richbart, S.D.; Modi, K.J.; Light, R.S.; Gadepalli, R.S.; Rimoldi, J.R.; Long, T.E.; Chen, Y.C.; Dasgupta, P. "Abstract 6834: The Region C Non-pungent Capsaicin Analogs ARVANIL and DOHEVANIL Sensitize Human Ovarian Cancer Cells Towards the Growth-inhibitory Activity of Gemcitabine," American Association for Cancer Research Annual Meeting, April 21, 2025, Chicago, IL. link
2. Modi, K.J.; Gadepalli, R.S.; Rimoldi, J.R.; Long, T.E.; Chen, Y.C.; Brown, K.C.; Richbart, S.D.; Meritt, J.C.; Miles, S.L.; Dasgupta, P. "Abstract 6930: Structure Activity Relationship (SAR) Studies Identify Novel Non-Pungent Capsaicin Analogs Which Display Robust Growth-inhibitory Activity in Human Ovarian Carcinoma Cells," American Association for Cancer Research Annual Meeting, April 15, 2025, Chicago, IL. link
3. Keblawi, U.; Das, E.V. ‡; Long, T.E.; Yu, H. "Extraction of Rhamnolipids from Three Mutants of *Pseudomonas Aeruginosa*", presented at the Mid-Atlantic Microbial Pathogenesis Meeting on February 2, 2025, Wintergreen Resort, VA. link
4. Das, E.V.‡; Keblawi, U.; Long, T.E.; Yu, H. "Rewiring rhamnolipid regulation in genetically attenuated strains of *Pseudomonas aeruginosa*", presented at the Mid-Atlantic Microbial Pathogenesis Meeting on February 3, 2025, Wintergreen Resort, VA. link
5. Evans, S.‡; Yu, H.; Long, T.E. "A Pilot Efficacy and Safety Study on a Novel Antimicrobial Peptide-based DNA Nanoparticle Pharmaceutical in a Mouse Model of *B. anthracis* Lung Infection", presented at the Mid-Atlantic Microbial Pathogenesis Meeting on February 2, 2025, Wintergreen Resort, VA link
6. Harrison, S; Long, T.; Verratti, K.; Necciai, B.; Sozhamannan, S.; Greyak, E.; Player, R. 2024 Chemical and Biological Defense Science & Technology (CBD S&T) Conference, "Understanding the Mechanisms of High-level

Ciprofloxacin resistance in *Bacillus cereus sensu lato* Group of Bacteria," Broward County Convention Center, Fort Lauderdale, FL, December 3, 2024 link

7. Evans, S.[‡]; Yu, H.; Valentine, M.; Meka, Y.[‡]; Koehler, S.; Long, T. E.* "The Impact of Antabuse (Disulfiram) on the Intestinal Microbiome and Evaluation of Impact on Gram-Positive Bacteria". ASM Microbe, Atlanta, GA June 16, 2024. link
8. Evans, S.[‡]; Meka, Y.[‡]; Valentine, M.; Yu, H.; Long, T. E.* 35th Annual Health Sciences Research Day, "Effects of Disulfiram (Antabuse) on the Intestinal Microbiome," Marshall University School of Medicine, Huntington, WV. November 10, 2023.
9. Meka, Y.[‡]; Chavva, H.; Long, T. E*; 34th Annual Health Sciences Research Day, "In-vitro Pharmacodynamic Interactions of Vancomycin and Disulfiram (Antabuse®) in Staphylococcus aureus," Marshall University School of Medicine, Huntington, WV. October 28, 2022. link
10. Mim, O.; Long, T. E.; Valentovic, M.; 34th Annual Health Sciences Research Day, "Development of Vancomycin HPLC Methodology for Analysis of Microliter Plasma samples Using HPLC," Marshall University School of Medicine, Huntington, WV. October 28, 2022. link
11. Tetteh-Quarshie, S. [‡], Jones, C., Long, T. "Exploring Rheological Properties of Chitosan Gel and Antimicrobial Activities of 5-FU Against Diabetic Wound Pathogens," 97th Annual West Virginia Academy of Science Meeting, Fairmont State University, Fairmount, WV, April 23, 2022. link
12. Rice, C.[†]; Watson, K. [†]; Long, T. "Detecting for Effects of Copper Supplementation on Antimicrobial Activity of Disulfiram," Midyear Clinical Meeting, American Society of Health-System Pharmacists, December 9, 2021. link
13. Shanholtzer, C. N.[†]; Carreon, H.[†]; Rice, C.[†]; Watson, K.[†]; Long, T. E. "Evaluation of the Addition of Divalent Metal Salts to Disulfiram and Its Primary Metabolite for the Treatment of Fluconazole-resistant Candida Infections," Midyear Clinical Meeting, American Society of Health-System Pharmacists, December 9, 2021. link
14. Shanholtzer, C. N.[†]; Carreon, H.[†]; Long, T. E. "Antifungal Activity of Antabuse and its Primary Metabolite with Copper, Against Fluconazole Resistant Candida Strains," 33rd Annual Health Sciences Research Day, Marshall University, Huntington, WV, October 29, 2021. link
15. Adeluola, A.[‡]; Long, T.; Amin, R. A. R. M. "Low dose Actinomycin D Predominantly Activates p53-p21 Pathway in Aerodigestive Tract Cancers: Implications for Cyclotherapy," 33rd Annual Health Sciences Research Day, Marshall University, Huntington, WV, October 29, 2021. link
16. Brazeau, D.; Stevens, T.; Long, T.; Karamchi. M.; Guilford, M. E.; "Evaluating DNA Preservation, Quantification and Inactivation of Methicillin-resistant Staphylococcus aureus from a Collection and Transport System for Rapid Point-of-care Diagnostic Tests," World Microbe Forum, June 20, 2021, Abstract CPHM12 Molecular Diagnostic Microbiology – NGS link
17. Shelton, M.; Adkins, T.; Hesson, J.; Long, T.; Karamchi, M.; Brazeau, B. "Evaluation of Gram-positive Bacterial DNA Recovery From a Swab Collection and Transport system for Point-of-Care Diagnostic Tests," 32nd Annual Health Sciences Center Research Day, Marshall University, Huntington, WV, March 6, 2020. link
18. Jennings, T. M.; Babcock, C.; Long, T.; McAleer, J. "Sterility of Evzio® Brand Naloxone After Expiration," Health Sciences Center Health Sciences Center 32nd Annual Research Day, Marshall University, Huntington, WV, March 22, 2019. link
19. Kummer, T. M. [†]; Meakin, M. [†]; Long, T. E.* "Analysis of FDA-approved Drugs Altering the Treatment of Infections Due to MRSA," Midyear Clinical Meeting, American Society of Health-System Pharmacists, Anaheim, CA, December 3, 2018.
20. Meakin, M. [†]; Kummer, T. M. [†]; Long, T. E.* "Repurposing Dronedarone, Caspofungin, and Tolcapone as Anti-MRSA Antibiotics," Midyear Clinical Meeting, American Society of Health-System Pharmacists, Anaheim, CA, December 3, 2018.
21. Moore, J. A.[†]; Earl, M. H.[†]; Meakin, M.[†]; Kummer, T. M.[†]; Long, T. E.* "Alterations of MRSA Susceptibility to Vancomycin by Approved, Experimental, and Homeopathic Drugs," West Virginia Clinical and Translational Science Institute Annual Meeting, Morgantown, WV, May 16, 2018.
22. Sheppard, J. G.[†]; Frazier, K. R.[†]; Hossain, M. F.; Long T. E.*. "Disulfiram-based Disulfides as Narrow Spectrum anti-MRSA Antibiotics," Joan C. Edwards School of Medicine 30th Annual Research Day, Marshall University, Huntington, WV, March 30, 2018. link
23. Sheppard, J. G.[†]; McAleer, J.; Long, T. E.* "Allicin-Inspired Pyridyl Disulfides as Anti-MRSA Antibiotics" Joan C. Edwards School of Medicine 29th Annual Research Day, Marshall University, Huntington, WV, March 24, 2017. link
24. Keding, L. C.[‡]; Long, T. E.*; Anstead, M. I.; Yu, H. D. "A Novel *In Vitro* Assay to Assess Antibiotic Penetration in Respiratory Mucus," Joan C. Edwards School of Medicine 28th Annual Research Day, Marshall University, Huntington, WV, March 11, 2016. link

25. Lewis, D.†; Long, T. E.*; Keding, L.C.‡; Withers, T. R.; Yu, H. D. "Growth Inhibition and Penetration Ability of Anionic Fluoroquinolone Derivatives Against Mucoid *Pseudomonas aeruginosa*," 50th Annual ASHP Midyear Clinical Meeting and Exposition, New Orleans, LA, December 8, 2015, Abstract-388593.
26. Keding, L. C. ‡; Long, T. E.*; Lewis, D.†; Withers, T. R.; Yu, H. D. "Anionic Fluoroquinolones as Antibacterials Against Mucoid *Pseudomonas aeruginosa*," Appalachian Regional Cell Conference, Huntington, WV, November 21, 2015.
27. Long, T. E.*; Withers, T. R.; Yu, H. D. "Alginate Biomaterials from a Genetically Engineered Variant of *Pseudomonas aeruginosa*," 2015 AAPS Annual Meeting and Exposition, Orlando, FL, October 29, 2015, Abstract-373. link
28. Carter, A. K.‡; Long, T. E.*; Withers, T. R.; Yu, H. D.* "The Development of a Novel Treatment Strategy for *Pseudomonas aeruginosa* Lung Infections in Cystic Fibrosis Patients," West Virginia IDeA Network of Biomedical Research Excellence Research Symposium, Huntington, WV, July 27, 2015.
29. Worely, G.; Long, T. E.*; Withers, T.R.; Yu, H. D.* "Overexpression of C5-Mannuronan Epimerase AlgG in *Pseudomonas aeruginosa*," West Virginia IDeA Network of Biomedical Research Excellence Research Symposium, Huntington, WV July 27, 2015.
30. Anderson, S. I.*; Anderson, H. G.; Booth, C.J.; Broedel-Zaugg, K.; Brown, A. S.; Gillette, C.; Hao, J.; Kimble, C.; Long, T. E.; McAleer J.; Mohan S.; Riley, B.; Rockich-Winston, N.; Stanton, R.; Train, B. C. "Reliability and Validity of Student Peer OSCE Scoring," 116th American Association of Colleges of Pharmacy Annual Meeting, National Harbor, MD, July 2015
31. Kimble, A.*; Williams, J.; Long, T. E. "Improving the First Offering of an Infectious Disease Module that Utilized Flipped Classroom," 115th American Association of Colleges of Pharmacy Annual Meeting, Grapevine, TX, July 2014. link
32. Lu, X.‡; Long, T. E.* "Asymmetric Synthesis of Monocyclic β-Lactams from L-Cysteine Using Photochemistry," University of Georgia Conference on Drug Discovery, Athens, GA, November 2011.
33. Lu, X.‡; Long, T. E.* "Asymmetrical Approach to Synthesize Monocyclic beta-Lactams Using Photochemistry," American Chemical Society Southeastern Regional Meeting, Richmond, VA, October 2011.
34. Lu, X.‡; Long, T. E.*"Asymmetric Synthesis of Monocyclic β-Lactams from L-Cysteine Using Photochemistry," 242nd American Chemical Society National Meeting, Denver, CO, August 2011.
35. Long, T. E.*; Taliaferro, J. P.; Patel, S. K.‡ "Haloenol Lactone-Containing Peptides: Novel Serinase Inhibitors for Leads in Drug Discovery," Georgia Research Alliance/Center for Disease Control Collaboration Roundtable, Center for Disease Control, Atlanta, GA, February 26, 2010.
36. Lu, X.‡; Long, T. E.* "Synthesis of Novel Heterocycles as Antibacterial Agents," University of Georgia Conference on Drug Discovery, Athens, GA, November 5, 2009.
37. Taliaferro, J. P.; Patel, S. K.‡; Long, T. E.* "Novel Synergistic Inhibitors of MRSA," University of Georgia Conference on Drug Discovery, Athens, GA, November 5, 2009.
38. Mock, J. N.‡; Patel, S. K.‡; Lu, X.‡; Long, T. E.; Cummings, B. S.* "Novel Bromoenol Lactone-Based Ca^{2+}-Independent Phospholipase A2 Inhibitors Induce Cytotoxicity in Prostate Cancer Cells," University of Georgia Conference on Drug Discovery, Athens, GA, November 5, 2009.
39. Patel, S. K.‡; Long, T. E.* "Novel Methods to Synthesize α-Vinylic Amino Acids," American Association of Pharmaceutical Scientists Annual Meeting and Exposition, Atlanta, GA, November 16, 2008.
40. Lu, X.‡; Long, T. E.*; "New Antimicrobials for Multi-Resistant Bacteria," UGA/CDC Research Symposium, Center for Disease Control, Atlanta, GA, September 4, 2008.
41. Long, T. E.* "Design and Synthesis of New Antibiotics for Drug Resistant Infections," Inaugural University of Georgia Conference on Drug Discovery, Athens, GA, April 2007.

† Pharm.D. student
‡ Ph.D. or M.S. student
* Corresponding author

From Postdoctoral and Graduate Studies:

42. Wencewicz, T. A.; Long, T. E.; Miller, M. J.* "The "Trojan Horse" Drug Delivery System: Antibiotic Conjugates of the Bacterial Siderophore Danoxamine," 39th Central Regional Meeting of the American Chemical Society, Covington, KY, May 20, 2007.
43. Ramaraju, P.; Long, T. E.; Turos E.* "Heterosubstituted *N*-Thiolated β-Lactam Antibiotics," 232nd American Chemical Society National Meeting, San Francisco, CA, September 10, 2006, MEDI-340.

44. Long, T. E.; Miller, M. J.* "Siderophore-drug Conjugates of Danoxamine and a Rhodotorulic Acid Analog," 230th American Chemical Society National Meeting, Washington, D.C. August 28, 2005, AEI-55.
45. Coates, C. M.; Shim, J-Y.; Long, T. E.*; Turos, E.; Dickey, S.; Lim, D. V. "Defining the Role of C-3 Substitution on the Activity of *N*-Thiolated β-Lactam Antibacterials," Abstracts of Papers, 225th American Chemical Society National Meeting, New Orleans, LA, March 23, 2003, MEDI-051.
46. Culbreath, M. L.; Turos, E.*; Long, T. E.; Leslie, J. M.; TeStrake D. "*N*-Thiolated β-lactams: New Sources of Antifungal Agents," Abstracts of Papers, 225th American Chemical Society National Meeting, New Orleans, LA, March 23, 2003.
47. Turos, E.*; Shim, J-Y.; Long T, E.; Dickey, S.; Lim, D. V. "Studies on the Influence Fatty Ester Side Chains Have On Antibacterial Activity of *N*-Thiolated β-Lactams," Abstracts of Papers, 223rd American Chemical Society National Meeting, Orlando, FL, April 7, 2002, MEDI-257.
48. Turos, E.*; Long, T. E.; Leslie, J. M.; Heldreth, B.; Coates, C.; Shim J-Y.; Wang, H.; Torres, A.; Ortiz, A.; Dickey S.; Lim, D. V. Chemistry and Biology of *N*-Thiolated β-Lactam Antibiotics," Abstracts of Papers, 224th American Chemical Society National Meeting, Boston, MA, August 18, 2002, MEDI-046.
49. Turos, E.*; Coates, C.; Long, T. E.; Dickey S.; Lim, D. V. "Probing the Effect of Unsaturation in the C-4 Side Chain of *N*-Thiolated β-Lactam Antibacterials," Abstracts of Papers, 223rd American Chemical Society National Meeting, Orlando, FL, April 7, 2002, MEDI-256.
50. Turos, E.*; Heldreth, B.; Long, T. E.; Dickey S.; Lim, D. V. "Structure-activity Studies on *N*-Thiolated β-Lactams: Effect of the Organothio Substituent on Antibacterial Activity," Abstracts of Papers, 223rd American Chemical Society National Meeting, Orlando, FL, April 7, 2002, MEDI-255.
51. Turos, E.*; Long, T. E.; Dickey S.; Lim, D. V. "*N*-Thiolated β-lactams: A Novel Family of Antibacterial Agents for MRSA," Abstracts of Papers, 223rd American Chemical Society National Meeting National Meeting, Orlando, FL, April 7, 2002, MEDI-254.
52. Turos, E.*; Long, T. E.; Heldreth, B.; Coates, C. M.; Shim, J-Y.; Polk, J.; Konaklieva, M. I.; Dickey, S.; Lim, D. V. "*N*-Thiolated β-lactams: Structurally and Mechanistically Novel Antibacterial Agents for MRSA," Abstracts of Papers, 223rd American Chemical Society National Meeting, Orlando, FL, April 7, 2002, MEDI-170.
53. Long, T. E.; Turos, E.* "*N*-Thiolated β-Lactams: A Novel Family of Antibacterial Agents for MRSA," Raymond N. Castle Student Research Conference, University of South Florida, Tampa, FL, April 13, 2002.
54. Long, T. E.; Turos, E.*; Dickey S.; Lim, D. V. "*N*-Thiolated β-lactams: A Novel Family of Antibacterial Agents for MRSA," 223rd American Chemical Society National Meeting, Orlando, FL, April 11, 2002, MEDI-254.
55. Shim, J-Y.; Turos, E.*; Long, T. E.; Dickey S.; Lim, D. V. "Studies on the Influence Fatty Ester Side Chains Have on Antibacterial Activity of *N*-Thiolated β-Lactams," 223rd American Chemical Society National Meeting, Orlando, FL, April 11, 2002, MEDI-257.
56. Coates, C.; Turos, E.*; Long, T. E.; Dickey S.; Lim, D. V. "Probing the Effect of Unsaturation on the C-4 Side Chain of *N*-Thiolated β-Lactam Antibacterials," 223rd American Chemical Society National Meeting, Orlando, FL, April 11, 2002, MEDI-256.
57. Heldreth, B.; Turos, E.*; Long, T. E.; Dickey S.; Lim, D. V. "Structure-activity Studies on *N*-Thiolated β-Lactams: Effect of the Organothio Substituent on Antibacterial Activity," 223rd American Chemical Society National Meeting, Orlando, FL, April 11, 2002, MEDI-255.
58. Long, T. E.; Turos, E.* "Current Research on a Novel Class of β-Lactam Antibacterials," Raymond N. Castle Student Research Conference, University of South Florida, Tampa, FL, April 28, 2001.
59. Turos, E.*; Long, T. E.; Blum, A. L.; Amry, A.; Baker, E. A.; Suwandi, L. S.; McCain, M. D.; Rahman M. F.; Konaklieva, M. I. "Fluorinated Analogs of Novel *N*-Thiolated β-Lactam Antibacterials," 222nd American Chemical Society National Meeting, Chicago, IL, August 26, 2001.
60. Long, T. E.; Turos, E.* "Unusual Monocyclic β-Lactams Having *Staphylococcus* Activity," Florida Academy of Sciences, Tampa, FL, March 6, 1999.

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XI. Patents

1. Long, T. E.*; Patel, S. K. "Preparation of Alkenes by Mild Thermolysis of Sulfoxides," PCT International Application, filed 11/17/09, Serial No.: US 8580998 B2; PCT/US09/64708; WO 2,010,068,371. link
2. Turos, E.*; Carpenter, E.; Long, T. E.; Lim, D. V.; Dickey, S. S. "N-Thiolated β-Lactam Antibiotics," U.S. Patent, filed 08/24/00, issued 11/05/02, Serial No.: 09/6476015 B1. link

X. Invited Seminars

1. “Effects of FDA-Approved Medications on MRSA Susceptibility to Vancomycin,” Marshall University, Department of Chemistry, Huntington, WV, October 29, 2021.
2. “Effects of FDA-Approved Medications on MRSA Susceptibility to Vancomycin,” Marshall University, School of Pharmacy, Huntington, WV, November 22, 2019.
3. “Drug Discovery Research on Disulfide-based Antibiotics for MRSA Infections,” Concord University, Department of Physical Sciences, Athens, WV, March 23, 2018.
4. “Drug Discovery Research on New Agents for Antimicrobial-Resistant Infections,” Eastern Kentucky University, Department of Chemistry, Richmond, KY, February 26, 2015.
5. “Drug Discovery Research on Antimicrobial Agents for Malaria and Biofilm Pseudomonas,” West Virginia State University, Department of Chemistry, Institute, WV, scheduled February 18, 2015.
6. “Novel Agents for the Treatment of Infectious Diseases Including Malaria,” Marshall University, Department of Chemistry, Huntington, WV, January 28, 2014.
7. “Design of Novel Chemotherapeutic Agents for Malaria and Prostate Cancer,” Marshall University, School of Pharmacy, Huntington, WV, February 22, 2013
8. "New Antimicrobial Agents for Bacterial and Tropical Diseases Including Malaria," University of Georgia, Department of Chemistry, Athens, GA, January 19, 2012.
9. "New Antimicrobials for the Treatment of Bacterial and Tropical Diseases Including Malaria," University of Georgia, Department of Infectious Diseases, Athens, GA, October 19, 2011.
10. “New Antimicrobial Agents for Bacterial and Tropical Diseases Including Malaria,” North Georgia College & State University, Department of Chemistry, Dahlonega, GA, February 4, 2011.
11. “Synthesis and Evaluation of New Antibacterials for Multi-Resistant Infections,” Kennesaw State University, Department of Chemistry and Biochemistry, Kennesaw, GA, November 4, 2010.
12. “New Antimicrobial Agents for Bacterial and Tropical Diseases Including Malaria,” Georgia Southern University, Department of Chemistry, Statesboro, GA, October 15, 2010.
13. “Synthesis and Evaluation of Novel Peptide Antimicrobial Agents,” Augusta State University, Department of Physics and Chemistry, Augusta, GA, March 24, 2010.
14. “New Antibiotics for Drug-Resistant Infections,” College of Veterinary Medicine, University of Georgia, Athens, GA, May 14, 2007.

XI. Funded Projects & Contracts

Title: A Modular Nanoantibiotic Platform for Treatment Against Aerosolized Biothreat Agents (W911SR-22-C-0036)
Sponsor: DEVCOM / Parabon Nanolabs, Inc.
Period: 2/23-12/24
Budget: $98,962
Role: PI/PD

Title: Rapid Microbial Identification and Characterization in the Field (W911SR-22-C-0002)
Sponsor: DEVCOM / Parabon Nanolabs, Inc.
Period: 7/22-8/24
Budget: $100,022
Role: PI/PD

Title: Discovery of Disulfiram as an Anti-MRSA Antibiotic Adjuvant (1R15AI151970-0)
Agency: NIH / NIAID
Period: 03/20-02/23
Budget: $434,180
Role: PI/PD

Title: Effects of FDA-approved Drugs on the Treatment of MRSA Infections
Agency: NASA West Virginia Space Grant Consortium / NASA EPSCoR Consortium; Research Seed Grant
Period: 04/17-03/18
Budget: $20,000
Role: PI

Title: Disulfiram-based Antibacterials for Drug-resistant Infections
Agency: Marshall University School of Pharmacy
Period: 7/17-6/18
Budget: $5,000
Role: PI/PD

Title: Mechanistic Studies of Disulfiram as an Anti-MRSA Drug
Agency: Joan C. Edwards School of Medicine and School of Pharmacy Collaborative Grant Program
Period: 1/18-12/18
Budget: $50,000
Role: co-PI/PD

Title: Developing MitoNEET Molecular Probes in Parkinsonism
Agency: West Virginia Clinical and Translational Science Institute
Period: 10/17-9/18
Budget: $50,000
Role: co-PI

Title: Novel Antibiotics for the Treatment of Resistant Infections
Agency: Marshall University School of Pharmacy
Period: 7/16-6/17
Budget: $10,000
Role: PI/PD

Title: Novel Antibiotics for the Treatment of Anthrax Disease
Agency: Marshall Research Corporation
Period: 2017
Budget: $208
Role: PI/PD

Title: A Novel In Vitro Assay to Assess Antibiotic Bioavailability in Respiratory Sputum and Pseudomonas Biofilms
Agency: Marshall University School of Pharmacy
Period: 12/15-11/16
Budget: $20,000
Role: PI/PD

Award: Quinlan Travel Award
Agency: Marshall Research Corporation
Period: 2015
Budget: $500
Role: PI/PD

Title: Characterization of Biopolymer Production in Pseudomonas aeruginosa
Agency: National Aeronautics and Space Administration; NASA West Virginia Space Grant Consortium; Joint University Industry Research Opportunity Program (award: 91-175B-MURC)
Period: 07/14-08/15
Budget: $40,000
Role: Co-PI

Title: Development of Isothiocyanate-based Inhibitors of MD-2/TLR4 to Treat Inflammatory Conditions Associated with Space Risk Factors
Agency: National Aeronautics and Space Administration; Marshall Research Corporation Internal Grant Program (award: NASA NNX13AN08A)
Period: 07/14-06/15
Budget: $5,000
Role: PI

Title: Antiplasmodial Evaluation of Phosphonium Lipocations of Hydroxy-1,4-Naphthoquinones
Agency: University of Georgia Research Foundation (UGARF)
Period: FY 2013
Budget: $3,000
Role: PI

Agency: DuPont Crop Protection, Collaborative Research and Licensing
Period: FY 2011
Contract: $1,800

Award: College of Pharmacy Endowment
Agency: University of Georgia Research Foundation (UGARF)
Period: 10/10-06/11
Budget: $3,000
Role: PI

Award: Hayes Endowment
Agency: University of Georgia Research Foundation (UGARF)
Period: 06/09-4/09
Budget: $4,969
Role: PI

Title: Novel β-Lactam Antibiotics for Resistant Bacteria
Agency: American Association of Colleges of Pharmacy (AACP)
Period: 12/08-12/09
Budget: $10,000
Role: PI

Title: Antibiotic Analogs of Leinamycin
Award: Junior Faculty Grant
Agency: University of Georgia Research Foundation (UGARF)
Period: 01/07-12/07
Budget: $7,000
Role: PI

XII. Professional Service

a. *Ad Hoc* Reviewer for Peer-Reviewed Journals:

1. *ACS Medicinal Chemistry Letters*
2. *Biomedicine and Pharmacotherapy*
3. *Bioorganic and Medicinal Chemistry*
4. *Bioorganic Chemistry*
5. *Biotechnology Journal*
6. *Clinical & Medical Microbiology*
7. *Current Bioactive Compounds*
8. *European Journal of Medicinal Chemistry*
9. *Expert Review of Anti-Infective Therapy*
10. *Expert Opinion On Drug Discovery*
11. *Expert Opinion On Investigational Drugs*
12. *Free Radical Biology and Medicine*
13. *Journal of Antibiotics*
14. *Journal of Applied Microbiology*
15. *Langmuir*
16. *Letters in Applied Microbiology*
17. *Microbiology and Immunology*

18. *Microbial Drug Resistance*
19. *Molecules*
20. *Nature Scientific Reports*
21. *Open Forum Infectious Diseases*
22. *Tetrahedron*
23. *Tetrahedron Letters*
24. *PLoS ONE*
25. *Therapeutics and Clinical Risk Management*
26. *Open Forum Infectious Diseases*
27. *Organic Syntheses* (1)
    - Served as checker by re-performing experiments on half, full, and double scales for reactions reported in "Synthesis of 2α-Benzyloxy-8-oxabicyclo[3.2.1]oct-6-en-3-one by [4 + 3] Cycloaddition," *Org. Synth.* **2006**, *83*, 61. link

b. Grant Reviewer

1. NIH/NIAID ZAI1 KLM-D (M1) Support for Research Excellence (SuRE) Award (R16) Clinical Trial Not Allowed) and Support for Research Excellence First Independent Research (SuRE-First) Award (R16 - Clinical Trial Not Allowed) 4/22/25 to 4/23/25
2. Military Infectious Disease Research Program, Wounds Panel (W-1) 1/25
3. NIH/NIAID ZAI1 NKD-D (J1) Support for Research Excellence (SuRE) Award (R16 – Clinical Trial Not Allowed) 11/7/24
4. NIH/NIAID ZAI1-VSR-D-M1 NIAID New Innovators Awards (DP2 Clinical Trial Not Allowed) 3/11 to 3/14/24
5. NIH/NIAID ZAI1 MMO-D (J1) Support for Research Excellence (SuRE) Award (R16 – Clinical Trial Not Allowed) 11/7/23
6. Military Infection Control and Prevention panel (ICM-1) Defense Medical Research and Development Program (DMRDP) 1/24/23.
7. NIH/NIAID ZRG1 AIDC-D (80) A - AREA/REAP: Infectious Diseases and Immunology, 3/29/22
8. NIH/NIAID ZRG1 AIDC-S (80) Infectious Diseases and Immunology Research Enhancement Review, 7/19/21
9. NSF Phase I COVID: Drug Discovery and Delivery 5/4/21
10. NIH/NIAID ZAI1 MFH-M J1 1, Partnerships for Countermeasures Against Select Pathogens (R01 Clinical Trials Not Allowed) 11/9/20
11. NSF Phase I SBIR/STTR COVID-19 DCL, 2020
12. NSF Phase I: Pharmaceutical Technologies SBIR/STTR Grants, 2020
13. Department of Defense Peer-Reviewed Medical Research Program (PRMRP) Pre-Antimicrobial Resistance Grants, 2019
14. West Virginia Clinical and Translational Science Institute (CTSI) Pilot Grants, 2018
15. Department of Defense Peer-Reviewed Medical Research Program (PRMRP) Pre-Antimicrobial Resistance Grants, 2017
16. Research Corporation for Science Advancement Cottrell College Science Awards, 2013
17. American Association of Colleges of Pharmacy (AACP) New Investigator Awards, 2013

c. School & University Service:

1. Provost Search Committee, Marshall University, 2025
2. MUSOP Faculty Affairs Committee member, Marshall School of Pharmacy 2024-present
3. MUSOP Curriculum Committee member, Marshall School of Pharmacy 2024-present
4. MUSOP Student Affairs Committee member, Marshall School of Pharmacy 2022-present, Chair 2023-24
5. MUSOP Progressions Committee member, Marshall School of Pharmacy 2019-21
6. MUSOP Dean Third Year Review Consulting Committee member, Marshall School of Pharmacy 2021
7. Institutional Biosafety Committee (IBC), Marshall University, 2022-present
8. MUSOP Assessment Committee member, Marshall School of Pharmacy 2019-22, Chair 2020-22
9. MUSOP Faculty Senate Alternate, Marshall School of Pharmacy 2019-2021
10. MUSOP search committee chair for pharmaceutical science instructor position, 2018
11. MUSOP search committee for pharmaceutical science faculty position, 2018-19
12. Executive Council, DPSR representative, Marshall School of Pharmacy 2017-19
13. Dean search committee, Marshall School of Pharmacy 2016-17

14. MUSOP Admissions Committee, Marshall School of Pharmacy 2016-19
15. MUSOP OSCE Revamp Committee Spring 2017
16. Admissions Coordinator search committee, Marshall School of Pharmacy 2016.
17. Council of Chairs Awards Committee Marshall School University 2015-present
18. ACPE Steering Committee, Marshall School of Pharmacy 2015-17.
19. MUSOP search committee for medicinal chemistry faculty position, 2015-16.
20. Pharmily Campaign, Co-Chair, Marshall School of Pharmacy, 2014-15.
21. Interview Assessment Ad-hoc Committee, Marshall School of Pharmacy, 2015.
22. Faculty Affair Committee Member, Marshall School of Pharmacy, 2014-15.
23. Student Admissions Sub-Committee Chair, Marshall School of Pharmacy, 2014-15.
24. Student Affairs Committee Member, Marshall School of Pharmacy, 2013-present, Chair 2014-15.
25. MUSOP search committee for CNS faculty position, 2013-14.
26. MUSOP search committee for immunology/endocrinology faculty position, 2013-14.
27. University Council Member, UGA College of Pharmacy, 2012-13.
28. Scholarship and Awards Committee, UGA College of Pharmacy, 2010-13, Chair 2011-12.
29. Admissions Committee Member, UGA College of Pharmacy, 2010-13, Chair 2012-13.
30. Computers & Instructional Technologies Committee Member, UGA College of Pharmacy, 2006-09, Chair 2007-09.
31. College of Pharmacy Faculty Council Representative, UGA College of Pharmacy, 2008-11
32. Graduate Admissions Committee, UGA College of Pharmacy, 2008-10, 2011-13
33. NMR Shared Laboratory Supervisor, UGA College of Pharmacy, 2009-13
34. Spectrometer Shared Laboratory Supervisor, UGA College of Pharmacy, 2008-10

d. Other Professional Service:

1. Presented research talk on "Drug Discovery Research on New Agents for Antimicrobial-Resistant Infections," American Chemical Society Lexington Section Meeting, Eastern Kentucky University, Richmond, KY on 2/25/16.
2. Presented research talk on "New Antimicrobial Agents for Bacterial and Tropical Diseases Including Malaria," American Chemical Society Kanawha Valley Section Meeting, University of Charleston, Charleston, WV on 2/18/16.
3. Interviewed by a writer for BioPharm Insight on the experimental antibiotic cadazolid, 12/1/15
4. Invited lecturer for Honors Seminar in New Drug Development, Marshall University, 9/21/15.
5. Representative speaker for the Immunology and Infectious Disease Research Cluster in the Marshall School of Medicine at the 10th Annual Biomedical Sciences Research Retreat 8/14/15.
6. Served as judge for oral presentations at 27th Annual Research Day hosted by Marshall University School of Medicine on 03/03/15.
7. Presented on “Incorporation of Students in Research” for MUSOP Faculty Development Seminar on 01/09/15.
8. Presented research talk on "New Antimicrobial Agents for Bacterial and Tropical Diseases Including Malaria," American Chemical Society Northeast Section Meeting, 11/17/11.
9. Served as faculty advisor for the UGA Pharmacy School Multicultural Health Fair at the J&J Flea market on 04/09/11, Athens, GA.
10. WUOG 90.5 FM radio interview on “Food-borne Illnesses,” 10/6/10.
11. Served as faculty advisor for the UGA Pharmacy School Dawgtoberfest Health Fair, 10/14/09
12. WUOG 90.5 FM radio interview on “MRSA Infections,” 09/09/09.
13. Served as pharmacy faculty advisor for the Day of Dignity Health Fair, 09/06/09, Atlanta, GA.
14. Served as chair for the Ph.D. defense for Kerriann Greenhalgh, University of South Florida, Department of Chemistry, 09/2007, Tampa, FL.