

Sean Stokes

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Education

Doctor of Philosophy. Mississippi State University. Jan. 2008 – Dec. 2012.
Dissertation: "Studies Related to the Synthesis of Chromane- and Quinoline-based Heterocycles."

Master of Science. The University of Alabama in Huntsville. Sept. 2004 – Dec. 2007.
Thesis: "Cruzain Inhibitory Activity of Cloudforest Natural Products from Monteverde, Costa Rica."

Bachelor of Science. The University of Alabama in Huntsville. Sept. 2000 – May 2004.

Employment

Assistant Clinical Professor. Chemistry Department. Mississippi State University.
Jan. 2018 – current.

Instrument Manager/Instructor. Chemistry Department. Mississippi State University.
Sept. 2014 – Dec. 2017.

Instructor. Chemistry Department. Mississippi State University.
Aug. 2012 – Aug. 2014.

Graduate Teaching Assistant. Chemistry Department. Mississippi State University.
Jan. 2012 – July 2012.

Graduate Research Assistant. Chemistry Department. Mississippi State University.
Sept. 2010 – Dec. 2011.

Graduate Teaching Assistant. Chemistry Department. Mississippi State University.
Jan. 2008 – Aug. 2010.

Lecturer. Chemistry Department. University of Alabama in Huntsville.
Sept. 2007 – Dec. 2007.

Graduate Teaching Assistant. Chemistry Department. University of Alabama in Huntsville.
Sept. 2005 – Aug. 2007.

Chemistry Dept. Stockroom Worker. Chemistry Department. University of Alabama in Huntsville. Sept. 2001 – Aug. 2005.

Awards & Accomplishments

Most Outstanding Faculty Member. Awarded April 25, 2019 by Mississippi State University, Chemistry Department.

MSU Alumni Association Early Career Teaching Award – Nominee. Nominated by the Mississippi State University, Chemistry Department. Oct. 9, 2018.

Most Outstanding Faculty Member. Awarded April 19, 2018 by Mississippi State University, Chemistry Department.

Most Outstanding Faculty Member. Awarded April 21, 2017 by Mississippi State University, Chemistry Department.

Honors Council Teaching Award. Awarded April 1, 2017 by Mississippi State University, Shackouls Honors College.

Most Outstanding Faculty Member. Awarded April 29, 2015 by Mississippi State University, Chemistry Department.

Departmental Service Award. Awarded Apr. 24, 2013 by Mississippi State University, Chemistry Department.

College of Arts & Sciences Graduate Student Research Award. Awarded Apr. 3, 2012 by Mississippi State University, College of Arts & Sciences.

Most Outstanding Teaching Assistant: Organic Division. Awarded Apr. 20, 2010 by Mississippi State University, Chemistry Department.

Most Outstanding Research Assistant: Organic Division. Awarded Apr. 20, 2010 by Mississippi State University, Chemistry Department.

Donald Zacharias Doctoral Teaching Assistant of the Year Award – Nominee. Nominated by the Mississippi State University, Chemistry Department. Apr. 13, 2010.

President of the Chemistry Graduate Student Association. Mississippi State University. Aug. 2008 – Sept. 2010.

College of Science Outstanding Teaching Assistant Award. Awarded Apr. 10, 2007 by the University of Alabama in Huntsville, College of Science.

Publications

1. Cope, J.C., Valle, H.U., Hall, R.S., Riley, K.M., Goel, E., Biswas, S., Hendrich, M.P., Wipf, D.O., Stokes, S.L., Emerson, J.P. Tuning the Copper(II)/Copper(I) Redox Potential for More Robust Copper-Catalyzed C-N Bond Forming Reactions. *Eur. J. Inorg. Chem.* **2020**, (14), 1278-1285.

2. Valle, H.U., Riley, K.M., Russell, D.E., Wolgemuth, D.K., Voges-Haupt, C.F., Rogers, A.T., Redd, S.L., Stokes, S.L., Emerson, J.P. Synthesis, Characterization and Structure of a [Cu(phen)₂(OTf)]OTf Complex: An Efficient Nitrogen Transfer Pre-catalyst. *Chemistry Select* **2018**, 3(18), 5143-5146.
3. Hillesheim, P.C., Scipione, K.A., Stokes, S.L. Crystal Structure of (3-carboxypropyl) triphenylphosonium hexafluoridophosphate. *Acta Cryst. E* **2014**, 70(11), o1197-o1198.
4. Stokes, S., Mead, K.T. Synthesis of Aryl-Substituted Quinolines from *N*-Tosyl-1-Azadienes. *Synthetic Communications* **2013**, 43(19), 2627-2633.
5. Stokes, S., Mustain, R., Pickle, L., Mead, K.T. Rhodium-Catalyzed Cyclopropanations of 2-Aryl-2*H*-Chromenes with Dialkyl Malonate Esters. A Comparison of α -Diazo Derivatives and Phenyliodonium Ylides. *Tetrahedron Letters* **2012**, 53, 3890-3893.
6. Stokes, S., Bekkam, M., Rupp, M., Mead, K.T. Synthesis of Aryl-Substituted 1,4-Dihydroquinolines by [4+2] Cycloaddition of Benzyne with 1-Azadienes. *Synlett* **2012**, (3), 389-392.
7. Stokes, S., Spears, B., Laseter, C., Barker, B., Mead, K.T. γ -Lactonization of 2*H*-Chromenes via Cyclopropanation. *Tetrahedron Letters* **2010**, 51, 4003-4006.
8. Cakir, S.P., Stokes, S., Sygula, A., Mead, K.T. Evidence for π -Stacking as a Source of Stereocontrol in the Synthesis of Core Pyranochromene Ring System common to Calyxin I, Calyxin, J, and Epicalyxin J. *Journal of Organic Chemistry* **2009**, 74, 7529-7532.
9. Agius, B.R., Stokes, S.L., Richter, L.R., Setzer, W.N. Cruzain Inhibition by Terpenoids. *Planta Medica* **2008**, 74(9), 19.
10. Setzer, W.N., Park, G., Agius, B.R., Stokes, S.L., Walker, T.M., Haber, W.A. Chemical Compositions and Biological Activities of Leaf Essential Oils of Twelve Species of *Piper* from Monteverde, Costa Rica. *Natural Product Communications* **2008**, 3, 1367-1374.
11. Haber, W.A., Agius, B.R., Stokes, S.L., Setzer, W.N. Bioactivity and Chemical Composition of Leaf Essential Oil of *Talauma gloriensis* Pittier (Magnoliaceae) from Monteverde, Costa Rica. *Records of Natural Products* **2008**, 2, 1-5.
12. Agius, B.R., Setzer, M.C., Stokes, S.L., Walker, T.M., Haber, W.A., Setzer, W.N. Composition and Bioactivity of Essential Oils of Lauraceae from Monteverde, Costa Rica. *International Journal of Essential Oil Therapeutics* **2007**, 1, 167-171.
13. Stokes, S.L., Cole, R.A., Haber, W.A., Setzer, W. N. Cruzain Inhibitory Activity of the Leaf Essential Oil from an Undescribed Species of *Eugenia* from Monteverde, Costa Rica. *Natural Product Communications* **2007**, 2, 1211-1213.

14. Setzer, W.N., Stokes, S.L., Penton, A.F., Takaku, S., Haber, W.A., Hansell, E., Caffrey, C.R., McKerrow, J.H. Cruzain Inhibitory Activity of Leaf Essential Oils of Neotropical Lauraceae and Essential Oil Components. *Natural Product Communications* **2007**, *2*, 1203-1210.
15. Agius, B.R., Vogler, B., Stokes, S.L., Setzer, W.N., Caffrey, C.R., Hansell, E., McKerrow, J.H. Inhibition of Cruzain by Triterpenoids Isolated from a *Salacia* Species from Monteverde, Costa Rica. *Natural Product Communications* **2007**, *2*, 1083-1084.
16. Setzer, W.N., Stokes, S.L., Bansal, A., Haber, W.A., Caffrey, C.R., Hansell, E., McKerrow, J.H. Chemical Composition and Cruzain Inhibitory Activity of *Croton draco* Bark Essential Oil from Monteverde, Costa Rica. *Natural Product Communications* **2007**, *2*, 685-689.
17. Setzer, W.N., Takaku, S., Stokes, S.L., Penton, A.F. Inhibition of Cruzain by *Ocotea* Leaf Essential Oils from Monteverde, Costa Rica. *Pharmacologyonline* **2006**, *3*, 785-793.

Posters & Presentations

- Stokes, S., Rupp, M., Mead, K.T. Presentation: "Synthesis of Aryl Substituted 1,4-Dihydroquinolines using a [4+2] Cycloaddition." Lester S. Andrews Chemistry Symposium. May 12–13, 2011. Starkville, MS
- Stokes, S., Rupp, M., Mead, K.T. Poster: "Synthesis of 1,4-Diaryl-1,4-dihydroquinolines using a [4+2] Cycloaddition." Southeastern Chemistry Chairs Meeting. Mar. 18–20, 2011. Starkville, MS.
- Stokes, S., Spears, B., Laseter, C., Barker, B., Mead, K.T. Poster: "γ-Lactonization of 2*H*-Chromenes via Cyclopropanation." Southeastern Chemistry Chairs Meeting. Mar. 18–20, 2011. Starkville, MS.
- Stokes, S.L., Cakir, S.P., Mead, K.T. Presentation: "The Influence of π Stacking on the Stereochemistry of Phenolic Constituents of *Alpinia Blepharocalyx*." 60th Southeastern Regional Meeting of the American Chemical Society. Nov. 12–15, 2008. Nashville, TN.
- Stokes, S.L., Setzer, W.N. Presentation: "Cruzain Inhibitory Activity of Cloudforest Natural Products from Monteverde, Costa Rica." Partnership for Biotechnology Research: 9th Annual Fall Bioretreat. Oct. 18–19, 2007. Huntsville, AL.
- Stokes, S.L., Setzer, W.N. Poster: "Synergistic Effects of Essential Oil Components: Inhibition of Cruzain." Society for Economic Botany: 48th Annual Meeting. June 4–7, 2007. Chicago, IL.
- Stokes, S.L., Takaku, S., Penton, A.F., Setzer, W.N. Poster: "Cruzain Inhibitory Activity of Leaf Essential Oils from Neotropical Lauraceae." Society for Economic Botany: 48th Annual Meeting. June 4–7, 2007. Chicago, IL.

Stokes, S.L., Penton, A.F., Setzer, W.N. Poster: "Bioactive Screening of Costa Rican Plant Extracts to Fight Chagas' Disease." 1st Annual UAH-COS Student Conference. Nov. 2–3, 2006. Huntsville, AL.

Stokes, S.L., Penton, A.F., Setzer, W.N. Poster: "Bioactive Screening of Costa Rican Plant Extracts to Fight Chagas' Disease." Partnership for Biotechnology Research: 8th Annual Fall Bioretreat. Sept. 8–9, 2006. Huntsville, AL.

Lectures & Labs Taught

Mississippi State University

CH 1211 General Chemistry I Lab
CH 1213 General Chemistry I
CH 1221 General Chemistry II Lab
CH 1223 General Chemistry II
CH 2501 Elementary Organic Chemistry Lab
CH 2503 Elementary Organic Chemistry
CH 4511 Organic Chemistry I Lab
CH 4513 Organic Chemistry I
CH 4521 Organic Chemistry II Lab
CH 4523 Organic Chemistry II
CH 4554 Integrated Organic Chemistry I
CH 4564 Integrated Organic Chemistry II
CH 8990 Special Topics: Organic Spectroscopy

University of Alabama in Huntsville

CH 125 General Chemistry Lab I
CH 126 General Chemistry Lab II
CH 335 Organic Chemistry Lab I
CH 336 Organic Chemistry Lab II

Proposal/Grant Submissions

Mononuclear Copper(II) Complexes for C-N Bond Forming Reactions. Co-PI, Submitted Oct. 19, 2019, \$110,000, ACS-PRF, Declined.

Study of Commingled and Fragmentary Remains using ICP-MS. Co-PI, Submitted Oct. 15, 2020, \$5,275, Arts & Sciences Strategic Research Initiative, Accepted.

Tuning the Electronic Structure of Copper(II) Complexes for *N*-atom Transfer Chemistry. Co-PI, Submitted Mar. 18, 2019, \$110,000, ACS-PRF, Declined.

Copper(II) Based DNA Hybrid Catalyst for Aqueous Asymmetric Transformations. Co-PI, Submitted Oct. 2, 2018, \$479,130, NSF MPS-CAT, Declined.

Spectroscopy Interpretation for Undergraduate Organic Students: A Writing Approach Supporting the University Maroon and White Initiative. Co-PI, Submitted Feb 3, 2015, \$3720, MSU 2015 Schillig Special Teaching Projects Program, Accepted.

Spectroscopy Interpretation and Chemical Interpretation using Calibrated Peer Review. Co-PI, Submitted Feb. 5, 2014, \$5000, MSU 2014 Schillig Special Teaching Projects Program, Accepted.

Workbooks & Lab Manuals Authored

CH 4523 Organic Chemistry II Workbook. Sean Stokes. Contributor: Sean Stokes. Editors: Terri Linley and Xue "Snow" Xu. MSU Chemistry Department. 2019-2020.

CH 4513 Organic Chemistry I Workbook. Sean Stokes. Contributors: Sean Stokes, Xin Cui, Keith Hollis, Xue "Snow" Xu, Colleen Scott and Andrzej Sygula. Editors: Terri Linley and Xue "Snow" Xu. MSU Chemistry Department. 2018-2020.

CH 4521 Organic Chemistry II Lab Manual. Sean Stokes & Deb Mlsna. Editors: Terri Linley, Charles Nettles and Whitnee Nettles. MSU Chemistry Department. 2014-2019.

CH 4511 Organic Chemistry I Lab Manual. Sean Stokes & Deb Mlsna. Editors: Terri Linley, Charles Nettles and Whitnee Nettles. MSU Chemistry Department. 2014-2019.

CH 2501 Elementary Organic Chemistry Lab Manual. Sean Stokes & Deb Mlsna. Editors: Terri Linley and Whitnee Nettles. MSU Chemistry Department. 2014-2020.

Mississippi State University Academic Service

- Chemistry Department Undergraduate Advisor. 2013-current.
- Physicians on the Rise Advisor. 2014-current.
- Chemistry Department Inventory Co-Coordinator. 2014-current.
- Bill Henry Memorial Golf Tournament Committee Member. 2018-current.
- Chemistry Department Alumni Engagement Chair. 2019-current.
- Chemistry Department Space & Planning Committee Member 2018-current
- Chemistry Department Scholarship Committee Member. 2017.
- Student Affiliates of the American Chemical Society (SAACS) Advisor. 2012.
- Student Affiliates of the American Chemical Society (SAACS) Co-Advisor. 2013-2014.
- Chemistry Department Instrument Committee Member. 2013, 2015-2019.
- Chemistry Department Instrument Committee Chair. 2014 & 2020.
- Chemistry Department Undergraduate Curriculum Committee Member. 2019.

Graduate Student Committee Membership

- Daniel Wolgemuth – MS Student – Emerson – Graduated 2019
- Sydnee Elmore – MS Student – Emerson – Graduated 2019
- Maggie Leake – PhD Student – D. Mlsna

- Jayamini Hewage – PhD Student – Wipf
- Prashan Rodrigo – PhD Student – T. Mlsna