

## JARED THOMAS SHAW

*Professor II*

*Vice Chair of Infrastructure & Safety*

*Department of Chemistry, University of California*

*One Shields Ave, Davis CA, 95616*

*(530) 752-9979; jtshaw@ucdavis.edu*

### Education

- Ph.D., Organic Chemistry, University of California, Irvine, 1999
- B.S., Chemistry, University of California, Berkeley, 1993

### Research Training

- *Harvard University*: NIH Postdoctoral Fellow with David A. Evans, 1999-2002
- *University of California, Irvine*: Graduate Research with Keith A. Woerpel, 1994-1999
- *University of California, Berkeley*: Undergraduate Research with Clayton H. Heathcock, 1991-1993

### Professional Experience

- *University of California, Davis*: Professor, 2016-present
- *University of California, Davis*: Associate Professor, 2012-2016
- *University of California, Davis*: Assistant Professor, 2007-2012
- *Broad Institute of Harvard and MIT*: Institute Fellow in the Chemical Biology Program, 2005-2007
- *Harvard Medical School*: Institute Fellow at the Institute of Chemistry and Cell Biology, 2002-2005
- *Gilead Sciences, Inc.*: Research Chemist, 1993-1994

### Consultancy

- Chicago Tri-Institutional Center for Methodology and Library Development (CTCMLD, funded by NIH/NIGMS), external advisory board (EAB), 2009-2013
- International Cooperative Biodiversity Group (ICBG, funded by the NIH/Fogarty International Center), external advisory board (EAB), 2011-2013
- Shire Pharmaceuticals, 2011-2012

### Honors and Awards

- Thieme Chemistry Journal Award (2012)
- NSF CAREER (2009)
- Amgen Research Award, sponsored by Amgen's Chemistry Research Discovery Dept. (2005)
- Outstanding Poster Presentation, Combinatorial Chemistry GRC (2003)
- NIH Postdoctoral Fellowship (1999-2001)
- E. K. C. Lee Award for Excellence in Graduate Studies and Research (1998)
- ACS/Division of Organic Chemistry Graduate Fellowship (1997)
- Department of Education/GAANN Fellowship, University of California, Irvine (1994-1996)
- Alumni Scholarship, University of California, Berkeley (1989-1993)

### Publications

83) "Synthesis of Benzodihydrofurans by Asymmetric C–H Insertion Reactions of Donor/Donor Carbenoids." K. N. Lamb, R. A. Squitieri, S. R. Chintala, A. J. Kwong, E. I. Balmond, C. Soldi, O. Dmitrenko, M. C. Reis, R. Chung, J. B. Addison, J. C. Fettingner, J. E. Hein, D. J. Tantillo, J. M. Fox, J. T. Shaw. **2017**, *submitted*.

82) "Diastereoselective Base-Catalyzed Formal [4+2] Cycloadditions of N-Sulfonyl Imines and Cyclic Anhydrides." S. W. Laws, L. C. Moore, M. J. Di Maso, Q. Nhu N. Nguyen, D. J. Tantillo, J. T. Shaw. *Org. Lett.* **2017**, *in revision*.

81) "Targeting Quinolone and Aminocoumarin-Resistant Bacteria with New Gyramide Analogs That Inhibit DNA Gyrase." K. A. Hurley, T. M. A. Santos, M. R. Fensterwald, M. Rajendran, J. T. Moore, E. I. Balmond, B. J. Blahnik, K. C. Faulkner, M. H. Foss, V. A. Heinrich, M. G. Lammers, L. C. Moore, G. D. Reynolds, G. P. Shearn-Nance, B. A. Stearns, Zi W. Yao, J. T. Shaw, D. B. Weibel. *MedChemComm.* **2016**, *in press*.

- 80) "Asymmetric Synthesis of Homocitric Acid Lactone." L. A. Nickerson, V. Huynh, E. I. Balmond, Stephen P. Cramer, J. T. Shaw. *J. Org. Chem.* **2016**, 11404-11408.
- 79) "Systematic study of the Photoswitching Properties of Spiropyrans and Spirooxazines: Substituent Effect." E. I. Balmond, B. K. Tautges, A. L. Faulkner, V. W. Or, B. M. Hodur, J.T. Shaw, A.Y. Louie. *J. Org. Chem.*, **2016**, in press 8744-8758.
- 78) "The Plastidial Metabolite MEcPP Induces a Transcriptionally Centered Stress Response Hub via the Transcription Factor CAMTA3." G. Benn, M. Bjornson, H. Ke, A. de Souza, E. Balmond, J. T. Shaw, K. Dehesh. *Proc. Natl. Acad. Sci. U.S.A.*, **2016**, 8855-8860.
- 77) "Synthesis of Esters by in situ Formation and Trapping of Diazo-alkanes." R. A. Squitieri, G. P. Shearn-Nance, J. E. Hein, J. T. Shaw. *J. Org. Chem.*, **2016**, 5278-5284.
- 76) "Synthesis of Bisavenanthramide B-6 by an Anionic Anhydride Mannich Reaction." M. J. Di Maso, G. M. Nepomuceno, M. A. St. Peter, H. H. Gitre, K. S. Martin, J. T. Shaw. *Org. Lett.* **2016**, 1740-1743.
- 75) "Diastereoselective Synthesis of and Mechanistic Understanding for the Formation of 2-Piperidinones from Imines and Cyano-Substituted Anhydrides." M J. Di Maso, K. M. Snyder, F. D. Fernandes, O. Pattawong, D Q. Tan, J. C. Fettinger, P. H.-Y. Cheong, J. T. Shaw. *Chem. Eur. J.*, **2016**, 4794-4801.
- 74) "Towards Structural Correctness: Aquatolide and the Importance of 1D Proton NMR FID Archiving." G. F. Pauli, M. Niemitz, J. Bisson, M. W. Lodewyk, C. Soldi, J. T. Shaw, D. J. Tantillo, J. M. Saya, K. Vos, R. A. Kleinnijenhuis, H. Hiemstra, S.-N. Chen, J. B. McAlpine, D. C. Lankin, and J. B. Friesen. *J. Org. Chem.* **2016**, 878-889.
- 73) "Targeting the Bacterial Division Protein FtsZ." K. A. Hurley, T. M. A. Santos, G. M. Nepomuceno, J. T. Shaw, D. B. Weibel. *J. Med. Chem.*, **2016**, 6975-6998.
- 72) "Preparation of a Conjugation-Ready Thiol Responsive Molecular Switch." B. Tautges, V. Or, J. Garcia, J. T. Shaw, A. Y. Louie. *Tetrahedron Lett.*, **2015**, 6569-6573.
- 71) "4-methyl-1-(2-(phenylsulfonyl)ethyl)-2,6,7-trioxabicyclo[2.2.2]octane." M. J. Di Maso, M. A. St. Peter, J. T. Shaw. *Org. Synth.*, **2015**, 9, 328-341.
- 70) "Synthesis of the Diaryl Ether Cores Common to Chrysopaentins A, E and F." A. J. Brockway, C. I. Grove, M. E. Mahoney, J. T. Shaw. *Tetrahedron Lett.*, **2015**, 3396-3401. *Symposium in Print in Memory of Prof. Harry Wasserman.* [PMCID: in progress](#)
- 69) "Synthesis and Evaluation of Quinazolines as Inhibitors of the Bacterial Cell Division Protein FtsZ." G. M. Nepomuceno, K. M. Chan, V. Huynh, K. S. Martin, J. T. Moore, T. E. O'Brien, L. A. E. Pollo, F. J. Sarabia, C. Tadeus, Z. Yao, D. E. Anderson, J. B. Ames and J. T. Shaw. *ACS Med. Chem. Lett.*, **2015**, 308-312. [PMCID: PMC4360151](#)
- 68) "Enantioselective Intramolecular C-H Insertion Reactions of 'Donor-Donor' Metal Carbenoids." C. Soldi, K. N. Lamb, R. A. Squitieri, M. González-López, M. J. Di Maso, J. T. Shaw. *J. Am. Chem. Soc.*, **2014**, 15142-15145. [PMCID: PMC4227726](#)
- 67) "Failsafe Mechanisms Couple Division and DNA Replication in Bacteria." H. A. Arjes, A. Kriel, N. A. Sorto, J. T. Shaw, J. D. Wang, P. A. Levin. *Curr. Biol.*, **2014**, 2149-2155. [PMCID: PMC4175050](#)
- 66) "Anhydride-Based Multicomponent Reactions." K. S. Martin, A. Younai, J. T. Shaw. *Multicomponent Reactions in Organic Synthesis* (Wiley-Interscience; Ed. J. Zhu) **2014**, 379-400.
- 65) "Studies in the Synthesis of Biaryl Natural Products." M. J. Di Maso, C. I. Grove, J. T. Shaw. *Strategies and Tactics in Organic Synthesis*, **2014**, 225-248.
- 64) "Gyramides Prevent Bacterial Growth by Inhibiting DNA Gyrase and Altering Chromosome Topology." M. Rajendram, K. A. Hurley, M. H. Foss, K. M. Thornton, J. T. Moore, J. T. Shaw, D. B. Weibel. *ACS Chem. Biol.*, **2014**, 1312-1319.

## Publications, *continued*

- 63) "Diastereoselective Synthesis of  $\gamma$ - and  $\delta$ -Lactams From Imines and Sulfone-Substituted Anhydrides." N. A. Sorto, M. J. Di Maso, M. A. Muñoz, R. J. Dougherty, J. C. Fettinger, J. T. Shaw. *Org. Chem.*, **2014**, 2601-2610.
- 62) "Nobody Can See Atoms: Science Camps Highlighting Approaches for Making Chemistry Accessible to Blind and Visually-Impaired Students." H. B. Wedler, L. Boyes, R. L. Davis, D. Flynn, A. K. Franz, C. S. Hamman, J. G. Harrison, M. W. Lodewyk, K. A. Milinkevich, J. T. Shaw, D. J. Tantillo, S. C. Wang. *J. Chem. Educ.*, **2013**, 188-194.
- 61) "Enantioselective Synthesis of Isotopically Labeled Homocitric Acid Lactone." J. T. Moore, N. V. Hanhan, M. E. Mahoney, S. P. Cramer, J. T. Shaw. *Org. Lett.*, **2013**, 5615-5617. [PMCID: PMC3932135](#)
- 60) "Stereoselective Synthesis of  $\gamma$ -Lactams from Imines and Cyanosuccinic Anhydrides." D. Q. Tan, O. Pattawong, A. Younai, J. C. Fettinger, P. H.-Y. Cheong, J. T. Shaw, *Org. Lett.*, **2013**, 5126-5129. [PMCID: PMC3874237](#)
- 59) "Stereocontrol in Asymmetric  $\gamma$ -Lactam Syntheses from Imines and Cyanosuccinic Anhydrides." O. Pattawong, D. Q. Tan, J. T. Shaw, P. H.-Y. Cheong, *Org. Lett.*, **2013**, 5130-5133. [PMCID: PMC3988202](#)
- 58) "Synthesis of a Library of 'Lead-Like'  $\gamma$ -Lactams by a One Pot, Four-Component Reaction." K. S. Martin, M. J. Di Maso, J. C. Fettinger, J. T. Shaw *ACS Comb. Sci.*, **2013**, 356-362. [PMCID: PMC3816122](#)
- 57) "Design and Synthesis of Mimics of the T7-loop of FtsZ." N. A. Sorto, P. P. Painter, J. C. Fettinger, D. J. Tantillo, J. T. Shaw. *Org. Lett.*, **2013**, 15, 2700-2703. [PMCID: PMC3727220](#)
- 56) "Mechanism of Alkoxy Group Substitution by Grignard Reagents on Aromatic Rings and Experimental Verification of Theoretical Predictions of Anomalous Reactions." G. Jimenez-Oses, A. J. Brockway, J. T. Shaw, K. N. Houk. *J. Am. Chem. Soc.*, **2013**, 6633-6642. [PMCID: PMC3726219](#)
- 55) "From Bead to Flask: Synthesis of a Complex  $\beta$ -Amino Amide for Probe Development Studies." K. S. Martin, C. Soldi, K. N. Candee, H. I. Wettersten, R. H. Weiss, J. T. Shaw, *Beilstein J. Org. Chem.*, **2013**, 260-264. [PMCID: PMC3566855](#)
- 54) "The Correct Structure of Aquatolide-Experimental Validation of a Theoretically Predicted Structural Revision." M. Lodewyk, C. Soldi, P. Jones, M. E. Olmstead, J. Rita, J. T. Shaw, D. J. Tantillo, *J. Am. Chem. Soc.*, **2012**, 18550-18553.
- 53) "Catalytic Alkene Cyclization Reactions for the Stereoselective Synthesis of Complex 'Terpenoid-like' Heterocycles." J. T. Moore, C. Soldi, J. C. Fettinger, J. T. Shaw, *Chem. Sci.*, **2012**, 292-296. [PMCID: PMC3614375](#)
- 52) "Comparison of Small Molecule Inhibitors of the Bacterial Cell Division Protein FtsZ and Identification of a Reliable Cross-Species Inhibitor." D. E. Anderson, M. B. Kim, N. A. Sorto, J. T. Moore, T. E. O'Brien, C. I. Grove, J. B. Ames, J. T. Shaw, *ACS Chem. Biol.*, **2012**, 1918-1928. [PMCID: PMC3514448](#)
- 51) "Applied Computational Chemistry for the Blind and Visually Impaired." H. B. Wedler, S. R. Cohen, R. L. Davis, C. S. Hamann, J. G. Harrison, M. R. Siebert, J. T. Shaw, D. J. Tantillo, *J. Chem. Educ.*, **2012**, 1400-1404.
- 50) "The Synthesis and Antimicrobial Activity of Heterocyclic Derivatives of Totarol." M. B. Kim, T. E. O'Brien, J. T. Moore, D. E. Anderson, M. H. Foss, D. B. Weibel, J. B. Ames, J. T. Shaw, *ACS Med. Chem. Lett.*, **2012**, 818-822. [PMCID: PMC3483140](#)

## Publications, continued

- <sup>†</sup>49) "Strategic Applications of Multicomponent Reactions in Diversity-Oriented Synthesis." J. M. Knapp, M. J. Kurth, J. T. Shaw, A. Younai, *Diversity-Oriented Synthesis: Basics and Applications in Organic Synthesis, Drug Discovery, and Chemical Biology* (Wiley-Interscience; Ed. A. Trabocchi) **2012**, 29-57.
- 48) "Synthesis of 6,6'-Binaphthopyran-2-one Natural Products: Pigmentosin A, Talaroderxines A & B." C. I. Grove, M. J. Di Maso, F. A. Jaipuri, M. B. Kim, J. T. Shaw, *Org. Lett.*, **2012**, 4338-4341. [PMCID: PMC3461326](#)
- 47) "Inhibitors of Bacterial Tubulin Target Bacterial Membranes In Vivo." M. H. Foss, Y.-J. Eun, C. I. Grove, D. A. Pauw, N. A. Sorto, J. W. Rensvold, D. J. Pagliarini, J. T. Shaw, D. W. Weibel, *MedChemComm*, **2012**, 112-119. [PMCID: PMC3607388](#)
- 46) "Characterization of *Caulobacter Crescentus* FtsZ Using Dynamic Light Scattering." S. Hou, S. A. Wieczorek, T. S. Kaminski, N. Ziebacz, M. Tabaka, N. A. Sorto, M. H. Foss, J. T. Shaw, M. Thanbichler, D. B. Weibel, K. Nieznanski, R. Holyst, P. Garstecki, *J. Biol. Chem.*, **2012**, 23878-23886. [PMCID: PMC3390664](#)
- 45) "Influence of Chiral Thiols on the Diastereoselective Synthesis of  $\gamma$ -Lactams from Cyclic Anhydrides." A. Younai, J. C. Fettinger, J. T. Shaw, *Tetrahedron*, **2012**, 4320-4327.
- 44) "Synthesis of a  $\gamma$ -Lactam Library via Formal Cycloaddition of Imines and Substituted Succinic Anhydrides." D. Q. Tan, A. L. Atherton, A. J. Smith, C. Soldi, K. A. Hurley, J. C. Fettinger, J. T. Shaw, *ACS Comb. Sci.*, **2012**, 218-223. [PMCID: PMC3325288](#)
- 43) "Second-Generation Synthesis of (-)-Viriditoxin." C. I. Grove, J. C. Fettinger, J. T. Shaw, *Synthesis* [Feature Article], **2012**, 362-371. [PMCID: PMC3461596](#)
- 42) "Carbon-Carbon Bond-Forming Reactions of  $\alpha$ -Thioaryl Carbonyl Compounds for the Synthesis of Complex Heterocyclic Molecules." J. E. Biggs-Houck, R. L. Davis, J. Wei, B. Q. Mercado, M. M. Olmstead, D. J. Tantillo, J. T. Shaw, *J. Org. Chem.*, **2012**, 160-172.
- 41) "Direct Displacement of Alkoxy Groups of Vinylogous Esters by Grignard Reagents." A. J. Brockway, M. González-López, J. C. Fettinger, J. T. Shaw, *J. Org. Chem.*, **2011**, 3515-3518. [PMCID: PMC3180960](#)
- 40) "Synthesis of (-)-Viriditoxin, a 6-6' Binaphthopyranone that Targets the Bacterial Cell Division Protein FtsZ." Y. S. Park, M. González-López, C. I. Grove, S. Uргаonkar, J. C. Fettinger, J. T. Shaw, *Angew. Chem. Int. Ed.*, **2011**, 3730-3733. [PMCID: PMC3325170](#)
- 39) "N-Benzyl-3-sulfonamidopyrrolidines as a New Class of Bacterial DNA Gyrase Inhibitors." M. H. Foss, K. A. Hurley, N. A. Sorto, L. L. Lackner, K. M. Thornton, J. T. Shaw, D. B. Weibel, *ACS Med. Chem. Lett.*, **2011**, 289-292. [PMCID: PMC3088120](#)
- 38) "Ammonia Synthons for the Multicomponent Assembly of Complex  $\gamma$ -Lactams." D. Q. Tan, Kevin S. Martin, J. C. Fettinger, J. T. Shaw, *Proc. Natl. Acad. Sci. U.S.A.*, **2011**, 6781-6786. [PMCID: PMC3084106](#)
- 37) "Diastereoselective Synthesis of ( $\pm$ )-Heliotropamide by a One-Pot, Four-Component Reaction." A. Younai, G. F. Chin, J. T. Shaw, *J. Org. Chem.*, **2010**, 8333-8336.
- 36) "Practical Synthesis of PC190723, An Inhibitor of the Bacterial Cell Division Protein FtsZ." N. A. Sorto, M. M. Olmstead, J. T. Shaw, *J. Org. Chem.*, **2010**, 7946-7949. [PMCID: PMC3068231](#)
- <sup>†</sup>35) "High-Throughput Methods of Chemical Synthesis Applied to the Preparation of Inhibitors of Protein-Protein Interactions." A. K. Franz, J. T. Shaw, Y. Tang. *Protein Surface Recognition: Approaches for Drug Discovery* (Wiley-Interscience; Eds. E. Giralt, M. Peczu, X. Salvatella) **2010**, 157-210.

<sup>†</sup> indicates that authorship was assigned alphabetically

## Publications, *continued*

- 34) "Synthesis of Antimicrobial Natural Products Targeting FtsZ: (+)-Totarol and Related Totarane Diterpenes." M. B. Kim and J. T. Shaw, *Org. Lett.*, **2010**, 3324-3327. [PMCID: PMC2927847](#)
- 33) "Organic Linking." J. T. Shaw and M. McIntosh, *ACS Chem. Biol.* **2010**, 255-256. (editorial)
- 32) "Recent Advances of in Multicomponent Reactions for Diversity-Oriented Synthesis." J. E. Biggs-Houck, A. Younai, J. T. Shaw, *Curr. Opin. Chem. Biol.*, **2010**, 371-382.
- 31) "One-Step Synthesis of Complex Nitrogen Heterocycles from Imines and Alkyl-Substituted Maleic Anhydrides." Y. Tang, J. C. Fetting, J. T. Shaw, *Org. Lett.*, **2009**, 3802-3805.
- 30) "Naturally Diverse: Highlights in Versatile Synthetic Methods Enabling Target- and Diversity-Oriented Synthesis." J. T. Shaw, *Nat. Prod. Rep.* **2009**, 11-26.
- 29) "Cyclic Anhydrides in Formal Cycloaddition and Multicomponent Reactions." M. González-López and J. T. Shaw, *Chem. Rev.* **2009**, *108*, 164-189.
- 28) "Zinc-Catalyzed Silylation of Terminal Alkynes." R. Rahaim, Jr. and J. T. Shaw, *J. Org. Chem.* **2008**, *73*, 2912-2915.
- 27) "Chemical Inhibition of the Mitochondrial Division Dynamin Reveals its Role in Bax/Bak-dependent Mitochondrial Outer Membrane Permeabilization." A. Cassidy-Stone, J. E. Chipuk, E. Ingeman, C. Song, C. Yoo, M. J. Kurth, J. T. Shaw, J. Hinshaw, D. R. Green, J. Nunnari, *Dev. Cell*, **2008**, 193-204. [PMCID: PMC2267902](#)
- 26) "Identification of the Molecular Target of Small Molecule Inhibitors of HDL Receptor SR-BI Activity." T. J. F. Nieland, J. T. Shaw, F. A. Jaipuri, J. L. Duffner, A. N. Koehler, S. Banakos, V. I. Zannis, T. Kirchhausen, M. Krieger, *Biochemistry*, **2008**, 460-472. [PMCID: PMC2736594](#)
- 25) "*N*-Benzyl-3-sulfonamidopyrrolidines as Inhibitors of Cell Division in *E. coli*." S. Mukherjee, C. A. Robinson, A. G. Howe, T. Mazor, P. A. Wood, S. Urgaonkar, A. M. Hebert, D. RayChaudhuri, J. T. Shaw, *Bioorg. Med. Chem. Lett.*, **2007**, 6651-6655.
- 24) "Influence of HDL-cholesterol Elevating Drugs on the In Vitro Activity of the HDL Receptor SR-BI." T. J. Nieland, J. T. Shaw, F. A. Jaipuri, Z. Maliga, J. L. Duffner, A. N. Koehler, M. Krieger, *J. Lipid Res.*, **2007**, 1832-1845.
- 23) "Diastereoselective Synthesis of  $\gamma$ -Lactams by a One-pot, Four-component Reaction." J. Wei and J. T. Shaw, *Org. Lett.*, **2007**, 4077-4080.
- 22) "Synthesis of Kaempferitrin." S. U. Urgaonkar and J. T. Shaw, *J. Org. Chem.*, **2007**, *72*, 4582-4585.
- 21) "Synthesis and Stereochemical Assignment of Brasilibactin A." J. M. Mitchell and J. T. Shaw, *Org. Lett.* **2007**, *9*, 1679-1681.
- 20) "Synthesis of Diverse Library of Lactam Carboxamides Leading to the Discovery of a New Transcription-Factor Inhibitor." P. Y. Ng, Y. Tang, W. M. Knosp, H. S. Stadler, J. T. Shaw, *Angew. Chem. Int. Ed.*, **2007**, 5352-5355.
- 19) "Cycloaddition Reactions of Imines with 3-Thiosuccinic Anhydrides: Synthesis of the Tricyclic Core of Martinellic Acid." P. Y. Ng, C. E. Masse, J. T. Shaw, *Org. Lett.* **2006**, *8*, 3999-4002.
- 18) "Divergent Structural Complexity from a Linear Reaction Sequence: Synthesis of Fused and Spirobicyclic  $\gamma$ -Lactams from Common Synthetic Precursors." C. E. Masse, P. Y. Ng, Y. Fukase, M. Sanchez-Rosello, J. T. Shaw, *J. Comb. Chem.* **2006**, *8*, 293-296.
- 17) "A Structurally Diverse Library of Polycyclic Lactams resulting from Systematic Placement of Proximal Functional Groups." J. M. Mitchell and J. T. Shaw, *Angew. Chem. Int. Ed.* **2006**, *45*, 1722-1726.

<sup>†</sup> indicates that authorship was assigned alphabetically

## Publications, *continued*

16) "Synthesis of Antimicrobial Natural Products Targeting FtsZ: ( $\pm$ )-Dichamanetin and ( $\pm$ )-2''-Hydroxy-5''-benzylisouvarinol-B." S. Uргаonkar, H. S. La Pierre, I. Meir, H. Lund, D. RayChaudhuri, J. T. Shaw, *Org. Lett.* **2005**, *7*, 5609-5612. [PMCID: PMC2588422](#)

<sup>†</sup>15) "Stereoselective C-Glycosylation Reactions of Ribose Derivatives: Electronic Effects of Five-Membered Ring Oxocarbenium Ions." C. H. Larsen, B. H. Ridgway, J. T. Shaw, D. M. Smith, K. A. Woerpel, *J. Am. Chem. Soc.* **2005**, *127*, 10879-10884.

14) "A New Copper Acetate-bis(oxazoline)-Catalyzed, Enantioselective Henry Reaction." D. A. Evans, D. Seidel, M. Rueping, H. W. Lam, J. T. Shaw, C. W. Downey, *J. Am. Chem. Soc.* **2003**, *125*, 12692-12693.

13) "Recent Advances in Asymmetric Synthesis with Chiral Imide Auxiliaries." D. A. Evans and J. T. Shaw, *Actualité Chimique*, **2003**, 35-38.

12) "Magnesium Halide-Catalyzed Anti-Aldol Reactions of Chiral *N*-Acylothiazolidinethiones." D. A. Evans, C. W. Downey, J. T. Shaw, J. S. Tedrow, *Org. Lett.* **2002**, *4*, 1127-1130.

11) "Diastereoselective Magnesium Halide Catalyzed Anti-Aldol Reactions of Chiral *N*-Acyloxazolidinones." D. A. Evans, J. S. Tedrow, J. T. Shaw, C. W. Downey, *J. Am. Chem. Soc.* **2002**, *124*, 392-393.

<sup>†</sup>10) "Diastereoselective Nucleophilic Substitution Reactions of Oxasilacyclopentane Acetals: Application of the 'Inside Attack' Model for Reactions of Five-Membered-Ring Oxocarbenium Ions." T. J. Bear, J. T. Shaw, K. A. Woerpel, *J. Org. Chem.* **2002**, *67*, 2056-2064.

<sup>†</sup>9) "A Stereoelectronic Model to Explain the Highly Stereoselective Reactions of Nucleophiles with Five-Membered-Ring Oxocarbenium Ions." C. H. Larsen, B. H. Ridgway, J. T. Shaw, K. A. Woerpel, *J. Am. Chem. Soc.* **1999**, *121*, 12208-12209.

<sup>†</sup>8) "Divergent Diastereoselectivity in the Addition of Nucleophiles to Tetrahydrofuran-Derived Oxonium Ions." J. T. Shaw and K. A. Woerpel, *Tetrahedron* **1999**, *50*, 8747-8756.

7) "Synthesis and Hybridization Property of an Oligonucleotide Containing a 3'-Thioformacetal Linked Pentathymidylate." J. C. Zhang, J. T. Shaw, M. D. Matteucci, *Bioorg. Med. Chem. Lett.* **1999**, *9*, 319-322.

<sup>†</sup>6) "Preparation and Synthetic Utility of Oxasilacyclopentane Acetals Derived from Siliranes." J. T. Shaw and K. A. Woerpel, *Tetrahedron* **1997**, *48*, 16597-16606.

<sup>†</sup>5) "Divergent Diastereoselectivity in the Addition of Nucleophiles to Five-Membered-Ring Oxonium Ions." J. T. Shaw and K. A. Woerpel, *J. Org. Chem.* **1997**, *62*, 6706-6707.

<sup>†</sup>4) "Tandem Aldol-Tishchenko Reactions of Lithium Enolates: A Highly Stereoselective Method for Diol and Triol Synthesis." P. M. Bodnar, J. T. Shaw and K. A. Woerpel, *J. Org. Chem.* **1997**, *62*, 5674-5675.

<sup>†</sup>3) "Stereo- and Regioselectivity of Reactions of Siliranes with Aldehydes and Related Substrates." P. M. Bodnar, W. S. Palmer, B. H. Ridgway, J. T. Shaw, J. H. Smitrovich, K. A. Woerpel, *J. Org. Chem.* **1997**, *62*, 4737-4745.

<sup>†</sup>2) "Stereoselective Insertion of Formamides into the C-Si Bonds of Siliranes." J. T. Shaw and K. A. Woerpel, *J. Org. Chem.* **1997**, *62*, 442-443.

<sup>†</sup>1) "Stereo- and Regiochemistry of Aldehyde Insertions into the C-Si Bonds of Siliranes." P. M. Bodnar, W. S. Palmer, J. T. Shaw, J. H. Smitrovich, J. D. Sonnenberg, A. L. Presley, K. A. Woerpel, *J. Am. Chem. Soc.* **1995**, *117*, 10575-10576.

<sup>†</sup> indicates that authorship was assigned alphabetically

## Public Outreach

*Founder and Host, Davis Science Café*, 2012-present. Davis Science Café is part of a global movement to promote interactions between scientists and the general public. DSC has hosted over 50 speakers from UC Davis and other local organizations in a monthly event that regularly has “standing room only” crowds.

<https://capscomm.org/local-science-cafes/davis-science-cafe/>

<https://www.facebook.com/groups/davissciencecafe/>

### Invited Speaker

4) *Chemistry Camp for the Blind*, 2011-present (absent 2015). Weekend camp founded by Dr. Henry Wedler (UCD Chemistry alumnus) and hosted at Enchanted Hills, Napa, CA.

<http://lighthouse-sf.org/blog/tag/chemistry-camp/>

3) *Science Distilled*, January, 18, 2017. Science Café hosted by Bobby Costagna, Sacramento, CA.

2) *Science Night Live*, November 5, 2014. Science Café hosted by Nick Grey at the World of Wonders Science Museum in Lodi, CA.

1) *Davis Science Café*, August, 14, 2013. Davis, CA.

## Invited Seminars

83) California State University, Fullerton, CA, November 8, 2016.

82) Xavier University of Louisiana, New Orleans, LA, September 15, 2016.

81) Telluride Meeting on Enabling Technology for Reactions and Processes, Telluride, CO, August 4, 2016.

80) Third US-Spain Symposium on Asymmetric Catalysis and Chemical Synthesis, Bilbao, Spain, May 26, 2016

79) University of the Pacific, Stockton, CA, March 1, 2016.

78) Gordon Research Conference on Heterocyclic Chemistry, Salve Regina University, Newport, RI, June 23, 2015

76) University of Indiana, Bloomington, IN, January 23, 2015

75) Marquette University, Milwaukee, WI, September 26, 2014

74) Gordon Research Conference On Natural Products, Proctor Academy, Andover, NH, July 21<sup>st</sup>, 2014

73) Pontificia Universidad Católica, Santiago, Chile, July 9, 2014

72) Merck Pharmaceuticals, Kenilworth, NJ, October 18, 2013

71) Vertex Pharmaceuticals, La Jolla, CA, September 12, 2013

70) Gordon Research Conference on High-Throughput Chemistry and Chemical Biology, Colby-Sawyer College, June 1, 2013

69) Dow AgroSciences, Indianapolis, IN, November, 19, 2012

68) California State University, Los Angeles, CA, October 23, 2012

67) Syracuse University, Department of Chemistry, Syracuse, NY, September 25, 2012

66) Cornell University, Department of Chemistry, Ithaca, NY, September, 24, 2012

65) Gordon Research Conference on Heterocyclic Chemistry, Salve Regina University, Newport, RI, June 24, 2012

64) University of North Carolina, Chapel Hill, NC, April 19, 2012

63) Duke University, Durham, NC, April 17, 2012

### **Invited Seminars, *continued***

- 62) Wayne State University, Detroit, MI, April 11, 2012
- 61) University of Minnesota Institute For Therapeutics Discovery & Development, Minneapolis, MN, April 5, 2012
- 60) Michigan State University, East Lansing, MI, April 4, 2012
- 59) Oregon State University, Corvallis, OR, March 15, 2012
- 58) California State University, San Francisco, CA, January 13, 2012
- 57) 5<sup>th</sup> International Conference on Multi-Component Reactions and Related Chemistry (MCR2011), Zhejiang University, Hangzhou, China, November 15, 2011
- 56) SACNAS National Meeting, San José, CA, October 28, 2011
- 55) Colorado State University, Fort Collins, CO, September 19, 2011
- 54) University of Utah, Salt Lake City, UT, September 15, 2011
- 53) Tufts University, Medford, MA, September 13, 2011
- 52) Boston University, Boston, MA, September 12, 2011
- 51) California State University, Sonoma, Rohnert Park, CA, September 9, 2011
- 50) 242<sup>nd</sup> Meeting of the American Chemical Society Young Academic Investigators' Symposium, August 29, 2011
- 49) Cubist Pharmaceuticals, Waltham, MA, July 29, 2011
- 48) University of California, San Diego, May 23, 2011
- 47) University of California, Riverside, May 20, 2011
- 46) University of California, Santa Cruz, May 9, 2011
- 45) University of Pittsburgh, Pittsburgh, PA, May 5, 2011
- 44) Johns Hopkins University, Baltimore, MD, April 28, 2011
- 43) University of Maryland, College Park, MD, April 28, 2011
- 42) University of Delaware, Newark, DE, April 27, 2011
- 41) New York University, New York, NY, April 26, 2011
- 40) University of Pennsylvania, Philadelphia, PA, April 25, 2011
- 39) University of Vermont, Burlington, VT, April 22, 2011
- 38) Dartmouth College, Hanover, NH, April 21, 2011
- 37) Vanderbilt University, Nashville, TN, April 19, 2011
- 36) University of Texas, Austin, TX, April 15, 2011
- 35) University of Kansas, Lawrence, KS, April 13, 2011
- 34) University of Arkansas, Fayetteville, AR, April 11, 2011
- 33) 241<sup>st</sup> Meeting of the American Chemical Society, Symposium on Chemistry of Natural Resources, March 29, 2011
- 32) Texas A&M University, College Station, TX, March 25, 2011
- 31) University of California, Los Angeles Organic Chemistry Colloquium, February 17, 2011
- 30) Academia Sinica, Taipei, Taiwan, December 7, 2010
- 29) University of Southampton, Southampton, UK, May 14, 2010
- 28) Oxford University, Oxford, UK, May 13, 2010

### **Invited Seminars, *continued***

- 27) Royal Society of Chemistry Conference on New Technologies in Synthesis and Medicinal Chemistry, Novartis Horsham Research Centre, UK, May 11, 2010
- 26) Cambridge University, Cambridge, UK, May 10, 2010
- 25) Universidade Federal de Santa Catarina, Florianópolis, Brazil, April 15, 2010
- 24) Gordon-Keenan Research Seminar on Combinatorial Chemistry, Colby-Sawyer College, New London, NH, June 6, 2009 (Keynote address)
- 23) R. Bryan Miller Symposium, Davis, CA, April 3, 2009
- 22) Tokyo University of Science International Collaboration Workshop, Tokyo, Japan, December 10th, 2008
- 21) Exelixis Pharmaceuticals, South San Francisco, CA, August 8th, 2008
- 20) Gilead Sciences, Foster City, CA, April 16, 2008
- 19) California State University, San José, CA, March 4, 2008
- 18) Gordon Research Conference on Marine Natural Products (short poster talk), Ventura, CA, February 28, 2008
- 17) Midwest Regional Meeting of the American Chemical Society, Kansas City, MO, November 8, 2007
- 16) Pacific University, Forest Grove, OR, October 16, 2007
- 15) NSF Workshop on Physical Organic Chemistry, Basin Harbor Club, Vergennes, VT, September 19, 2007
- 14) California State University, Long Beach, CA, September 12, 2007
- 13) Gordon Research Conference on Combinatorial Chemistry, Colby-Sawyer College, New London, NH, June 1, 2007
- 12) Biotage User Group Meeting on Microwave Synthesis, Boston, MA, May 10, 2007
- 11) Abbot Laboratories, Abbott Park, IL, April 10, 2007
- 10) Select Biosciences Conference on High-Throughput Organic Synthesis, Boston, MA, November 15, 2006
- 9) AztraZeneca Pharmaceuticals, Waltham, MA, September 14, 2006
- 8) University of Southampton, UK, August 25, 2006
- 7) Accelerated Bio and Chem (ABC) Technologies, Basel, Switzerland, January 26, 2006
- 6) Conference on Diversity-Oriented Synthesis (Select Biosciences), Waltham, MA, September 22, 2005
- 5) Gordon Research Conference on Combinatorial Chemistry, Proctor Academy, Andover, NH, August 23, 2005
- 4) Cambridge Healthtech Institute Library Design and Organic Synthesis Meeting, La Jolla, CA, February 14, 2005
- 3) Biotage User Group Meeting on Microwave Synthesis, Boston, MA, October 5, 2004
- 2) Gordon Research Conference on Combinatorial Chemistry, Queens College, Oxford, UK, August 22, 2004
- 1) Advances in Streamlined Synthesis Symposium, Boston University, Boston, MA, June 5, 2004

## Patents

J. T. Shaw, J. T. Moore, M. R. Fensterwald, D. B. Weibel, K. A. Hurley. Inhibitors of Bacterial DNA Gyrase With Efficacy Against Gram-negative Bacteria. International Patent Appl. No. PCT/US2015/030638, filed May 14, 2015.

J. T. Shaw, J. T. Moore, M. R. Fensterwald, D. B. Weibel, K. A. Hurley, "Inhibitors of Bacterial DNA Gyrase With Efficacy Against Gram-negative Bacteria", Filed on May 14, 2014. [Provisional]

J. T. Moore, J. T. Shaw, "Enantioselective Synthesis of Homocitric Acid Lactone Suitable for Isotopic Labeling", UC Case 2013-876-1, Filed on October 3, 2013, #61/886,381. [Provisional]

K. C. Anderson, J. E. Bradner, E. F. Greenberg, T. Hideshima, N. P. Kwiatkowski, R. Mazitschek, S. L. Schreiber, J. T. Shaw. "Treatment of Protein Degradation Disorders." U.S. Patent Application Publication No. 2006/0239909, published 9/6/2006. Corresponding international patent application publications include: AU2006226861 (A1); CA2601706 (A1); CN101495116 (A); EP1861126 (A2); JP2009509910 (A); SG171690 (A1); WO2006102557 (A2).

J. T. Shaw, S. Urgaonkar, D. RayChaudhuri, H. S. La Pierre. "Synthesis of Flavanone Inhibitors of FtsZ as Antibiotics." U.S. Patent Application Publication No. 2007/0221568, published 5/18/2007. Corresponding international patent application publications include: EP1957474 (A1); WO2007056188 (A1).

## Professional Activities

Campus Affiliations: Research at the Chemical-Biology Interface (CBI) Training Grant (NIH), Pharmacology Training Grant (NIH), Graduate Group in Integrative Pathology, UC Davis Comprehensive Cancer Center.

Reviewer: *Angew. Chem. Int. Ed.*, *Org. Lett.*, *J. Am. Chem. Soc.*, *J. Org. Chem.*, *Chem.- Eur. J.*, *Nature Protocols*, *Eur. J. Med. Chem.*, *Tetrahedron Lett.*, *ACS Chem. Biol.*, *Bioorg. Med. Chem.*, *Bioorg. Med. Chem. Lett.*, *Expert Opin. Drug Disc.*, *SYNLETT*

Member: American Chemical Society, American Academy for the Advancement of Science, American Society of Pharmacognosy, Union of Concerned Scientists