WILFRED A. VAN DER DONK

University of Illinois at Urbana-Champaign
Department of Chemistry, 161 RAL Box 38-5
Urbana, IL 61801
Phone: (217) 244-5360; FAX: (217) 244-8533
vddonk@illinois.edu

Date of birth April 21, 1966
US citizen since 2013

EDUCATION

1989	B.Sc & M.Sc, Leiden University, The Netherlands Thesis Advisor: Prof. Jan Reedijk Thesis Title: Model Complexes for Copper Metallo-Enzymes
1994	Ph.D., Rice University, Houston, Texas Thesis Advisor: Prof. Kevin Burgess Thesis Title: Transition Metal Catalyzed Hydroborations

POSITIONS SINCE FINAL DEGREE

1994-1997	Postdoctoral Fellow, Massachusetts Institute of Technology, Cambridge, MA Advisor Prof. JoAnne Stubbe Project: Mechanistic Studies on Ribonucleotide Reductase
1997-2003	Assistant Professor, Department of Chemistry University of Illinois at Urbana-Champaign
2003-2005	Associate Professor, Department of Chemistry University of Illinois at Urbana-Champaign
2005-2008	William H. and Janet Lycan Professor of Chemistry University of Illinois at Urbana-Champaign
2008-present	Richard E. Heckert Endowed Chair in Chemistry University of Illinois at Urbana-Champaign
2008-present	Investigator, Howard Hughes Medical Institute
2007-present	Professor, Institute for Genomic Biology University of Illinois at Urbana-Champaign

FELLOWSHIPS AND AWARDS

1989	*Cum Laude* Masters Thesis, Leiden University
1989-1993	Robert A. Welch Predoctoral Fellowship
1991, 1994	Harry B. Weiser Scholarship for Excellence in Research (Rice University)
1994-1997	Postdoctoral Fellowship, Jane Coffin Childs Foundation for Medical Research
1997	Camille and Henry Dreyfus New Faculty Award
1998	Burroughs-Wellcome New Investigator in the Pharmacological Sciences
1998	Research Innovation Award from the Research Corporation

1999	School of Chemical Sciences Teaching Award (U. Illinois)
1999	UIUC Research Board Beckman Award
1999	Arnold and Mabel Beckman Young Investigator Award
1999	3M Non-Tenured Faculty Award
2000	Cottrell Scholar of the Research Corporation
2001	Beckman Fellow, Center for Advanced Study, University of Illinois
2001	Alfred P. Sloan Fellowship
2002	Camille Dreyfus Teacher-Scholar Award
2003	Helen Corley Petit Scholar
2004	Pfizer Award, American Chemical Society, Division of Biological Chemistry
2004	University Scholar, UIUC
2006	Cope Scholar Award, American Chemical Society
2007	Tetrahedron Young Investigator Award in Bioorganic & Medicinal Chemistry
2008	School of Chemical Sciences Teaching Award (U. Illinois)
2009	Organic and Biomolecular Chemistry Lecture Award, Royal Society of Chemistry
2010	Jeremy Knowles Award, Royal Society of Chemistry
2010	Fellow of the Royal Society of Chemistry
2011	Fellow of the American Academy of Microbiology
2012	Fellow of the American Association for the Advancement of Science
2013	Emil Thomas Kaiser Award, The Protein Society
2014	Member of the American Academy of Arts and Sciences
2015	Bioorganic Chemistry Award, the Royal Society of Chemistry
2016	NIGMS Merit Award
2017	Repligen Award, American Chemical Society
2017	Vincent du Vigneaud Award, American Peptide Society

SPECIAL LECTURES & SYMPOSIA

Schneller Frontiers lecture, Auburn University, November 14, 2019
Rowena Matthews lecture, University of Michigan, September 24, 2019
David Hopwood lecture, John Innes Centre, UK, November 27, 2018
H.H. King lecture, Kansas State University, November 9, 2018
John Daly lecture, National Institutes of Health, October 26, 2018
Myron and Muriel Bender lectures, Northwestern University, August 6-7, 2018
J. Clarence Karcher lecture, University of Oklahoma, December 8, 2017
Backer lecture, University of Groningen, the Netherlands, October 30, 2017
Albert Hofmann award lecture, University of Zürich, October 24, 2017
Nozaki Memorial lecture, Duke University, Department of Biochemistry, December 2, 2016
Peter Yates Memorial lecture, University of Toronto, November 11, 2016
Plenary Lecture, International Conference on Circular Proteins, Brisbane, Australia, November 1, 2015
Andrew Braisted Lecture, UC Berkeley/UCSF. Oct 4, 2015
Novartis Lecture in Chemical Biology, Boston College, September 8, 2015
Frontiers in Chemistry Lectures, Texas A&M, April 6-8, 2015
Jerome A. Berson Lecture, Yale University, Department of Chemistry, March 3, 2015
CBI Program Symposium Keynote Lecturer, Harvard University, April 18-19, 2014
CBI Program Symposium Keynote Lecturer, University of Kansas, January 24, 2014
Genentech Lecture, The Scripps Research Institute, November 18, 2013
ACS Chem. Biol. Award Lecture 2013, ACS National Meeting, New Orleans, March 2013
Kharasch Visiting Professor, University of Chicago, January 2013

GlaxoSmithKline lecture, Centre for Synthesis & Chemical Biology, Dublin, Ireland, December 14, 2012
T. T. Tchen Memorial Lecture, Wayne State University, September 28, 2012
Paul Dowd lecturer, University of Pittsburgh, May 2012
Chemistry Symposium, Boston University, June 24, 2011
Jeremy Knowles Lecture, Directing Biosynthesis II: Durham, UK, September 17, 2010
Organic and Biomolecular Chemistry Award Lecture, IUPAC Congress, Glasgow, August 7, 2009
Chemical Biology Symposium, SUNY Buffalo, September 2009
Novartis lecture, University of Michigan, May 19, 2008
CBIP Program Symposium Keynote Lecturer, Ohio State, May 8, 2007
Tetrahedron Young Investigator Award lecture, Berlin, June 28, 2007
Arthur C. Cope Scholar Award lecture, ACS meeting, August 2006
Baker Symposium on Chemical Biology, Cornell University, April 30, 2005
Pfizer Award lecture, ACS Meeting, August 2004
Science@theInterface Conference, University of Chicago, June 3, 2004
Wageningen Symposium on Organic Chemistry, the Netherlands, April 2004
Pfizer lecture in medicinal chemistry, University of Michigan, January 24, 2002

AFFILIATIONS
American Chemical Society
American Society for Biochemistry and Molecular Biology
American Peptide Society
American Society for Microbiology
Society for Industrial Microbiology and Biotechnology
The Protein Society
Organic Chemistry Division of the American Chemical Society
Biological Chemistry Division of the American Chemical Society
Inorganic Chemistry Division of the American Chemical Society
Society for the Advancement of Chicanos/Latinos and Native Americans in Science (SACNAS)
Royal Society of Chemistry

PROFESSIONAL ACTIVITIES
UIUC
P.I. and founding Director NIH Chemistry-Biology Interface Training Grant, 2004-2016
Faculty advisor, UIUC SACNAS chapter, founder, 2008-present
Member, Sloan Scholarship Board, University Center for Exemplary Mentoring (UCEM)
Director of Graduate Studies, Dept of Chemistry, 2012-present
Carle-Illinois College of Medicine Research Advisory Board, July 2017-present
Institute for Genomic Biology Advisory Committee, 2016-2018

Journal service
Reviewing Editor, *eLife*, 2012-present
Editorial Board *Chemical Communications* 2009-2011
Editorial Advisory Board *J. Org. Chem.* 2006-2018
Editorial Advisory Board *ACS Chem. Biol.* 2009-present
Editorial Advisory Board *ChemBioChem* 2011-2016
Editorial Advisory Board, *Chemical Communications* 2012-present
Editorial Advisory Board, *ACS Central Science* 2015-present
Editorial Advisory Board, *Cell Chemical Biology* 2016-present

Editorial Advisory Board, *Chemical Reviews* 2018-present
Reviewer (2000-present) of manuscripts for *Science, Nature, Nature Chem. Biol., Nat. Biotechnol., Nat. Chem., J. Am. Chem. Soc., Angew. Chem., Proc. Nat. Acad. Sci. USA, eLife, Nat. Commun., Biochemistry, Org. Lett., ACS Chem. Biol. ChemBioChem, Mol. Microbiol. J. Org. Chem., Inorg. Chem., Chem. Rev., Tetrahedron Lett., J. Phys. Chem., Bioorg. Med. Chem. Lett., BMC Microbiol., Appl. Environ. Microbiol.*
Guest editor, special issue of *ChemComm* on Enzymes and Proteins with Herbert Waldman
Guest editor, special issue of *Curr. Opin. Chem. Biol.* with Squire Booker
Guest editor, special issue of *Curr. Opin. Chem. Biol.* 2016 with Dan Tawfik
Guest editor, special issue of *Chem. Rev.* 2017 on unusual enzymes in natural product biosynthesis
Guest editor, special issue of *J. Org. Chem.* 2018 on natural product synthesis and biosynthesis
Co-editor, "Cyclic Peptides: from Bioorganic Synthesis to Applications" Royal Society of Chemistry, Cambridge, UK, 2018. With James Naismith and Jesko Koehnke.

Grant and fellowship review
Member, NIH SBCB Synthetic and Biological Chemistry B study section. 2008-2012
Member, Scientific Advisory Committee, Damon Runyon Cancer Foundation 2008-2012
Member, Searle Scholars Advisory Board, 2017-2021
Member NIGMS Advisory Council, 2016-2018
Ad hoc member NIH Physical Biochemistry study section
Ad hoc member NIH Bioorganic & Natural Products study section
Ad hoc member NIH SBIR Drug Discovery and Development study section
Ad hoc member NIH SBCB Synthetic and Biological Chemistry B study section
Ad hoc member NIH Pioneer mail review
Ad hoc member NIGMS Advisory Council, 2015-2016
Reviewer of grants for NIH, NSF, Research Corporation, Wellcome Fund, Dutch National Research Foundation (NWO), EPSRC (UK), Leverhulme Trust, NSERC, Science Foundation Ireland, and Petroleum Research Fund

Conference organization, consulting, and scientific society service
Co-chair symposium on vitamin B_{12} at the 3rd International Conference on Porphyrins and Phthalocyanines, held July 11-16, 2004, New Orleans
Vice-chair, vitamin B_{12} Gordon Research Conference, Oxford, England, Sept 18-23, 2005
Chair vitamin B_{12} Gordon Research Conference, Biddeford, ME, July 1-6, 2007
Vice-chair, Bioorganic Chemistry Gordon Research Conference, Proctor Academy, June 10-15, 2007
Co-chair, Bioorganic Chemistry Gordon Research, Proctor Academy, June 15-20, 2008
Organizing Committee, 21st Enzyme Mechanisms Conference, Tucson, Arizona, January 3-6, 2009
Co-chair (with Jin Zhang UCSD), 2018 ASBMB national conference, San Diego, April 21-25, 2018
Chair, 27th Enzyme Mechanisms Conference, January 3-7, 2021.
Organizing committee, 1st International Conference on RiPPs, April 23-25, Granada, Spain.
Member Executive Committee, 2006-2009, Div. of Biological Chemistry, American Chemical Society
Scientific Advisory Board, Divergence Inc., St. Louis, MO, 2004-2011

PUBLICATIONS CHRONOLOGICAL
Independent Investigator (University of Illinois at Urbana-Champaign)
*corresponding author

Submitted

290. Duan, Y.; Llorente, C.; Brand, K.; Chu, H.; Jiang, L.; Lang, S.; Torralba, M.; Shao, Y.; Liu, J.; Hernandez-Morales, A.; Lessor, L.; Rahman, I.R.; Miyamoto, Y.; Ly, M.; Sun, W.; Kiesel, R.; Hutmacher, F.; Lee, S.; Ventura-Cots, M.; Bosques-Padilla, F.; Verna, E.C.; Abraldes, J.G.; Brown Jr, R.S.; Vargas, V.; Altamirano, J.; Caballería, J.; Shawcross, D.; Ho, S.B.; Louvet, A.; Lucey, M.R.; Mathurin, P.; Garcia-Tsao, G.; Bataller, R.; Tu, X.M.; Eckmann, L.; van der Donk, W.A.; Young, R.; Trevor, L.; Pride, D.; Stärkel, P.; Fouts, D.E.; Schnabl, B.* "Bacteriophages That Target Cytolytic *Enterococcus faecalis* Reduce Features of Ethanol-induced Liver Disease"

289. Bothwell, I.R.; Cogan, D.P.; Kim, T.; Reinhardt, C.J.; van der Donk, W.A.*; Nair, S.K.* "Characterization of Glutamyl-tRNA Dependent Dehydratases using Non-Reactive Substrate Mimics"

288. Ting, C.; Funk, M.A.; Halaby, S.L.; Zhang, Z.; Gonen, T.; van der Donk, W.A.* "Use of a Scaffold Peptide in the Biosynthesis of Amino Acid Derived Natural Products"

Accepted for publication

287. Hegemann, J.D.; Shi, L.; Gross, M.L.*: van der Donk, W.A.* "Mechanistic Studies of the Kinase Domains of Class IV Lanthipeptide Synthetases" *ACS Chem. Biol.* **2019**. *NIHMSID: 1034061*

Published

286. Hegemann, J.D.; Bobeica, S.C.; Walker, M.C.; Bothwell, I.R.; van der Donk, W.A.* "Assessing the Flexibility of the Prochlorosin 2.8 Scaffold for Bioengineering Applications" *ACS Synth. Biol.* **2019**, *8*, 1204-1214. *PMCID: PMC6525029*

285. Bobeica, S.C.; Dong, S.-H.; Huo, L.; 1, Mazo, N.; McLaughlin, M.I.; Jiménez-Osés, G.; Nair, S.K.*; van der Donk, W.A.* "Insights into AMS/PCAT Transporters from Biochemical and Structural Characterization of a Double Glycine Motif Protease" *eLife*, **2019**; *8*, e42305. *PMCID: PMC6363468*

284. Wu, C.; Biswas, S.; Garcia De Gonzalo, C.V.; van der Donk, W.A* "Investigations into the mechanism of action of sublancin" *ACS Infect. Dis.* **2019**, *5*, 454-459. *PMCID: PMC6408254*

283. Tang, W.; Bobeica, S.C.; Wang, L.; van der Donk* "CylA is a Sequence-Specific Protease Involved in Toxin Biosynthesis" *J. Ind. Microbiol. Biotechnol.* **2019**, *46*, 537-549. *PMCID: PMC6450559*

282. Bougioukou, D.J.; Ting, C.P.; Peck, S.C.; Mukherjee, S.; van der Donk, W.A.* "Use of the Dehydrophos Biosynthetic Enzymes to Prepare Antimicrobial Analogs of Alaphosphin" *Org. Biomol. Chem.* **2019**, *17*, 822-829. *PMCID: PMC6344287*

281. Funk, M.A.; Ting, C.; van der Donk, W.A.* "Catalytic Use of a Leader Peptide in the Biosynthesis of 3-Thia-glutamate" *bioRxiv*, **2018**, 338681. DOI: 10.1101/338681.

280. Howe, G.W.; van der Donk, W.A.* "^{18}O Kinetic Isotope Effects Reveal an Associative Transition State for Phosphite Dehydrogenase Catalyzed Phosphoryl Transfer" *J. Am. Chem. Soc.* **2018**, *140*, 17820-17824. *PMCID: PMC6467793*

279. Ren H.; Biswas, S.; Ho, S.; van der Donk, W.A.*; Zhao, H.* "Rapid Discovery of Glycocins through Pathway Refactoring in *Escherichia coli*" *ACS Chem. Biol.* **2018**, *13*, 2966-2972.

278. Si, T.; Tian, Q.; Min, Y.; Zhang, L.; Sweedler, J.; van der Donk, W.A.*; Zhao, H.* "Rapid screening of lanthipeptide analogs via in-colony removal of leader peptides in *Escherichia coli*" *J. Am. Chem. Soc.* **2018**, *140*, 11884-11888. *PMCID: PMC6476326*

277. Wang, K.K.A.; Ng, T.L.; Wang, P.; Huang, Z.; Balskus, E.P.*, van der Donk, W.A.* "Glutamic acid is a carrier for hydrazine during the biosyntheses of fosfazinomycin and kanamycin" *Nat. Comm.* **2018**, *9*, 3687. *PMCID: PMC6133997*

276. An, L.; Cogan, D.P.; Navo, C.D.; Jiménez-Osés, G.; Nair, S.K.*; van der Donk, W.A.* "Substrate-assisted Enzymatic Formation of Lysinoalanine in Duramycin" *Nat. Chem. Biol.* **2018**, *14*, 28-933. *PMCID: PMC6372306*
275. Dutta, D.; Lai, K.-Y.; Reyes-Ordoñez, A.; Chen, J.; van der Donk, W.A* "Lanthionine Synthetase C-like Protein 2 (LanCL2) is Important for Adipogenic Differentiation" *J. Lipid Res.* **2018**, *8*, 1433-1445. *PMCID: PMC6071776*
274. McLaughlin, M.I.; van der Donk, W.A.* "Stereospecific Radical-mediated B_{12}-dependent Methyl Transfer by the Fosfomycin Biosynthesis Enzyme Fom3" *Biochemistry* **2018**, *57*, 4967-4971. *PMCID: PMC6103835*
273. Hegemann, J.D.; Schwalen, C.J.; Mitchell, D.A.*; van der Donk, W.A.* "Elucidation of the Roles of Conserved Residues in the Biosynthesis of the Lasso Peptide Paeninodin" *Chem. Comm.* **2018**, *54*, 9007-9010. *PMCID: PMC6092944*
272. Bobeica, S.C.; van der Donk, W.A.* "The Enzymology of Prochlorosin Biosynthesis" *Methods Enzymol.* 2018, *604*, 165-203.
271. Hegemann, J.D.; van der Donk, W.A.* "Investigation of Substrate Recognition and Biosynthesis in Class IV Lanthipeptide Systems" *J. Am. Chem. Soc.* **2018**, *140*, 5743-5754. *PMCID: PMC5932250*
270. Kakkar, N.; Perez, J.; Liu, W.R.; Jewett, M.; van der Donk, W.A.* "Incorporation of Nonproteinogenic Amino Acids in Class I and II Lantibiotics" *ACS Chem. Biol.* **2018**, *20*, 951-957. *PMCID: PMC5910287*
269. Hetrick, K.J.; Walker, M.C; van der Donk, W.A.* "Development and Application of Yeast and Phage Display of Diverse Lanthipeptides" *ACS Cent. Sci.* **2018**, *4*, 458–467. *PMCID: PMC5920614*
268. Koehnke, J.; Naismith, J.; van der Donk, W. A., *Cyclic Peptides: from Bioorganic Synthesis to Applications*. Royal Society of Chemistry: Cambridge, UK, 2018.
267. Ulrich, E.C.; Bougioukou, D.J.; van der Donk, W.A.* "Investigation of Amide Bond Formation during Dehydrophos Biosynthesis" *ACS Chem. Biol.* **2018**, *13*, 537-541. *PMCID: PMC5856630*
266. Yang, X.; Lennard, K.R.: He, C.; Walker, M.C.; Ball, A.T.; Doigneaux, C.; Tavassoli, A.*; van der Donk, W.A.* "A lanthipeptide library used to identify inhibitors of a protein-protein interaction inhibitor " *Nat. Chem. Biol.* **2018**, *14*, 375-380. *PMCID: PMC5866752*
265. Repka, L.M.; Hetrick, K.J.; Chee, S.H.; van der Donk, W.A.* "Characterization of Leader Peptide Binding during Catalysis by the Nisin Dehydratase NisB" *J. Am. Chem. Soc.* **2018**, 140, 4200-4203. *PMCID: PMC5901694*
264. Zhang, Z.; Mahanta, N.; Hudson, G.A.; Mitchell, D.A.*; van der Donk, W.A.* "Mechanism of a Class C Radical *S*-Adenosyl-L-methionine Thiazole Methyl Transferase" *J. Am. Chem. Soc.* **2017**, *139*, 18623-18631. *PMCID: PMC5748327*
263. Biswas, S.; Garcia De Gonzalo, C.V.; Repka, L.M.; van der Donk, W.A.* "Structure Activity Relationships of the S-linked Glycocin Sublancin" *ACS Chem. Biol.* **2017**, *12*, 2965-2969. *PMCID: PMC5732038*
262. Cogan, D.P.; Hudson, G.A.; Zhang, Z.; Pogorelov, T.V.; van der Donk, W.A.; Mitchell, D.A.; Nair, S.K.* "Mechanism of Enzymatic [4+2]-*Aza*-cycloaddition in Thiopeptide Antibiotic Biosynthesis" *Proc. Natl. Acad. Sci. U.S.A.* **2017**, *114*, 12928-12933. *PMCID: PMC5724283*
261. Born, D.A.; Ulrich, E.C.; Ju, K.-S.; Peck, S.C.; van der Donk, W.A.*; Drennan, C.L.* "Structural Basis for Methylphosphonate Biosynthesis" *Science* **2017**, *358*, 1336-1339. *PMCID: PMC5901744*
260. Funk, M.; van der Donk, W.A.* "Ribosomal Natural Products, Tailored to Fit" *Acc. Chem. Res.* **2017**, *50*, 1577-1586. *PMCID: PMC5603336*

259. Cubillos-Ruiz, A.; Berta-Thompson, J.W.; Becker, J.W.; van der Donk, W.A.; Chisholm, S.W.* "Evolutionary Radiation of Lanthipeptides in Marine Cyanobacteria" *Proc. Natl. Acad. Sci. U.S.A.* **2017**, 114, E5424-E5433. *PMCID: PMC5502607*
258. Burkhart, B.; Kakkar, N.; Hudson, G.; van der Donk, W.A.*; Mitchell, D.A.* "Chimeric Leader Peptides for the Generation of Non-Natural Hybrid RiPP Products" *ACS Cent. Sci.* **2017**, *3*, 629-638. *PMCID: PMC5492250*
257. Repka, L.M.; Chekan, J.R.; Satish K. Nair, S.K.*; van der Donk, W.A.* "Mechanistic Understanding of Lanthipeptide Biosynthetic Enzymes" *Chem. Rev.* **2017**, *117*, 5457-5520. *PMCID: PMC5408752*
256. Mahanta, N.; Zhang, Z.; Hudson, G.A.; van der Donk, W.A.;* Mitchell, D.A.* "Reconstitution and substrate specificity of the radical S-Adenosyl-methionine thiazole C-methyltransferase in thiomuracin biosynthesis" *J. Am. Chem. Soc.* **2017**, *139*, 4310-4313. *PMCID:PMC5477235*
255. Hetrick, K.J.; van der Donk, W.A.* "Ribosomally synthesized and post-translationally modified peptide natural product discovery in the genomic era" *Curr. Opin. Chem. Biol.* **2017**, *38*, 36-44. *PMCID: PMC5474203*
254. Peck, S.C.; van der Donk, W.A.* "Go It Alone: Four Electron Oxidations by Mononuclear Non-heme Iron Enzymes" *J. Biol. Inorg. Chem.* **2017**, *22*, 381-394. *PMCID:PMC5352498*
253. Ortega, M.A.; Cogan, D.P.; Mukherjee, S.; Garg, N.; Li, B.; Maffioli, S.; Donadio, S.; Sosio, M.; Escano, J.; Smith, J.L.; Nair, S.K.*; van der Donk, W.A.* "Two flavoenzymes catalyze the post-translational generation of 5-chlorotryptophan and 2-aminovinyl-cysteine during NAI-107 biosynthesis" *ACS Chem. Biol.* **2017**, *12*, 548-557. *PMCID: PMC5315687*
252. Olivares, P.; Ulrich, E.C.; Chekan, J.R.; van der Donk, W.A.*; Nair, S.K.* "Characterization of Two Late-Stage Enzymes Involved in Fosfomycin Biosynthesis in Pseudomonads" *ACS Chem. Biol.* **2017**, *12*, 456-463. *PMCID: PMC5315633*
251. Peck, S.C.; Wang, C.; Dassama, L.M.K.; Zhang, B.; Guo, Y.; Rajakovich, L.J.; Bollinger, J.M.*; Krebs, C.*; van der Donk, W.A.* "O-H Activation by an Unexpected Ferryl Intermediate during Catalysis by 2-Hydroxyethylphosphonate Dioxygenase" *J. Am. Chem. Soc.* **2017**, *139*, 2045-2052. *PMCID: PMC5302023*
250. He, C.; Zeng, M.; Dutta, D.; Hee Koh, T.H.; Chen, J.*; van der Donk, W.A.* "LanCL proteins are not Involved in Lanthionine Synthesis in Mammals" *Sci. Rep.* **2017**, *7*, 40980**.** *PMCID: PMC5247676*
249. Huo, L.; Okesli, A.; Zhao, M.; van der Donk, W.A.* "Insights into the biosynthesis of duramycin" *Appl. Environ. Microbiol.* **2017**, *83*, e02698-16. *PMCID: PMC5244291*
248. Clark, K.M.; Tiang, S.; van der Donk, W.A.*; Lu, Y.* "Probing the Role of Backbone Carbonyl Interaction with the Cu_A Center in Azurin by Replacing the Peptide Bond with an Ester Linkage" *Chem. Comm.* **2017**, *53*, 224-227. *PMCID: PMC5253137*
247. Mukherjee, S.; Huo, L.; Thibodeaux, G.; van der Donk, W.A.* "Synthesis and Bioactivity of Diastereomers of the Virulence Lanthipeptide Cytolysin" *Org. Lett.* **2016**, *18*, 6188-6191. *PMCID: PMC5269379*
246. Zhang, Z.; Hudson, G.A.; Mahanta, N.; Tietz, J.I.; van der Donk, W.A.*; Mitchell, D.A.* "Biosynthetic timing and substrate specificity for the thiopeptide thiomuracin" *J. Am. Chem. Soc.* **2016**, *138*, 15511-15514. *PMCID: PMC5148741*
245. Ulrich, E.C.; van der Donk, W.A.* "Cameo appearances of aminoacyl-tRNA in natural product biosynthesis" *Curr. Opin. Chem. Biol.*, **2016**, *35*, 29-36. *PMCID: PMC5161580*
244. Tang, W.; Thibodeaux, G.N.; van der Donk, W.A.* "The Enterococcal Cytolysin Synthetase Coevolves with Substrate for Stereoselective Lanthionine Synthesis" *ACS Chem. Biol.* **2016**, *11*, 2438-2446. *PMCID: PMC5289929*

243. Thibodeaux, C.J.; Wagoner, J.; Yu, Y.; van der Donk, W.A.* "Leader Peptide Establishes Dehydration Order, Promotes Efficiency, and Ensures Fidelity During Lacticin 481 Biosynthesis" *J. Am. Chem. Soc.* **2016**, *138*, 6436-6444. *PMCID: PMC4880487*
242. Huo, L.; van der Donk, W.A.* "Discovery and characterization of bicereucin, an unusual D-amino acid-containing mixed two-component lantibiotic" *J. Am. Chem. Soc.* **2016**, *138*, 5254-5257. *PMCID: PMC4851115*
241. Huang, Z.; Wang, K.-K.A.; van der Donk, W.A.* "New Insights into the Biosynthesis of Fosfazinomycin" *Chem. Sci.* **2016**, *7*, 5219-5223. *PMCID: PMC5215806*
240. Garg, N.; Goto, Y.; Chen, T.; van der Donk, W.A.* "Characterization of the stereochemical configuration of lanthionine formation by the lanthipeptide synthetase GeoM" *Biopolymers Pept. Sci.* **2016**, *106*, 834–842. *PMCID: PMC5108700*
239. Ortega, M. A.; van der Donk, W.A.* "New Insights into the Biosynthetic Logic of Ribosomally Synthesized and Post-translationally Modified Peptide Natural Products" *Cell Chem. Biol.* **2016**, *23*, 31-44. *PMCID: PMC4779184*
238. Ding, W.; Liu, W.-Q.; Jia, Y.; Li, Y.; van der Donk, W.A.*; Zhang, Q.* "Biosynthetic investigation of phomopsins reveals a widespread pathway for ribosomal natural products in Ascomycetes" *Proc. Natl. Acad. Sci. U.S.A.* **2016**, *113*, 3521-3526. *PMCID: PMC4822579*
237. Ortega, M.A.; Hao, Y.; Walker, M.C.; Donadio, S.; Sosio, M.; Nair, S.K.;* van der Donk, W.A.* "Structure and tRNA Specificity of MibB, a Lantibiotic Dehydratase from Actinobacteria Involved in NAI-107 Biosynthesis" *Cell Chem. Biol.* **2016**, *23*, 370-380. *PMCID: PMC4798866*
236. Zhao, X.; van der Donk, W.A.* "Structural Characterization and Bioactivity Analysis of the Two-Component Lantibiotic *Flv* System from a Ruminant Bacterium" *Cell Chem. Biol.* **2016**, *23*, 246-256. *PMCID: PMC4814930*
235. Hudson, G.; Zhang, Z.; Tietz, J.; Mitchell, D.A.*; van der Donk, W.A.* "In vitro biosynthesis of the core scaffold of the thiopeptide thiomuracin" *J. Am. Chem. Soc.* **2015**, *137*, 16012-16015. *PMCID: PMC4819586*
234. Yang, X.: van der Donk, W.A.* "Posttranslational introduction of D-alanine into ribosomally synthesized peptides by the dehydroalanine reductase NpnJ" *J. Am. Chem. Soc.* **2015**, *137*, 12426-12429. *PMCID: PMC4599312*
233. Tang, W.; Dong, S.-H.; Repka, L.M.; He, C.; Nair, S.K.*; van der Donk, W.A.* "Applications of the Class II Lanthipeptide Protease LicP for Sequence-Specific, Traceless Peptide Bond Cleavage" *Chem. Sci.* **2015**, *6*, 6270-6279. *PMCID: PMC5289929*
232. Garcia De Gonzalo, C.V.; Denham, E.L.; Mars, R.A.T.; Stülke, J.; van der Donk, W.A.*; van Dijl, J.M.* "The Phosphoenolpyruvate:Sugar Phosphotransferase system is involved in sensitivity to the glucosylated bacteriocin sublancin" *Antimicrob. Agents Chemother.* **2015**, *59*, 6844-6854. *PMCID: PMC4604375*
231. Medema, M.H.*; Kottmann, R.; Yilmaz, P.; Cummings, M.; Biggins, J.B.; Blin, K.; de Bruijn, I.; Chooi. Y.H.; Claesen, J.; Coates, R.C.; Cruz-Morales, P.; Duddela, S.; Düsterhus, S.; Edwards, D.J.; Fewer, D.P.; Garg, N.; Geiger, C.; Gomez-Escribano, J.P.; Greule, A.; Hadjithomas, M.; Haines, A.S.; Helfrich, E.J.; Hillwig, M.L.; Ishida, K.; Jones, A.C.; Jones, C.S.; Jungmann, K.; Kegler, C.; Kim, H.U.; Kötter, P.; Krug, D.; Masschelein, J.; Melnik, A.V.; Mantovani, S.M.; Monroe, E.A.; Moore, M.; Moss, N.; Nützmann, H.W.; Pan, G.; Pati, A.; Petras, D; Reen, F.J.; Rosconi, F.; Rui, Z.; Tian, Z.; Tobias, N.J.; Tsunematsu, Y.; Wiemann, P.; Wyckoff, E.; Yan, X.; Yim, G.; Yu, F.; Xie, Y.; Aigle, B.; Apel, A.K.; Balibar, C.J.; Balskus, E.P.; Barona-Gómez, F.; Bechthold, A.; Bode, H.B.; Borriss, R.; Brady, S.F.; Brakhage, A.A.; Caffrey, P.; Cheng, Y.Q.; Clardy, J.; Cox, R.J.; De Mot, R.; Donadio, S.; Donia, M.S.; van der Donk, W.A.; Dorrestein, P.C.; Doyle, S.; Driessen, A.J.; Ehling-Schulz, M.; Entian, K.D.; Fischbach, M.A.; Gerwick, L.; Gerwick, W.H.; Gross, H.; Gust, B.; Hertweck, C.; Höfte, M.; Jensen, S.E.; Ju, J.; Katz, L.;

Kaysser, L.; Klassen, J.L.; Keller, N.P.; Kormanec, J.; Kuipers, O.P.; Kuzuyama, T.; Kyrpides, N.C.; Kwon, H.J.; Lautru, S.; Lavigne, R.; Lee, C.Y.; Linquan, B.; Liu, X.; Liu, W.; Luzhetskyy, A.; Mahmud, T.; Mast, Y.; Méndez, C.; Metsä-Ketelä, M.; Micklefield, J.; Mitchell, D.A.; Moore, B.S.; Moreira, L.M.; Müller, R.; Neilan, B.A.; Nett, M.; Nielsen, J.; O'Gara, F.; Oikawa, H.; Osbourn, A.; Osburne, M.S.; Ostash, B.; Payne, S.M.; Pernodet, J.L.; Petricek, M.; Piel, J.; Ploux, O.; Raaijmakers, J.M.; Salas, J.A.; Schmitt, E.K.; Scott, B.; Seipke, R.F.; Shen, B.; Sherman, D.H.; Sivonen, K.; Smanski, M.J.; Sosio, M.; Stegmann, E.; Süssmuth, R.D.; Tahlan, K.; Thomas, C.M.; Tang, Y.; Truman, A.W.; Viaud, M.; Walton, J.D.; Walsh, C.T.; Weber, T.; van Wezel, G.P.; Wilkinson, B.; Willey, J.M.; Wohlleben, W.; Wright, G.D.; Ziemert, N.; Zhang, C.; Zotchev, S.B.; Breitling, R.; Takano, E.; Glöckner, F.O. "Minimum Information about a Biosynthetic Gene cluster" *Nat. Chem. Biol.* **2015**, *11*, 625-631.

230. Walker, M.; van der Donk, W.A.* "The Many Roles of Glutamate in Metabolism" *J. Ind. Microbiol. Biotechnol.* **2015**, 43, 419-430. *PMCID: PMC4753154*
229. Zhu, H.; Peck, S.C.; Bonnot, F.; van der Donk, W.A.; Klinman, J.P.* "Oxygen-18 Kinetic Isotope Effects of Nonheme Iron Enzymes HEPD and MPnS Support Iron(III) Superoxide as the Hydrogen Abstraction Species" *J. Am. Chem. Soc.* **2015**, *137*, 10448-10451. *PMCID: PMC4970508*
228. Huang, Z.; van der Donk, W.A.* "An Unexpected Role for Ergothioneine" *National Science Review* **2015**, *2*, 382-383.
227. Dong, S.-H.; Tang, W.; Lukk, T.; Nair, S.K.*; van der Donk, W.A.* "The Enterococcal Cytolysin Synthetase Has an Unanticipated Lipid Kinase Fold" *eLife* **2015**, 4:e07607. *PMCID: PMC4550811*
226. Ju, K.-S.; Gao, J.; Doroghazi, J.R.; Wang, K.K.A; Thibodeaux, C.J.; Li, S.; Metzger, E.; Fudala, J.; Su, J.; Zhang, J.; Lee, J.; Cioni, J.P.; Evans, B.S.; Hirota, R.; Labeda, D.P.; van der Donk, W.A.*; Metcalf, W.W.* "Discovery of Phosphonic Acid Natural Products by Genome Mining of 10,000 Actinomycetes" *Proc. Natl. Acad. Sci. U.S.A.* **2015**, *112*, 12175-12180. *PMCID: PMC4593130*
225. Bindman, N.A.; Bobeica, S.; Liu, W.R*; van der Donk, W.A.* "Facile Removal of Leader Peptides from Lanthipeptides by Incorporation of a Hydroxy Acid" *J. Am. Chem. Soc.* **2015,** *137*, 6975-6978. *PMCID: PMC4505723*
224. van der Donk, W.A. "Bacteria Do It Differently: An Alternative Path to Squalene" *ACS Cent. Sci.* **2015**, *1*, 64-65. *PMCID: PMC4827487*
223. Zhang, Q.; Doroghazi, J.R.; Zhao, X.; Walker, M.C.; van der Donk, W.A.* "Expanded natural product diversity revealed by analysis of lanthipeptide-like gene clusters in *Actinobacteria*" *Appl. Environ. Microbiol.* **2015**, *81*, 4339-4350. *PMCID: PMC4475899*
222. Yu, Y.; Mukherjee, S.; van der Donk, W.A.* "Product Formation by the Promiscuous Lanthipeptide Synthetase ProcM is under Kinetic Control" *J. Am. Chem. Soc.* **2015**, *137*, 5140-5148. *PMCID: PMC4487812*
221. Yang, X.; van der Donk, W.A.* "The Michael-type cyclizations in lantibiotic biosynthesis are reversible" *ACS Chem. Biol.* **2015**, *10*, 1234-1238. *PMCID: PMC4433588*
220. Peck, S.C.; Chekan, J.R.; Ulrich E.C.; Nair, S.K.; van der Donk, W.A.* "A Common Late-Stage Intermediate in Catalysis by 2-Hydroxyethyl-phosphonate Dioxygenase and Methylphosphonate Synthase" *J. Am. Chem. Soc.* **2015**, *137*, 3217-3220. *PMCID: PMC4487810*
219. Thibodeaux, G.N.; McClerren, A.L.; Ma, Y.; Gancayco, M.R.; van der Donk, W.A.* "Synergistic binding of the leader and core peptide by the lantibiotic synthetase HalM2" *ACS Chem. Biol.* **2015**, *10*, 970-977. *PMCID: PMC4414810*
218. Huang, Z.; Wang, K.-K.A.; Lee, J.; van der Donk, W.A.* "Biosynthesis of fosfazinomycin is a convergent process" *Chem. Sci.* **2015**, *6*, 1282-1287. *PMCID: PMC4303578*
217. Tang, W.; Jimenez-Oses, G.; Houk, K.N.*; van der Donk, W.A.* "Substrate Control in Stereoselective Lanthionine Biosynthesis" *Nat. Chem.* **2015,** *7*, 57-64. *PMCID: PMC4270103*

216. Ortega, M.A.; Hao, Y.; Zhang, Q.; Walker, M.C.; van der Donk, W.A.*, Nair, S.K.* "Structure and Mechanism of the tRNA-Dependent Lantibiotic Dehydratase NisB" *Nature*, **2015**, *517*, 509-512. *PMCID: PMC4430201*
215. Thibodeaux, C.; Ha, T.; van der Donk, W.A.* "A Price to Pay for Relaxed Substrate Specificity: A Comparative Kinetic Analysis of the Class II Lanthipeptide Synthetases, ProcM and HalM2" *J. Am. Chem. Soc.*, **2014**, *136*, 17513-17529. *PMCID: PMC4277782*
214. Zeng, M.; van der Donk, W.A.*; Chen, J.* "Lantibiotic C-like protein 2 (LanCL2) is a novel regulator of Akt" *Mol. Biol. Cell*, **2014**, *25*, 3954-3961. *PMCID: PMC4244203*
213. van der Donk, W.A.*; Nair, S.K.* "Structure and Mechanism of Lanthipeptide Biosynthetic Enzymes" *Curr. Opin. Struct. Biol.* **2014**, *29*, 58-66. *PMCID: PMC4267917*
212. Zhang, Q.; Yang, X.; Wang, H.; van der Donk, W.A.* "High divergence of the precursor peptides in combinatorial lanthipeptide biosynthesis" *ACS Chem. Biol.* **2014**, 2686-2694. *PMCID: PMC4245175*
211. Huang, Y.; Reis, E.S.; Knerr, P.J.; van der Donk, W.A.; Ricklin, D.; Lambris, J.D.* "Conjugation to Albumin-Binding Molecule Tags as a Strategy to Improve Both Efficacy and Pharmacokinetic Properties of the Complement Inhibitor Compstatin" *ChemMedChem* **2014**, *9*, 2223-2226. *PMCID: PMC4177305*
210. Zhang, Q.; Ortega, M.A.; Shi, Y.; Wang, H.; Melby, J.O.; Tang, W.; Mitchell, D.A.; van der Donk, W.A.* "Structural investigation of ribosomally synthesized natural products by hypothetical structure enumeration and evaluation using tandem MS" *Proc. Natl. Acad. Sci. U.S.A.* **2014**, *111*, 12031-12036. *PMCID: PMC4143002*
209. Mukherjee, S.; van der Donk, W.A.* "Mechanistic Studies on the Substrate-Tolerant Lanthipeptide Synthetase ProcM" *J. Am. Chem. Soc.* **2014**, *136*, 10450-10459. *PMCID: PMC4111213*
208. Ortega, M.A.; Velásquez, J.E.; Garg, N.; Zhang, Q.; Joyce, R.E.; Nair, S.K.*; van der Donk, W.A.* "Substrate Specificity of the Lanthipeptide Peptidase ElxP and the Oxidoreductase ElxO" *ACS Chem. Biol.*, **2014**, *9*, 1718-1725. *PMCID: PMC4136673*
207. Bindman, N. A; van der Donk, W.A.* RiPPs: Ribosomally Synthesized and Posttranslationally Modified Peptides. In *Natural Products: Discourse, Diversity, and Design*; Osbourn, A., Goss, R., Carter, G.T., Eds.; John Wiley & Sons, Inc.: Hoboken, NJ, USA, 2014; pp 197-217.
206. Ranaghan, K.E.; Hung, J.E.; Bartlett, G.J.; Mooibroek, T.J.; Harvey, J.N.; Woolfson, D.N.; van der Donk, W.A.*; Mulholland, A.J.* "A catalytic role for methionine revealed by a combination of computation and experiments on phosphite dehydrogenase" *Chem. Sci.* **2014**, *5*, 2191-2199.
205. Clark, K.M.; Yu, Y.; van der Donk, W.A.*; Blackburn, N.J.; Lu, Y.* "Modulating the Copper-Sulfur Interaction in Type 1 Blue Copper Azurin by Replacing Cys112 with Nonproteinogenic Homocysteine" *Inorg. Chem. Front.*, **2014**, *1*, 153-158. *PMCID: PMC3972132*
204. Garcia De Gonzalo, C.V.; Zhu, L; Oman, T.J.; van der Donk, W.A.* "NMR structure of the S-linked glycopeptide sublancin 168" *ACS Chem. Biol.* **2014**, *9*, 796–801. *PMCID: PMC3985867*
203. Hung, J.; Fogle, E.J.; Garg, N.; Chekan, J.R.; Nair, S.K.; van der Donk, W.A.* "Chemical Rescue and Inhibition Studies to Determine the Role of Arg301 in Phosphite Dehydrogenase" *PLoS One* **2014**, *9*, e87134. *PMCID: PMC3909101*
202. Wang, H.; Oman, T.J.; Zhang, R.; Garcia De Gonzalo, C.V.; Zhang, Q.; van der Donk, W.A.* "The glycosyltransferase involved in thurandacin biosynthesis catalyzes both *O*- and *S*-glycosylation" *J. Am. Chem. Soc.* **2014**, *136*, 84-87. *PMCID: PMC3913795*
201. Gao, J.; Ju, K.S.; Yu, X.; Velásquez, J.E.; Mukherjee, S.; Lee, J.; Zhao, C.; Evans, B.S.; Doroghazi, J.R.; Metcalf, W.W.*; van der Donk, W.A.* "Use of a Phosphonate Methyltransferase in the Identification of the Fosfazinomycin Biosynthetic Gene Cluster" *Angew. Chem. Intl. Ed.* **2014**, *53*, 1334-1337. *PMCID: PMC3927463*

200. Agarwal, V.A.; Peck, S.C.; Chen, J-H.; Borisova, S.A.; Chekan, J.R.; van der Donk, W.A.*; Nair, S.K.* "Structure and function of phosphonoacetaldehyde dehydrogenase: the missing link in phosphonoacetate biodegradation" Chem. Biol. 2014, 21, 125-135. *PMCID: PMC4313731*
199. Garg, N.; Oman, T.J.; Wang, T.-S. A.; Garcia De Gonzalo, C.V.; Walker, S.; van der Donk, W.A.* "Mode of Action and Structure-Activity Relationship Studies of Geobacillin I" J. Antibiot. 2014, 67, 133-136. special issue in honor of Christopher T. Walsh. *PMCID: PMC4004768*
198. Yu, Y.; Zhang, Q.; van der Donk, W.A.* "Insights into the Evolution of Lanthipeptide Biosynthesis" *Protein Sci.* **2013**, *22*, 1478-1489. Invited review for receiving the Kaiser award. *PMCID: PMC3831664*
197. Peck, S.P; van der Donk, W.A.* "Phosphonate Biosynthesis and Catabolism: A Treasure Trove of Unusual Enzymology" *Curr. Opin. Chem. Biol.* **2013**, *17*, 580-588. *PMCID: PMC3764496*
196. Bindman, N. A; van der Donk, W.A.* "A General Method for Fluorescent Labeling of the N-Termini of Lanthipeptides and Its Application to Visualize their Cellular Localization" *J. Am. Chem. Soc.* **2013**, *135*, 10362–10371. *PMCID: PMC3775354*
195. Bougioukou, D.J.; Mukherjee, S.; van der Donk, W.A.* "Revisiting the Biosynthesis of Dehydrophos Reveals a tRNA Dependent Pathway" *Proc. Natl. Acad. Sci. USA* **2013**, *110*, 10952-10957. *PMCID: PMC3704017*
194. Knerr, P.J.; van der Donk, W.A.* "Chemical Synthesis of the Lantibiotic Lacticin 481 Reveals the Importance of Lanthionine Stereochemistry" *J. Am. Chem. Soc.* **2013**, *135*, 7094-7097. *PMCID: PMC3736828*
193. Peck, S.C.; van der Donk, W.A.* "Biochemistry: Positive and Radical" *Nature* **2013**, *496*, 34-35. Commentary.
192. Evans, B.S.*; Zhao, C.; Gao, J.; Evans, C.M.; Ju, K.S.; Doroghazi, J.R.; van der Donk, W.A.; Kelleher, N.L.; Metcalf, W.W. "Discovery of the Antibiotic Phosacetamycin via a New Mass Spectrometry-Based Method for Phosphonic Acid Detection" *ACS Chem. Biol.* **2013**, *8*, 908-913. *PMCID: PMC3657337*
191. Garg, N.; Salazar-Ocampo, L.M.A.; van der Donk, W.A.* "In vitro activity of the Nisin Dehydratase NisB" *Proc. Natl. Acad. Sci. USA* **2013**, *110*, 7258-7263. *PMCID: PMC3645518*
190. Yang, X.; van der Donk, W.A.* "Ribosomally Synthesized and Post-Translationally Modified Peptide Natural Products: New Insights Into the Role of Leader and Core Peptides During Biosynthesis" *Chem. Eur. J.* **2013**, *24*, 7662-7677. *PMCID: PMC3838977*
189. Tang, W.; van der Donk, W.A.* **"**The Sequence of the Enterococcal Cytolysin Imparts Unusual Lanthionine Stereochemistry" *Nat. Chem. Biol.* **2013**, *9*, 157-159**.** *PMCID: PMC3578037*
188. Arnison, P. *et al.*; van der Donk, W.A.* "Ribosomally Synthesized and Post-Translationally Modified Peptide Natural Products: Overview and Recommendations for a Universal Nomenclature" *Nat. Prod. Rep.* **2013**, *30*, 108-160. *PMCID: PMC3954855*
187. Thibodeaux, C. J.; van der Donk, W.A.* "Converging on a mechanism for choline degradation" *Proc. Natl. Acad. Sci. U.S.A.*, **2012**, *52*, 21184–21185. *PMCID: PMC3535664*
186. Zhang, Q.; Yu, Y.; Vélasquez, J. E.; van der Donk, W. A.* "Evolution of Lanthipeptide Synthetases" *Proc. Natl. Acad. Sci. U.S.A.*, **2012**, *109*, 18361-18366. *PMCID: PMC3494888*
185. Shi, Y.: Bueno, A; van der Donk, W.A.* "Heterologous production of the lantibiotic Ala(0)actagardine in *Escherichia coli*" *Chem. Comm.* **2012**, *48*, 10966-10968. *PMCID: PMC3485686*
184. Cooke, H.A.; Peck, S.C.; Evans, B.S.; van der Donk, W.A.* "Mechanistic Investigation of Methylphosphonate Synthase, a Non-Heme Iron-Dependent Oxygenase" *J. Am.Chem. Soc.*, **2012**, *134*, 15660-15663. *PMCID: PMC3458437*

183. Thibodeaux, G.; van der Donk, W.A.* "An engineered lantipeptide synthetase serves as a general leader peptide-dependent kinase" *Chem. Comm.* **2012**, *48*, 10615-10617. *PMCID: PMC3475617*
182. Knerr, P.J.; Oman, T.J.; Garcia de Gonzalo, C.; Lupoli,T.J. Walker S.; van der Donk, W. A.* "Non-Proteinogenic Amino Acids in Lacticin 481 Analogues Result in More Potent Inhibition of Peptidoglycan Transglycosylation" *ACS Chem. Biol.* **2012**, *7*, 1791-1795. *PMCID: PMC3501146*
181. Zhang, Q.; van der Donk, W.A.* "Catalytic promiscuity of a bacterial α-N-methyltransferase" *FEBS Lett.* **2012**, *588*, 3391-3397. *PMCID: PMC3462432*
180. Metcalf, W.W.*; Griffin, B.M.; Cicchillo, R.M.; Gao, J.; Janga, S.C.; Cooke, H.A.; Circello, B.T.; Evans; B.S.; Martens-Habbena, W.; Stahl, D.A.; van der Donk, W.A.* "Synthesis of methylphosphonic acid by abundant marine microbes: a source for methane in the aerobic ocean" *Science* **2012**, *337*, 1104-1107**.** *PMCID: PMC3466329*
179. Wang, H.; van der Donk, W.A.* "Biosynthesis of the Class III Lantipeptide Catenulipeptin" *ACS Chem. Biol.* **2012**, *7*, 1529-1535. *PMCID: PMC3448297*
178. Peck, S.C.; Gao, J.; van der Donk, W.A.* "Discovery and Biosynthesis of Phosphonate and Phosphinate Natural Products" *Methods Enzymol.* **2012**, *516*, 101-123 (special volume on natural product biosynthesis edited by Sir David Hopwood).
177. Zou, Y.; Zhang, H.; Brunzelle, J.S.; Johannes, T.W.; Woodyer, R.; Hung, J.E.; Nair, N.; van der Donk, W.A.; Zhao, H.; Nair, S.K.* "Crystal Structures of Phosphite Dehydrogenase Provide Insights into Nicotinamide Cofactor Regeneration" *Biochemistry* **2012**, *51*, 4263-4270.
176. Kim, S.Y.; Ju, K.-S.; Metcalf, W.W.; Evans, B.S.; Kuzuyama, T.; van der Donk, W.A.* "Different Biosynthetic Pathways to Fosfomycin in *Pseudomonas syringae* and Streptomyces" *Antimicrob. Agents Chemother.* **2012**, *56*, 4175-4183. *PMCID: PMC3421606*
175. Knerr, P.J.; van der Donk, W. A.* "Chemical Synthesis and Biological Activity of Analogues of the Lantibiotic Epilancin 15X" *J. Am. Chem. Soc.* **2012**, *134*, 7648-7651. *PMCID: PMC3349288*
174. Hung, J.E.; Fogle, E.J.; Christman, H.D.; Johannes, T.W.; Zhao, H.; Metcalf, W.W.; van der Donk, W.A.* "Investigation of the Role of Arg301 Identified in the X-ray Structure of Phosphite Dehydrogenase" *Biochemistry* **2012**, *51*, 4254-4262. *PMCID: PMC3361975*
173. Tang, W.; van der Donk, W. A.* "Structural characterization of four prochlorosins: a novel class of lantipeptides produced by planktonic marine cyanobacteria" *Biochemistry* **2012**, *51*, 4271-4279. *PMCID: PMC3361976*
172. Garg, N.; Tang, W.; Goto, Y.; van der Donk, W.A.* "Lantibiotics from *Geobacillus thermodenitrificans*" *Proc. Natl. Acad. Sci. U.S.A.* **2012**, *109*, 5241-5246. *PMCID: PMC3325677*
171. Oman, T.J.; Knerr, P.J.; Bindman, N.A.; Velásquez, J.E.; van der Donk, W.A.* "An Engineered Lantibiotic Synthetase That Does Not Require a Leader Peptide on Its Substrate" *J. Am. Chem. Soc.* **2012**, *134*, 6952-6955. *PMCID: PMC3350211*
170. Knerr, P.J.; van der Donk, W.A.* "Discovery, Biosynthesis and Engineering of Lantipeptides" *Ann. Rev. Biochem.* **2012**, *81*, 479-505.
169. Peck, S.C.; Kim, S.Y.; Evans, B.S.; van der Donk, W.A.* "Stereochemistry of Hydride Transfer by Group III Alcohol Dehydrogenases Involved in Phosphonate Biosynthesis" *Med. Chem. Commun.* **2012**, *3*, 967-970. *PMCID: PMC3764496*
168. Zhang, Q.; van der Donk, W.A.* "Answers to the carbon-phosphorus lyase conundrum" *ChemBioChem* **2012**, *13*, 627-629. *PMCID: PMC3206492*
167. Zhang, Q.; van der Donk, W.A.*; Liu, W.* "Radical-mediated enzymatic methylation: a tale of two SAMs" *Acc. Chem. Res.* **2011**, *45*, 555-564. *PMCID: PMC3328197*
166. Oman, T.O.; Lupoli, T.J.; Wang, T-S. A.; Kahne, D.; Walker, S.*; van der Donk, W.A.* "Haloduracin α Binds the Peptidoglycan Precursor Lipid II with 2:1 Stoichiometry" *J. Am. Chem. Soc.* **2011**, *133*, 17544-17547. *PMCID: PMC3206492*

165. Agarwal, V.; Borisova, S.A.; Metcalf, W.W.; van der Donk, W.A.*; Nair, S.K. * "Structural and Mechanistic Insights into C-P Bond Hydrolysis by Phosphonoacetate Hydrolase" *Chem. Biol.* **2011**, *18*, 1230-1240. *PMCID: PMC4321816*
164. Wang, H.; van der Donk, W.A.* "Substrate selectivity of the S-glycosyltransferase from sublancin biosynthesis" *J. Am. Chem. Soc.* **2011**, *133*, 16394–16397. *PMCID: PMC3191765*
163. DeSieno, M.A.; van der Donk, W.A.; Zhao, H.* "Characterization and Application of the Fe(II) and α-Ketoglutarate Dependent Hydroxylase FrbJ" *Chem. Comm.* **2011**, *47*, 10025-10027. *PMCID: PMC4091617*
162. Velásquez, J.E.; Zhang, X.; van der Donk, W.A.* "Biosynthesis of the Antimicrobial Peptide Epilancin 15X and its Unusual N-terminal Lactate Moiety" *Chem. Biol.* **2011**, *18*, 857-867. *PMCID: PMC3161514*
161. Ökesli, A.; Cooper, L.E.; Fogle, E.J.; van der Donk, W.A.* "Nine Posttranslational Modifications During the Biosynthesis of Cinnamycin" *J. Am. Chem. Soc.* **2011**, *133*, 13753–13760. *PMCID: PMC3163434*
160. Peck, S.C.; Cooke, H.A.; Cicchillo, R.M.; Nair, S.K.; van der Donk W.A.* "Mechanism and Substrate Recognition of Hydroxyethylphosphonate Dioxygenase" *Biochemistry* **2011**, *50*, 6598-6605. *PMCID: PMC3143709*
159. Borisova, S.A.; Christman, H.D.; Mourey-Metcalf, M.E.; Zulkepli, N.A.; Zhang, J.K.; van der Donk, W.A.; Metcalf, W.W.* "Genetic and biochemical characterization of a pathway for the degradation of 2-aminoethylphosphonate in *Sinorhizobium meliloti* 1021" *J. Biol. Chem.* **2011**, *286*, 22283-22290. *PMCID: PMC3121374*
158. Knerr, P.J.; Tzekou, A.; Ricklin, D.; Qu, H.; van der Donk, W.A.*; Lambris, J.D.* "Synthesis and Activity of Thioether-containing Analogues of the Complement Inhibitor Compstatin" *ACS Chem. Biol.* **2011**, *6*, 753-760. *PMCID: PMC3137721*
157. Gut, I.M.; Blanke, S.R.*; van der Donk, W.A.* "Mechanism of Nisin Inhibition of *Bacillus anthracis* Spore Outgrowth" *ACS Chem. Biol.* **2011**, *6*, 744-752. *PMCID: PMC3178273*
156. Circello, B.T.; Miller, C.G.; Lee, J.-H.; van der Donk,W.A.; Metcalf, W.W.* "The antibiotic dehydrophos is converted to a toxic pyruvate analog by peptide bond cleavage in *Salmonella enterica*" *Antimicrob. Agents Chemother.* **2011**, *55*, 3357-3362. *PMCID: PMC3122408*
155. Whitteck, J.T.; Malova, P.; Peck, S.C.; Cicchillo, R.M.; Hammerschmidt, F.*; van der Donk, W.A.* "On the Stereochemistry of 2-Hydroxyethylphosphonate Dioxygenase" *J. Am. Chem. Soc.* **2011**, *133*, 4236-4239. *PMCID: PMC3069692*
154. Gut, I.M.; Tamilselvam, B.; Prouty, A.M.; Stojkovic, B.; Czeschin, S.; van der Donk, W.A.*; Blanke S.R.* "Bacillus anthracis spore interactions with mammalian cells: Relationship between germination state and the outcome of in vitro infections" *BMC Microbiol.* **2011**, *11*, 46. *PMCID: PMC3060849*
153. Goto, Y.; Ökesli, A.; van der Donk, W.A.* "Mechanistic studies of Ser/Thr dehydration catalyzed by a member of the LanL Lanthionine synthetase family" *Biochemistry* **2011**, *50*, 891-898. *PMCID: PMC3031989*
152. Oman, T.J.; Boetcher, J.D.; Wang, H.; Okalibe, X.N.; van der Donk, W.A.* "Sublancin is not a Lantibiotic but an *S*-linked Glycopeptide" *Nat. Chem. Biol.* **2011**, *2*, 78-80. *PMCID: PMC3060661*
151. Wu, G.; Lü, J.-M.; Kulmacz, R.J. van der Donk, W.A.; Tsai, A.L.* "Cyclooxygenase reaction mechanism of prostaglandin H synthase from deuterium kinetic isotope effects" *J. Inorg. Biochem.* **2011**, *105*, 382-390. *PMCID: PMC3049311*
150. Lü, J.-M.; Rogge, C.E.; Wu, G.; Kulmacz, R.J. van der Donk, W.A.; Tsai, A.L.* "Cyclooxygenase reaction mechanism of PGHS — Evidence for a reversible transition between a pentadienyl radical and a new tyrosyl radical by nitric oxide trapping" *J. Inorg. Biochem.* **2011**, *105*, 356-365. *PMCID: PMC3053578*

149. Tsai, A.L.*; Wu, G.; Rogge, C.E.; Lü, J.-M.; Peng, S.; van der Donk, W.A.; Palmer, G.; Gerfen, G.J.; Kulmacz, R.J. "Structural comparisons of arachidonic and acid-induced radicals formed by prostaglandin h synthase-1 and -2" *J. Inorg. Biochem.* **2011**, *105*, 366-374. *PMCID: PMC3073652*
148. Shi, Y.; Yang, X.; Garg, N.; van der Donk, W.A.* "Production of Lantipeptides in *Escherichia coli*" *J. Am. Chem. Soc.*, **2011**, *133*, 2338-2341. *PMCID: PMC3044485*
147. Velásquez, J.E.; and van der Donk, W.A.* "Genome Mining for Ribosomally Synthesized Natural Products" *Curr. Opin. Chem. Biol.* **2011**, *15*, 11-21. *PMCID: PMC3090663*
146. Nair, S.K. and van der Donk, W.A.* "Structure and Mechanism of Enzymes Involved in Biosynthesis and Breakdown of the Phosphonates Fosfomycin, Dehydrophos, and Phosphinothricin" *Arch. Biochem. Biophys.* **2011,** *505*, 13-21. *PMCID: PMC3040005*
145. Bindman, N.; Merkx R.; Koehler, R.; Herrman, N.; van der Donk, W.A.* "Photochemical Cleavage of Leader Peptides" *Chem. Comm.* **2010**, *46*, 8935-8937. *PMCID: PMC3100556*
144. van der Donk, W.A.; Krebs, C.; Bollinger Jr., J.M. "Substrate Activation by Iron Superoxo Intermediates" *Curr. Opin. Struct. Biol.* **2010**, *20, 673-683. PMCID: PMC3030196*
143. Kuemin, M.; van der Donk, W.A.* "Structure-activity relationships of the phosphonate antibiotic dehydrophos" *Chem. Comm.* **2010**, *46*, 7694-7696. *PMCID: PMC3109733*
142. Lee, J.H; Bae, B.; Kuemin, M.; Circello, B.T. Metcalf, W.W.; Nair, S.K.; van der Donk W.A.* "Characterization and Structure of DhpI, a Phosphonate O-Methyltransferase Involved in Dehydrophos Biosynthesis" *Proc. Natl. Acad. Sci. U.S.A.* **2010**, *107*, 17557-17562. *PMCID: PMC2955109*
141. Clark, K.M.; Yu, Y.; Marshall, N.; Sieracki, N.; Nilges, M.; Blackburn, N.; van der Donk, W.A.*; Lu, Y.* "Transforming a Blue Copper into a Red Copper Protein: Engineering Cysteine and Homocysteine into the Axial Position of Azurin using Site-Directed Mutagenesis and Expressed Protein Ligation" *J. Am. Chem. Soc.* **2010** *132*, 10093-10101. *PMCID: PMC2929572*
140. Li, B.; Sher, D.; Kelly, L.; Shi, Y.; Huang, K.; Knerr, P.J.; Joewono, I.; Rusch, D.; Chisholm, S.W.*; van der Donk. W.A.*, "Catalytic Promiscuity in the Biosynthesis of Cyclic Peptide Secondary Metabolites in Planktonic Marine Cyanobacteria" *Proc. Natl. Acad. Sci. U.S.A.* **2010**, *107*, 10430-10435. *PMCID: PMC2890784*
139. Circello B.T.; Eliot A.C.; Lee, J.H.; van der Donk, W.A.; Metcalf, W.W.* "Molecular cloning and heterologous expression of the dehydrophos biosynthetic gene cluster" *Chem. Biol.* **2010**, *17*, 402-411. *PMCID: PMC2888486*
138. Goto, Y.; Li, B.; Claesen, J.; Shi, Y.; Bibb, M.J.; van der Donk, W.A.***** "Discovery of Unique Lantibiotic Synthetases Reveals Mechanistic and Evolutionary Insights" *PLoS Biol.* **2010**, *8*, e1000339. *PMCID: PMC2843593*
137. Borisova, S.A.; Circello B.T.; van der Donk, W.A.*; Metcalf, W.W.* "Biosynthesis of Rhizocticins, Antifungal Phosphonate Oligopeptides Produced by *Bacillus subtilis* ATCC6633" *Chem. Biol.* **2010**,*1*, 28-37. *PMCID: PMC2819989*
136. Oman, T.; van der Donk, W.A.* "Follow the Leader: the Use of Leader Peptides to Guide Natural Product Biosynthesis" *Nat. Chem. Biol.***2010**, *1*, 9-18. *PMCID: PMC3799897*
135. Cooper, L.E.; Li, B.; van der Donk, W.A.* "Biosynthesis and Mode of Action of Lantibiotics" in *Comprehensive Natural Products II: Chemistry and Biology*, Eds. Mander, L.; Liu, H.-W., Elsevier: Oxford, **2010**. Volume 5, pp. 217-256.
134. Whitteck, J.T.; Cicchillo, R.M.; van der Donk, W.A.* "Hydroperoxylation by Hydroxyethyl-phosphonate Dioxygenase" *J. Am. Chem. Soc.* **2009**, *131*, 16225. *PMCID: PMC2773148*
133. Wecksler, A.T.; Kenyon, V.; Garcia, N.K.; Deschamps, J.D.; van der Donk, W.A.; Holman, T.R.* "Kinetic and Structural Investigations of the Allosteric Site in Human Epithelial 15-Lipoxygenase-2" *Biochemistry* **2009**, *36*, 8721-8730. *PMCID: PMC2746553*

132. Oman, T.; van der Donk, W.A.* "Insights into the Mode of Action of the Two-Component Lantibiotic Haloduracin" *ACS Chem. Biol.* **2009**, *10*, 865-74. *PMCID: PMC2812937*
131. Levengood, M.R.; Knerr, P.J.; Oman, T.J.; van der Donk, W.A.* "In Vitro Mutasynthesis of Lantibiotic Analogs Containing Nonproteinogenic Amino Acids" *J. Am. Chem. Soc.* **2009**, *131*, 12024-25. *PMCID: PMC2732204*
130. Lee, M.V.; Ihnken, L.A.F.; You, Y.O.; McClerren, A.L.; van der Donk, W.A.*; Kelleher, N.L.* "Distributive and Directional Behavior of Lantibiotic Synthetases Revealed by High-Resolution Tandem Mass Spectrometry" *J. Am. Chem. Soc.* **2009**, *131*, 12258-64. *PMCID: PMC2735757*
129. Clark, K.M.; van der Donk, W.A.*****; Lu, Y.***** "Expressed Protein Ligation for Metalloprotein Design and Engineering"*Methods Enzymol.* **2009**, *462*, 98-115. *PMCID: PMC2780537*
128. Zhang, X.; van der Donk, W.A.***** "Using Expressed Protein Ligation to Probe the Substrate Specificity of Lantibiotic Synthetases" *Methods Enzymol.* **2009**, *462*, 117-134. *PMCID: PMC2780537*
127. Lee, J.; Evans, B.S.; Li, G.; Kelleher, N.L.*; van der Donk, W.A.* "In vitro Characterization of a Heterologously Expressed Non-Ribosomal Peptide Synthetase Involved in Phosphinothricin Tripeptide Biosynthesis" *Biochemistry* **2009**, *48*, 5054-5056. *PMCID: PMC2709985*
126. Wecksler, A.T.; Jacquot, C.; van der Donk, W.A.*; Holman, T.R.* "Mechanistic Investigations of Human Reticulocyte15- and Platelet 12-Lipoxygenases with Arachidonic Acid" *Biochemistry* **2009,** *48*, 6259-67. *PMCID: PMC2935259*
125. Cicchillo, R.M.; Zhang, H.; Blodgett, J.A.V.; Whitteck, J.T.; Li, G.; Nair, S.K.*****; van der Donk, W.A.*****; Metcalf, W.W.***** "An Unusual Carbon-Carbon Bond Cleavage Reaction During Phosphinothricin Biosynthesis" *Nature* **2009**, *459*, 871-874. *PMCID: PMC2874955*
124. You, Y.O.; Levengood, M. R.; Furgerson Ihnken, L.A.; Knowlton, A.K., van der Donk, W.A.***** "Lacticin 481 Synthetase as a General Ser/Thr Kinase" *ACS Chem. Biol.***2009**, *4*, 379-385. *PMCID: PMC2709986*
123. Li, B.; Cooper, L.E.; van der Donk, W.A.***** "*In vitro* Studies of Lantibiotic Biosynthesis" *Methods Enzymol.* **2009**, *458*, 533-558.
122. Levengood, M.R.; Kerwood, C.C.; Chatterjee, C.; van der Donk, W.A.***** "Investigation of the Substrate Specificity of Lacticin 481 Synthetase Using Nonproteinogenic Amino Acids" *ChemBioChem* **2009**, *10*, 911-919. *PMCID: PMC2737179*
121. Metcalf, W.W.; van der Donk, W. A. "Biosynthesis of Phosphonic and Phosphinic Acid Natural Products" *Ann. Rev. Biochem.* **2009**, *78*, 65-94. *PMCID: PMC2729427*
120. Furgerson, L.A.; van der Donk, W.A* "Lantibiotics, Biosynthesis and Mode of Action of" in *Wiley Encyclopedia of Chemical Biology*, Begley, T.P., Ed. John Wiley & Sons, Inc., 2009.
119. Barry, A.N.; Clark, K.M.; Otoikhian, A.; van der Donk, W.A.; Blackburn, N.***** "Selenocysteine positional variants reveal contributions to copper binding from cysteine residues in domains 2 and 3 of human copper chaperone for superoxide dismutase" *Biochemistry* **2008**, *47*, 13074-13083. *PMCID: PMC2645929*
118. Jacquot, C.; McGinley, C.M.; Plata, E.; van der Donk, W.A.***** "Synthesis of 11-Thialinoleic Acid and 14-Thialinoleic Acid, Inhibitors of Soybean and Human Lipoxygenases" *Org. Biomol. Chem.* **2008**, *6*, 4242-4252. *PMCID: PMC2883171*
117. Gut, I.M.; Prouty, A.M.; Ballard, J. D.; van der Donk, W.A.*****; Blanke, S.R.***** "Inhibition of *Bacillus anthracis* Spore Outgrowth by Nisin" *Antimicrob. Agents Chemother.* **2008**, *52*, 4281-8428. *PMCID: PMC2592879*
116. Cooper, L.E.; McClerren, A.L; Chary, A.; van der Donk, W.A.***** "Structure-Activity Relationship Studies of the Two-Component Lantibiotic Haloduracin" *Chem. Biol.* **2008**, *15*, 1025-1045. *PMCID: PMC2633096*

115. Jacquot, C.; Peng, S.; van der Donk, W.A.* "Kinetic Isotope Effects in the Oxidation of Arachidonic Acid by Soybean Lipoxygenase-1" *Bioorg. Med. Chem. Lett.* **2008**, *18* 5959-5962. *PMCID: PMC2652760*
114. Furgerson Ihnken, L.A.; Chatterjee, C.; van der Donk, W.A.***** "*In Vitro* Reconstitution and Substrate Specificity of a Lantibiotic Protease"*Biochemistry* **2008**, *47* 7352-7363. *PMCID: PMC2574596*
113. Patton, G.C.; Paul, M.; Cooper, L.E.; Chatterjee, C.; van der Donk, W.A.* "The Importance of the Leader Sequence for Directing Lanthionine Formation in Lacticin 481" *Biochemistry* **2008**, *47* 7342-7351. *PMCID: PMC2574844*
112. Jacquot, C.; Wecksler, A.T.; McGinley, C.M.; Segraves, E.N.; Holman, T.R.*****; van der Donk, W.A.* "Isotope Sensitive Branching and Kinetic Isotope Effects in the Reaction of Deuterated Arachidonic Acids with Human 12- and 15-Lipoxygenases" *Biochemistry* **2008**, *47*, 7295-7303. *PMCID: PMC2574664*
111. Shao, Z.; Blodgett, J.A.V.; Circello, B.T.; Eliot, A.C.; Woodyer, R.; Li, G.; van der Donk, W.A., Metcalf, W.W.; Zhao, H.* "Biosynthesis of 2-Hydroxyethylphosphonate, an Unexpected Intermediate Common to Multiple Phosphonate Biosynthetic Pathways" *J. Biol. Chem.* **2008,** *283*, 23161-23168**.** *PMCID: PMC2516978*
110. Levengood, M.R.; van der Donk, W.A.* **"**Use of Lantibiotic Synthetases for the Preparation of Bioactive Constrained Peptides" *Bioorg. Med. Chem. Lett.* **2008**, *18*, 3025-3028. *PMCID: PMC2452991*
109. Fogle, E.J.; van der Donk, W.A.* "Pre-Steady State Studies of Phosphite Dehydrogenase Demonstrate that Hydride Transfer is Fully Rate-Limiting" *Biochemistry* **2007,** *46*, 13101-13108. *PMCID: PMC2517116*
108. Whitteck, J.T.; Ni, W.; Griffin, B.M.; Eliot, A.C.; Thomas, P.M.; Kelleher, N.M.; Metcalf, B.W.; van der Donk, W.A.* "Reassignment of the Structure of the Antibiotic A53868 Reveals an Unusual Amino Dehydrophosphonic Acid" *Angew. Chem. Intl. Ed. Engl.* **2007,** *46*, 9089-9092.
107. van der Donk, W.A.*; Booker, S.J.* "Never Stop Questioning" *Curr.Opin. Chem. Biol.* **2007**, *11*, 527-528.
106. Levengood, M.R.; Patton, G.C.; van der Donk, W.A.* "The Leader Peptide is not Required for Post-translational Modification by Lacticin 481 Synthetase**"** *J. Am. Chem. Soc.* **2007**, *129*, 10314-10315. *PMCID: PMC2492579*
105. Zhang, X.; Ni, W.; van der Donk, W.A.* "On the Regioselectivity of Thioether Formation by Lacticin 481 Synthetase" *Org. Lett.* **2007**, *9*, 3343-3346. *PMCID: PMC2517117*
104. Willey, J.M.*; van der Donk, W.A.* "Lantibiotics: Peptides of Diverse Structure and Function" *Ann. Rev. Microbiol.* **2007**, *61*, 477-501.
103. Blodgett, J.A.V.; Thomas, P.M.; Li, G.; Velasquez, J.E.; van der Donk, W.A.; Kelleher, N.L.; Metcalf, W.W.* "Unusual transformations in the biosynthesis of the antibiotic phosphinothricin tripeptide" *Nat. Chem. Biol.* **2007**, *3*, 480-485. *PMCID: PMC4313788*
102. McGinley, C.M.; Jacquot, C.; van der Donk, W.A.* "Synthesis of 7-Thiaarachidonic Acid as a Mechanistic Probe of Prostaglandin H Synthase-2" *Bioorg. Med. ChemLett.***2007**, *17*, 4049-4052. *PMCID: PMC2040112*
101. Li, B.; van der Donk, W.A.* "Identification of Essential catalytic Residues of the Nisin Cyclase NisC" *J. Biol. Chem.* **2007**, *282*, 21169-21175.
100. Paul, M; Patton, G.C.; van der Donk, W.A.* "Mutants of the Zinc Ligands of Lacticin 481 Synthetase Retain Dehydration Activity but Have Impaired Cyclization Activity" *Biochemistry* **2007**, *46*, 6268-76. *PMCID: PMC2517114*
99. You, Y.O.; van der Donk, W.A.* "Mechanistic Investigations of the Dehydration Reaction of Lacticin 481 Synthetase Using Site-Directed Mutagenesis" *Biochemistry* **2007**, *46*, 5991-6000.

PMCID: PMC2517115

98. Zhang, X.; van der Donk, W.A.* "On the Substrate Specificity of Dehydration by Lacticin 481 Synthetase" *J. Am. Chem. Soc.* **2007**, *129*, 2212-2213. *PMCID: PMC2517113*
97. Li, G.; van der Donk, W.A.* "Efficient Synthesis of Suitably Protected β-Difluoroalanine and γ-Difluorothreonine from L-Ascorbic Acid" *Org. Lett.* **2007**, *9*, 41-44. *PMCID: PMC2593874*
96. Levengood, M.; van der Donk, W.A.* "Dehydroalanine-containing peptides: preparation from phenylselenocysteine and utility in convergent ligation strategies" *Nat. Protocols* **2007,** *1*, 3001-3010.
95. Woodyer, R.; Li, G.; Zhao, H.;* van der Donk, W.A.* "New Insight into the Mechanism of Methyl Transfer During the Biosynthesis of Fosfomycin" *Chem. Comm.* **2007**, 359-361.
94. Woodyer, R. D.; Shao, Z.; Metcalf, W. M.; van der Donk, W. A.;* Zhao, H.* "Heterologous Production of Fosfomycin and Identification of the Minimal Biosynthetic Gene Cluster" *Chem. Biol.* **2006**, *13*, 1171-1182.
93. van der Donk, W.A.* "Rings, Radicals, and Regeneration: the Early Years of a Bioorganic Laboratory" *J. Org. Chem.* **2006**, *71*, 9561-9571. *PMCID: PMC2519235*
92. Chatterjee, C.; Patton, G. C.; Cooper, L.; Paul, M.; Xie, L.; Ni, W.; van der Donk, W. A.* "Engineering Dehydro Amino Acids and Thioethers into Peptides Using Lacticin 481 Synthetase" *Chem & Biol.* **2006**, *13*, 1109-1117.
91. McClerren,A.L.; Cooper, L.E.; Quan, C.; Thomas, P.M.; Kelleher, N.L.; van der Donk, W.A.* "Discovery and *in vitro* Biosynthesis of Haloduracin, a New Two-component Lantibiotic" *Proc. Natl. Acad. Sci. USA* **2006**, *103*, 17243-17248.
90. Relyea, H.A.; van der Donk, W.A.* "Nature's Way to Make the Lantibiotics" *J. Chem. Educ.*, **2006**, *83*, 1769.
89. Liu, W.; Wang, L.H.; Pavol, F.; Hayashi, Y.; McGinley, C.M.; van der Donk, W.A.; Kulmacz, R.* "*Arabidopsis thaliana* Fatty Acid Alpha-dioxygenase-1: Evaluation of Substrates, Inhibitors, and Amino-Terminal Function" *Plant Physiol. Biochem.* **2006**, *44*, 284-293.
88. van der Donk, W.A. "Lighting Up the Nascent Cell Wall" *ACS Chem Biol.* **2006**, *1*, 425–428.
87. McGinley, C. M.; van der Donk, W. A.* "Synthesis of Site-Specifically Deuterated Arachidonic Acid Derivatives Containing a Remote Tritium Radiolabel" *J. Label. Cmpd. Radiopharm.***2006**, *49*, 545-558.
86. Pesavento, R.P.; Pratt, D.A.; Jeffers, J.; van der Donk, W.A.* "Model Studies of the Cu_B Site of Cytochrome c Oxidase Utilizing a Zn(II) Complex Containing an Imidazole-Phenol Cross-Linked Ligand" *Dalton Trans.* **2006**, 3326-3337.
85. Li, B.; Yu, J.-P. J.; Brunzelle, J. S.; Moll, G. N.; van der Donk, W. A.;* Nair, S. K.* "Structure and Mechanism of the Lantibiotic Cyclase Involved in Nisin Biosynthesis" *Science*, **2006**, *311*, 1464.
84. Miller, L. M.; Chatterjee, C.; van der Donk, W. A.; Kelleher, N. L.* "The Dehydratase Activity of Lacticin 481 Synthetase is Highly Processive" *J. Am. Chem. Soc.* **2006**, *128*, 1420-1421. *PMCID: PMC2532561*
83. McGinley, C.M.; Relyea, H.A.; van der Donk, W.A.* "Vitamin B_{12} Catalyzed Radical Cyclizations of Arylalkenes" *Synlett*, **2006**, 211-214.
82. Pratt, D.A.; van der Donk, W.A.* "On the Role of Alkylcobalamins in the Vitamin B_{12}-Catalyzed Reductive Dehalogenation of Perchloroethylene and Trichloroethylene" *Chem. Commun.***2006**, 558-560.
81. Woodyer, R.; van der Donk, W.A. ;* Zhao, H. * "Optimizing a Biocatalyst for Improved NAD(P)H Regeneration: Directed Evolution of Phosphite Dehydrogenase" *Comb. Chem. High Throughput Screen.* **2006**, *9*, 237-245.
80. van der Donk, W.A. "The Protein Modification Repertoire" *Nature Chem. Biol.* **2005**, *1*, 243.

79. Chatterjee, C.; Miller, L. M.; Leung, Y. L.; Xie, L.; Yi, M.; Kelleher, N.L.; van der Donk, W.A.* "Lacticin 481 Synthetase Phosphorylates its Substrate during Lantibiotic Production" *J. Am. Chem. Soc.* **2005**, *127*, 15332-15333.
78. Ide, N.D.; Galonić, D.P.; van der Donk, W.A.; Gin, D.Y.* "Conjugation of Selenols with Aziridine-2-Carboxylic Acid-Containing Peptides" *Synlett* **2005**, 2011-2014.
77. Patton, G.C.; van der Donk, W.A.* "New Developments in Lantibiotic Biosynthesis and Mode of Action" *Curr. Opin.Microbiol.* **2005**, *8*, 543-551.
76. Zhang, X.; Ni, W.; van der Donk, W.A.* "Synthesis of Nonproteinogenic Amino Acids to Probe Lantibiotic Biosynthesis" *J. Org. Chem.* **2005**, *70*, 6685-6692. *PMCID:PMC2525736*
75. Woodyer, R.; Zhao, H.;* van der Donk, W.A.* "Mechanistic investigation of a highly active phosphite dehydrogenase mutant and its application for NADPH regeneration" *FEBS J.* **2005**, *272*, 3816-3827.
74. Pratt, D.A.; Pesavento, R.P.; van der Donk, W.A.* "Model Studies of the Histidine-Tyrosine Cross-Link in Cytochrome *c* Oxidase Reveal the Flexible Substituent Effect of the Imidazole Moiety" *Org. Lett.* **2005**, *7*, 2735-2738.
73. Galonić, D. P.; Ide, N. D.; van der Donk, W. A.;* Gin, D. Y. * "Aziridine-2-Carboxylic Acid-Containing Peptides: Application to Solution- and Solid-Phase Convergent Site-Selective Peptide Modification" *J. Am. Chem. Soc.* **2005**, *127*, 7359-69.
72. Relyea, H.A.; Wheatley, J. L.; Woodyer, R.; Rimkus, S.; van der Donk, W.A.* "Inhibition and pH Dependence of Phosphite Dehydrogenase" *Biochemistry* **2005**, *44*, 6640-6649.
71. Woodyer, R.; Wheatley, J. L.; Relyea, H.A.; Rimkus, S.; van der Donk, W.A.* "Site-Directed Mutagenesis of Active Site Residues of Phosphite Dehydrogenase" *Biochemistry* **2005**, *44*, 4765-4774.
70. Relyea, H.A.; van der Donk, W.A.* "Mechanism and Applications of Phosphite Dehydrogenase" *Bioorg. Chem.* **2005**, *33*, 171-89.
69. Woodyer, R.; Simurdiak, M.; van der Donk, W.A. ;* Zhao, H.* "Heterologous Expression, Purification, and Characterization of a Highly Active Xylose Reductase from *Neurospora crassa*" *Appl. Environ. Microbiol.***2005**, *71*, 1642-1647. *PMC ID: PMC1065158*
68. McCauley, K.M.; Pratt, D.A.; Wilson, S. R.; Shey, J.; Burkey, T.J.; van der Donk, W.A.* "Properties and Reactivity of Chlorovinylcobalamin and Vinylcobalamin and Their Implications for Vitamin B_{12}-Catalyzed Reductive Dechlorination of Chlorinated Alkenes" *J. Am. Chem. Soc.* **2005**, *127*, 1126-1136.
67. Chatterjee, C. Paul, M.; Xie, L.; van der Donk, W.A.* "Biosynthesis and Mode of Action of Lantibiotics" *Chem. Rev.***2005**, *105*, 633-684.
66. Pratt, D. A.;* van der Donk, W.A.* "Theoretical Investigations into the Intermediacy of Chlorinated Vinyl Cobalamins in the Reductive Dehalogenation of Chlorinated Ethylenes" *J. Am. Chem. Soc.* **2005**, *127*, 384-396.
65. Galonić, D.; van der Donk, W.A.;* Gin, D.Y.* "Site-Selective Conjugation of Thiols with Aziridine-2-Carboxylic Acid-Containing Peptides" *J. Am. Chem. Soc.***2004**, *126*, 12712-12713.
64. Xie, L.; van der Donk, W.A.* "Post-Translational Modifications during Lantibiotic Biosynthesis" *Curr. Opin. Chem. Biol.***2004**, *8*, 498-507.
63. Paul, M.; van der Donk, W.A.* "Chemical and Enzymatic Synthesis of Lanthionines" *Minirev. Org. Chem.***2005**, *1*, 23-37.
62. Ralle, M.; Berry, S. M.; Gieselman, M.D.; Nilges, M.J.; van der Donk, W.A.; Lu, Y.; Blackburn, N. J.* "The Selenocysteine Substituted Blue Copper Center: Spectroscopic Investigations of Cys112SeCys *Pseudomonas aeruginosa* Azurin"*J. Am. Chem. Soc.* **2004**, *126*, 7244-7256.
61. Xie, L.; Miller, L.; Chatterjee, C.; Averin, O.; Kelleher, N.L.;* van der Donk, W.A.* "Lacticin 481: in vitro reconstitution of lantibiotic synthetase activity" *Science* **2004**, *303*, 679-681.

60. Peng, S.; McGinley, C.M.; .van der Donk, W.A.* "Synthesis of Site-Specifically Labeled Arachidonic Acids as Mechanistic Probes for Prostaglandin H Synthase" *Org. Lett.* **2004**, 6, 349-352.
59. McGinley, C.M.; van der Donk, W.A.* "Enzymatic Hydrogen Atom Abstraction from Polyunsaturated Fatty Acids" *Chem. Commun.***2003**, 2843-2846.
58. Okeley, N.M.; Paul, M.; Stasser, J.P.; Blackburn, N.J.;* van der Donk, W.A.* "SpaC and NisC, the Cyclases Involved in Subtilin and Nisin Biosynthesis, Are Zinc Proteins" *Biochemistry* **2003**, *42*, 13613-13624.
57. Galonić, D. P.; van der Donk, W.A.;* Gin, D.Y.* "Oligosaccharide-Peptide Ligation of Glycosyl Thiolates with Dehydropeptides: Synthesis of *S*-Linked Mucin-Related Glycopeptide Conjugates" *Chem.–Eur. J.* **2003**, *24*, 5997-6006.
56. Zhao, H.;* van der Donk, W.A.* "Regeneration of Cofactors for Use in Biocatalysis" *Curr. Opin. Biotechnol.* **2003**, *14*, 583-589.
55. Woodyer, R.; van der Donk, W. A.;* Zhao, H.* "Relaxing the Nicotinamide Cofactor Specificity of Phosphite Dehydrogenase by Rational Design" *Biochemistry* **2003**, *42*, 11604-11614.
54. Zhu, Y.; Gieselman, M. D.; Zhou, H.; Averin, O.; van der Donk, W.A.* "Biomimetic studies on the mechanism of stereoselective lanthionine formation" *Org. Biomol. Chem.* **2003**, *1*, 3304-3315.
53. Zhou, H.; Schmidt, D. M. Z.; Gerlt, J. A.;* van der Donk, W.A.* "Chemical and Enzymatic Synthesis of Fluorinated-Dehydroalanine-Containing Peptide" *ChemBioChem*, **2003**, *4*, 1206-1215.
52. van der Donk, W.A**; Zhao, H.* "Recent Developments in Pyridine Nucleotide Regeneration" *Curr. Opin. Biotechnol.* **2003**, *14*, 421-426.
51. Peng, S.; van der Donk, W.A.* "An Unusual Isotope Effect on Substrate Inhibition in the Oxidation of Arachidonic Acid by Lipoxygenase" *J. Am. Chem. Soc.* **2003**, *125*, 8988-8989.
50. Kulmacz, R.J**; van der Donk, W.A.; Tsai, A.-L. "Comparison of the Properties of Prostaglandin H Synthase-1 and -2" *Progr. Lipid Res.* **2003**, *42*, 377-404.
49. Blomberg, M. L.;* Blomberg, M.R.A.; Siegbahn, P. E. M.; van der Donk, W. A.; Tsai, A.-L. "A Quantum Chemical Study of the Synthesis of Prostaglandin G_2 by the Cyclooxygenase Active Site in Prostaglandin Endoperoxide H Synthase 1" *J. Phys. Chem. B*, **2003**, *107*, 3297-3308.
48. McCauley, K.M.; Wilson, S.S.R.; van der Donk, W.A* "Characterization of Chlorovinylcobalamin, A Putative Intermediate in Reductive Degradation of Chlorinated Ethylenes" *J. Am. Chem. Soc.* **2003**, *125*, 4410-4411.
47. van der Donk, W.A.;* Tsai, A.-L.; Kulmacz, R.J. "The Cyclooxygenase Reaction Mechanism" *Biochemistry* **2002**, *41*, 15451-15458.
46. Hellwig, P.;* Pfitzner, U.; Behr, J.; Rost;, B. Pesavento, R.P.; van der Donk, W.A.; Gennis, R.B.; Michel, H.; Ludwig, B.; Mantele, W. "Vibrational modes of tyrosines in cytochrome c oxidase from *Paracoccus denitrificans*: FTIR and electrochemical studies on Tyr-D_4-labeled and on Tyr280His and Tyr35Phe mutant enzymes" *Biochemistry* **2002**, *41*, 9116-9125.
45. McCauley, K.M.; Wilson, S.S.R.; van der Donk, W.A.* "Dichloroacetylene Is Not the Precursor to Dichlorinated Vinylcobaloxime and Vinylcobalamin in Cobalt Catalyzed Dechlorination of Perchloro- and Trichloroethylene" *Inorg. Chem.* **2002**, *41*, 5844-5848.
44. Nonnenberg, C.; van der Donk, W.A.;* Zipse, Z.* "Reductive Dechlorination of Trichloroethylene: A Computational Study" *J. Phys. Chem. A* **2002**, *106*, 8708-8715.
43. Peng, S.; Okeley, N.M.; Tsai, A.L.; Wu, G.; Kulmacz, R.J.; van der Donk, W.A.* "Synthesis of Isotopically Labeled Arachidonic Acids as Probes for the Reaction Mechanism of Prostaglandin H Synthase" *J. Am. Chem. Soc.* **2002**, *124*, 10785-10796.

42. Xie, L.; Chatterjee, C.; Balsara, R.; Okeley, N.M.; van der Donk, W.A.* "Heterologous Expression and Purification of SpaB Involved in Subtilin Biosynthesis" *Biochem.Biophys. Res. Commun.* **2002**, *295*, 952-957.
41. Vrtis, J.M.; White, A.K.; Metcalf, W.W.; van der Donk, W.A.* "Phosphite Dehydrogenase: A Versatile Cofactor-Regeneration Enzyme" *Angew.Chemie Intl. Ed. Engl.* **2002**, *41*, 3257-3259.
40. Tsai, A. L.; Palmer, G.; Wu, G.; Peng, S.; Okeley, N. M.; van der Donk, W. A.; Kulmacz, R. J. "Structural Characterization of Arachidonyl Radicals Formed by Aspirin-treated Prostaglandin H Synthase-2" *J. Biol. Chem.* **2002**, *277*, 38311-38321.
39. Gieselman, M.; Zhu, Y.; Zhou, H.; Galonic, D.; van der Donk, W.A.* "Selenocysteine Derivatives for Chemoselective Ligations" *ChemBioChem* **2002**, *3*, 709-716.
38. Zhou, H.; van der Donk, W.A.* "Biomimetic Stereoselective Formation of Methyllanthionine" *Org. Lett.* **2002**, *4*, 1335-1338.
37. Berry, S.; Gieselman, M.D.; Nilges, M.J.; van der Donk, W.A.;* Lu, Y.* "An Engineered Azurin Variant Containing a Selenocysteine Copper Ligand" *J. Am. Chem. Soc.* **2002**, *124*, 2084-2085.
36. Shey, J.; McCauley, K.M.; Dearth, A.; Young, B.; van der Donk, W.A.* "Mechanistic Investigation of a Novel Vitamin B_{12}-Catalyzed Carbon−Carbon Bond Forming Reaction, the Reductive Dimerization of Arylalkenes" *J. Org. Chem.* **2002**, *67*, 837-846.
35. McCauley, K.M.; Wilson, S.R.; van der Donk, W.A.* "Synthesis and Characterization of Chlorinated Alkenylcobaloximes to Probe the Mechanism of Vitamin B_{12}-Catalyzed Dechlorination of Priority Pollutants" *Inorg. Chem.* **2002**, *41*, 393-404.
34. Xie, L.; van der Donk, W.A.* "Homemade cofactors: Self-processing in galactose oxidase" *Proc. Natl. Acad. Sci. USA* **2001**, *98*, 12863-12865. *PMC ID: PMC60785*
33. Pesavento, R.; van der Donk, W.A.* "Tyrosyl Radical Cofactors" *Adv. Prot. Chem.* **2001**, *58*, 317-385.
32. Gieselman, M.; Xie, L.; van der Donk, W.A.* "Synthesis of a Selenocysteine-Containing Peptide by Native Chemical Ligation" *Org. Lett.* **2001**, *3*, 1331-1334.
31. Zhu, Y.; van der Donk, W.A.* "Convergent Synthesis of Peptide Conjugates using Dehydroalanines for Chemoselective Ligations" *Org. Lett.* **2001**, *3*, 1189-1192.
30. Peng, S.; Okeley, N.M.; Tsai, A.-L.; Wu, G.; Kulmacz, R.; van der Donk, W.A.* "Structural Characterization of a Pentadienyl Radical Intermediate Formed during Catalysis by Prostaglandin H Synthase-2" *J. Am. Chem. Soc.* **2001**, *123*, 3609-3610.
29. Vrtis, J.M.; White, A.; Metcalf, W.W.; van der Donk, W.A.* "Phosphite Dehydrogenase: An unusual Phosphoryl Transfer Reaction" *J. Am. Chem. Soc.* **2001**, *123*, 2672-2673.
28. Zhou, H.; van der Donk, W.A.* "Synthesis of 2-Amino-3-fluoroacrylic Acid Containing Peptides" *Org. Lett.* **2001**, *3*, 593-596.
27. Shey, J.; van der Donk, W.A.* "Mechanistic Studies on Vitamin B_{12}-Catalyzed Dechlorination of Chlorinated Alkenes" *J. Am. Chem. Soc.* **2000**, *122*, 12403-12404.
26. Okeley, N.M.; Zhu, Y.; van der Donk, W.A.* "Facile Chemoselective Synthesis of Dehydroalanine-Containing Peptides" *Org. Lett.* **2000**, *2*, 3603-3606.
25. Okeley, N.M.; van der Donk, W.A.* "Novel Cofactors via Post-translational Modifications of Enzyme Active Sites" *Chem. Biol.* **2000**, *7*, R159-R171.
24. McCauley, K.M.; Vrtis, J.M.; Dupont, J.; van der Donk, W.A.* "Insights into the Functional Role of the Tyrosine-Histidine Linkage in Cytochrome *c* Oxidase" *J. Am. Chem. Soc.* **2000**, *122*, 2403-2404.

Postdoctoral Research (Massachusetts Institute of Technology)

23. van der Donk, W.A.; Yu, G.; Perez, L.; Sanchez, R.; Stubbe, J.; Samano, V.; Robins, M.J. "Detection of a New Substrate-Derived Radical during Inactivation of Ribonucleotide Reductase from *Escherichia coli* by Gemcitabine 5'-Diphosphate" *Biochemistry* **1998**, 6419-6426.
22. van der Donk, W.A.; Gerfen, G.J.; Griffin, R.G.; Stubbe, J. "Direct EPR Spectroscopic Evidence for an Allylic Radical Generated from (E)-2'-Fluoromethylene-2'-deoxycytidine 5'-Diphosphate by E. coli Ribonucleotide Reductase" *J. Am. Chem. Soc.* **1998**, *120*, 4252-4253.
21. Stubbe, J.; van der Donk, W.A. "Protein Radicals in Catalysis" *Chem. Rev.* **1998**, *98*, 705-762.
20. Gerfen, G.J.; van der Donk, W.A.; Yu, G.; Farrar, C.; Griffin, R.G.; Stubbe, J.; McCarthy, J.R.; Matthews, D.P.; Jarvi, E.T. "Characterization of a Substrate Derived Radical Detected During the Inactivation of Ribonucleotide Reductase from *Escherichia coli* by 2'-Fluoromethylene-2'-deoxycytidine 5'-Diphosphate" *J. Am. Chem. Soc.* **1998**, *120*, 3823-3835.
19. van der Donk, W.A.; Zeng, C.; Biemann, K.; Stubbe, J.; Hanlon, A.; Kyte, J. "Identification of an Active Site Residue of the R1 Subunit of Ribonucleotide Reductase from *E. coli*: Characterization of Substrate Induced Polypeptide Cleavage by C225SR1" *Biochemistry* **1996**, *35*, 10058-10067.
18. van der Donk, W.A.; Yu, G.; Silva, D.J.; Stubbe, J.; McCarthy, J.R.; Matthews, D.P.; Jarvi, E.T.; Resvick, R.J.; Wagner, E. "Inactivation of Ribonucleotide Reductase by (*E*)-2'-Fluoromethylene-2'-deoxycytidine 5'-diphosphate: A Paradigm for Nucleotide Mechanism Based Inhibitors" *Biochemistry* **1996**, *35*, 8381-8391.
17. McCarthy, J.; Sunkara, P.; Matthews, D.; Bitonti, A.; Jarvi, E.; Sabol, J.; Resvick, R.; Huber, E.; van der Donk, W.A.; Yu, G.; Stubbe, J. "Design of a Fluoro Olefin Cytidine Nucleoside as a Bioprecursor of a Mechanism-Based Inhibitor of Ribonucleotide Reductase" *ACS Symp. Ser.***1996**, *639*, 246-264.
16. van der Donk, W.A.; Stubbe, J.; Gerfen, G.J.; Bellew, B.F.; Griffin, R.G. "EPR Investigation of the Inactivation of *E. coli* Ribonucleotide Reductase with 2'-Azido-2'-deoxyuridine 5'-Diphosphate: Evidence for the Involvement of the Thiyl Radical of C225-R1" *J. Am. Chem. Soc.* **1995**, *117*, 8908-8916.
15. Stubbe, J.; van der Donk, W.A. "Ribonucleotide Reductases: Radical Enzymes with Suicidal Tendencies" *Chem. Biol.* **1995**, *2*, 783-801.

Graduate Research (Rice University/Texas A&M University)

14. Porte, A.; van der Donk, W.A. Burgess, K. "New and Efficient Synthesis of an Amino Acid for Preparing Phosphine-Functionalized Peptidomimetics" *J. Org. Chem.* **1998**, *63*, 5262-5264.
13. Burgess, K.; van der Donk, W.A. "Asymmetric Hydroboration" in *Advanced Asymmetric Synthesis*, Stephenson, G.R., Ed.; Chapman & Hall, London, 1996, 181-211.
12. Burgess, K.; van der Donk, W.A. "Tris(triphenylphosphine)rhodium(I) chloride" in *Encyclopedia of Reagents for Organic Synthesis*, Paquette, L., Ed.; Wiley, New York, 1995, 1253-1261.
11. Burgess, K.; van der Donk, W.A. "Transition-metal Catalyzed Reactions of Boron Hydrides" in *Encyclopedia of Inorganic Chemistry*; Vol. 3, King, R.B., Ed.; Wiley, New York, 1994, 1420.
10. Burgess, K.; van der Donk, W.A. "Titanium-Mediated Additions of Borohydride to Alkenes" *J. Am. Chem. Soc.* **1994**, *116*, 6561-6569.
9. Burgess, K.; van der Donk, W.A. "The Importance of Phosphine-to-Rhodium Ratios in Enantioselective Hydroborations" *Inorg.Chim.Acta* **1994**, *220*, 93-98.
8. Burgess, K.; van der Donk, W.A. "On Titanium-Promoted Hydroborations of Alkenes by Borohydride and by Catecholborane"*Organometallics* **1994**, *13*, 3616-3620.
7. Burgess, K.; van der Donk, W.A. "On Hydroborations of Alkenes catalyzed by Titanium Complexes"*Tetrahedron Lett.* **1993**, *34*, 6817-6820.

6. Burgess, K.; van der Donk, W.A.; Westcott, S.A.; Marder, T.B.; Baker, R.T.; Calabrese, J.C. "Reactions of Catecholborane with Wilkinson's Catalyst: Implications for the Transition Metal-Catalyzed Hydroboration of Alkenes" *J. Am. Chem. Soc.* **1992**, *114*, 9350-9359.
5. Burgess, K.; van der Donk, W.A.; Jarstfer, M.B.; Ohlmeyer, M.J. "Further Evidence for the Role of dπ-pπ Bonding in Rhodium-Mediated Hydroborations" *J. Am. Chem. Soc.* **1991**, *113*, 6139-6144.
4. Burgess, K.; van der Donk, W.A.; Kook, A.M. "On Deuterium-Labeling Studies for Probing Rhodium-Catalyzed Hydroboration Reactions" *J. Org. Chem.* **1991**, *56*, 2949-2951.
3. Burgess, K.; van der Donk, W.A.; Ohlmeyer, M.J. "Enantioselectivehydroborations Catalyzed by Rhodium(+1)-complexes" *Tetrahedron Asymmetry* **1991**, *2*, 613-621.

Undergraduate Research (Leiden University, the Netherlands)

2. Haanstra, W.G.; van der Donk, W.A.J.W.; Driessen, W.L.; Reedijk, J.; Wood, J.S.; Drew, M.G.B. "Unusual Behaviour of the Thioether Function of the Ligand 1,8-Bis(3,5-dimethyl-1-pyrazolyl)-3,6-dithiaoctane (bddo) towards Transition-metal Salts. X-ray Structures of a Green and a Red Modification of [Cu(bddo)Cl_2]" *J. Chem. Soc. Dalton Trans.* **1990**, *10*, 3123-3128.
1. Haanstra, W.G.; van der Donk, W.A.J.W.; Driessen, W.L.; Reedijk, J.; Wood, J.S.; Drew, M.G.B. "Coordination Behaviour of the Ligand 1,9-Bis(3,5-dimethyl-1-pyrazolyl)-3,7-dithianonane (bddn) towards First Row Transition Metals. X-ray Structure of [Cu(bddn)(H_2O)](BF_4)$_2$" *Inorg.Chim.Acta* **1990**, *176*, 299-305.

PATENTS (PROVISIONAL AND ISSUED)

1. Metcalf, W.W.; van der Donk, W.A.; Vrtis, J.M.; White, A.K.; Garcia-Costas, A.M. NAD Phosphite oxidoreductase, a novel catalyst from bacteria for regeneration of NAD(P)H. U.S. Pat. Appl. 2004/0091985 A1, May 13, 2004; WIPO Pat. Appl. WO/2003/072726 A2, September 4, 2003; WIPO Pat. Appl. WO/2003/072726 A3, October 21, 2004; European Pat. Appl. EP1487974 A2, December 22, 2004; European Pat. Appl. EP1487974 A4, November 16, 2005; Canadian Pat. Appl. CA 2,480,639 A1, September 4, 2003.
2. Zhao, H.; Woodyer, R.; Simurdiak, M.; van der Donk, W.A. Highly Active Xylose Reductase from *Neurospora crassa*. U.S. Patent 7,592,163 B2, Sept. 22, 2009; U.S. Patent 7,381,553 B3, June 3, 2008; WIPO Pat. Appl. WO/2006/002021 A2, January 5, 2006; WIPO Pat. Appl. WO/2006/002021 A3, February 16, 2006.
3. van der Donk, W.A.; Xie, L; Chatterjee, C.; Paul, M. Compositions and Methods for Dehydration and Cyclization of Peptides, Synthetic Compounds, and Lantibiotics. U.S. Patent 7,785,825 B2, August 31, 2010.
4. Zhao, H.; Woodyer, R.D.; Metcalf, W.W.; van der Donk, W.A.; Johannes, T.W. Phosphite dehydrogenase Mutants for Nicotinamide Cofactor Regeneration. U.S. Patent 7,402,419 B2, July 22, 2008; WIPO Pat. Appl. WO/2004/108912 A2, December 16, 2004; WIPO Pat. Appl. WO/2004/108912 A3, April 7, 2005; European Pat. Appl. EP1636353 A2, December 16, 2004; Canadian Pat. Appl. CA 2,529,063 A1, December 16, 2004.
5. Zhao, H.; Woodyer, R.D.; Metcalf, W.W.; van der Donk, W.A.; Johannes, T.W. Engineered phosphite dehydrogenase mutants for nicotinamide cofactor regeneration. WIPO Pat. Appl. WO2006/074194 A2, July 13, 2006; WIPO Pat. Appl. WO2006/074194 A3, October 19, 2006.
6. van der Donk, W.A.; Cooper, L.E.; McClerren, A. L. Two component Bacillus lantibiotic and methods for producing and using the same. U.S. Patent 7,985,837 B2, July 26, 2011.
7. Metcalf, W.W.; van der Donk, W.A.; Zhang, J.; Circello, B.T.; Borisova, S.A. Compositions and methods for the synthesis of APPA-containing peptides. U.S. Patent 8,372,601 B2, Feb. 12, 2013.

8. Lambris, J.D.; van der Donk, W.A. Modified Compstatin with improved stability and binding properties. U.S. Pat. Appl. US/2014/0113874 A1, April 24, 2014; WIPO Pat. Appl. WO/2012/040259 A2, March 29, 2012; WIPO Pat. Appl. WO/2012/040259 A3, March 29, 2012.
9. van der Donk, W.A.; Tang, W. Higher performance proteases for scarless tag removal. U.S. Pat. Appl. US/2017/0240878 A1, August 24, 2017; WIPO Pat. Appl. WO/2015/175576 A2, November 19, 2015; WIPO Pat. Appl. WO/2015/175576 A3, March 17, 2016.
10. van der Donk, W.A.; Garg, N.; Goto, Y.; Tang, W. Class I and II Lantibiotics from Geobacillus denitrificans. U.S. Patent 9,326,523 B2, May 3, 2016; WIPO Pat. Appl. WO/2013/119821 A1, August 15, 2013.
11. Metcalf, W.W. ; Ju, K.-S.; Gao, J.; Doroghazi, J.R.; van der Donk, W.A. Phosphonic acid compounds and screening method. U.S. Patent 9,993,490 B2, June 12, 2018; WIPO Pat. Appl. WO/2016/014539 A1, January 28, 2016.
12. van der Donk, W.A.; Okesli, A.; Yang, X.; Hetrick, K.; Walker, M. Biosynthesis and engineering of lanthipeptides. U.S. Pat. Appl. US/2017/0204400 A1, July 20, 2017; WIPO Pat. Appl. WO/2016/049656 A1, March 31, 2016.

PRESENTATIONS CHRONOLOGICAL

Scheduled Presentations 2019-2020

276. Pacifichem 2020, December 15-20, 2020, Honolulu, Hawaii.
275. Biocatalysis Gordon Research Conference, Southern New Hampshire University, Manchester, NH, July 12 - 17, 2020
274. 2020 Frontiers in Chemical Biology, Hong Kong University, February 17, 2020.
273. 2020 International Symposium on Chemical Biology, January 22 - 24, 2020, Geneva, Switzerland. "Natural Product Biosynthesis by Posttranslational Modification"
272. Schneller Frontiers lecture, Auburn University, November 14, 2019.
271. 2019 Cold Spring Harbor Asia Conference on Chemical Biology, Suzhou, China, October 28-November 1, 2019.
"Biosynthesis and Engineering of Macrocyclic Peptides"
270. Rowena Matthews Lecture, Department of Biological Chemistry, University of Michigan Medical School, September 24, 2019.
269. Genetics of Industrial Microorganisms Congress (GIM2019), Pisa, Italy, September 8-12, 2019. "Posttranslational Modifications during Cyclic Peptide Biosynthesis"

Presentations 2000-2019

268. 1st International RiPP Conference, Granada, Spain, April 24-26, 2019.
"Biosynthesis and Engineering of Polycyclic Peptides"
267. 15th Annual Protein Engineering Summit (PEGS), Boston, MA, April 8-9, 2019.
"Yeast Display of Post-Translationally Modified Polycyclic Peptides"
266. Invited speaker, American Society of Biochemistry and Molecular Biology (ASBMB) chapter at Eastern Illinois University, Charleston, IL, April 3, 2019.
"Why Do We Not Have New Antibiotics?"
265. Sanders Tri-Institutional Chemical Biology Seminar Series, Rockefeller and Memorial Sloan Kettering Cancer Center, March 22, 2019.
"Biosynthesis and Engineering of Cyclic Peptide Antibiotics"
264. Biology Colloquium Series, MIT, February 12, 2019.
"Biosynthesis, Engineering and Applications of Macrocyclic Peptides"
263. 26th Enzyme Mechanisms Conference, New Orleans, January 9, 2019.

"Posttranslational Modifications during Cyclic Peptide Biosynthesis"

262. David Hopwood lecture, John Innes Centre, Norwich, UK, November 27, 2018.
"Posttranslational Modifications during Cyclic Peptide Biosynthesis"

261. H.H. King lecture, Kansas State University, November 9, 2018.
"Biosynthesis and Engineering of Cyclic Peptide Antibiotics"

260. John Daly lecture, National Institutes of Health, October 26, 2018.
"Biosynthesis and Engineering of Cyclic Peptide Antibiotics"

259. Dept. of Clinical Microbiology, NIH, October 25, 2018.
"Discovery of New Antimicrobial Phosphonates Using Genomics"

258. EMBO Symposium "Enzymes, biocatalysis and chemical biology: the new frontiers" Pavia, Italy, September 9-12, 2018. "Biosynthesis and engineering of cyclic peptide antibiotics"

257. European Peptide Symposium, Dublin, Ireland. August 26-September 1, 2018.
"Posttranslational Modifications during Cyclic Peptide Biosynthesis"

256. Myron and Muriel Bender lectures, Northwestern University, August 6-7, 2018.
"Leader Peptide Guided Natural Product Biosynthesis"
"Phosphonate Biosynthesis: A Treasure Trove for Novel Enzymology"

255. Bioorganic Chemistry Gordon Conference, Andover, New Hampshire, June 10-15, 2018.
"Leader Peptide Guided Natural Product Biosynthesis"

254. 6th International Symposium on Antimicrobial Peptides (AMP2018), Poitiers, France, June 6, 2018.
"Biosynthesis and Engineering of Cyclic Peptide Antibiotics"

253. Symposium honoring Judith Klinman, University of Pennsylvania, May 9, 2018.
"Leader Peptide Guided Natural Product Biosynthesis"

252. University of Minnesota, Department of Chemistry, February 22, 2018.
"Phosphonate Biosynthesis: A Treasure Trove for Novel Enzymology"

251. Natural Product Discovery and Development in the Genomic Era, Society for Industrial Microbiology and Biotechnology, Clearwater Florida, January 23, 2018.
"Biosynthesis and Engineering of Cyclic Peptide Antibiotics"

250. Mona Symposium on Natural Products & Medicinal Chemistry, University of the West Indies, Jamaica, January 8-11, 2018.
"Biosynthesis and Engineering of Cyclic Peptide Antibiotics"

249. MilliporeSigma/Karcher Lecture, University of Oklahoma, December 8, 2017.
"Biosynthesis and Engineering of Cyclic Peptide Antibiotics"

248. Princeton University, November 29, 2017.
"Biosynthesis and Engineering of Cyclic Peptide Antibiotics"

247. University of Tokyo, November 12-19, 2017.
"Personal reflections on moving from inorganic chemistry, to organic chemistry, to biosynthesis"
"Biosynthesis and Engineering of Cyclic Peptide Antibiotics"

246. Backer lecture, University of Groningen, The Netherlands, October 30, 2017.
"Biosynthesis and Engineering of Cyclic Peptide Antibiotics"

245. University of Eindhoven, The Netherlands, October 27, 2017.
"Biosynthesis and Engineering of Cyclic Peptide Antibiotics"

244. Chemical Biology Lecture Series, Leiden University, the Netherlands. October 26, 2017.
"Biosynthesis and Engineering of Cyclic Peptide Antibiotics"

243. Alfred Hoffmann award lecture, University of Zürich, Switzerland, October 24, 2017.
"Biosynthesis and Engineering of Cyclic Peptide Antibiotics"

242. Department of Chemistry, ETH, Zürich, Switzerland, October 23, 2017.
"Phosphonate Biosynthesis: A Treasure Trove for Novel Enzymology"

241. 2017 Boulder Peptide Symposium, Boulder, CO, September 25-29, 2017.
"Combinatorial Methods Towards Genetically Encoded Cyclic Peptides"
240. Alfred Benzon Symposium, Copenhagen University, Copenhagen, Denmark, August 21-24, 2017.
"Biosynthesis and Engineering of Cyclic Peptide Antibiotics"
239. Repligen Award lecture, ACS National meeting, Washington DC, August 20, 2017.
"Two radical proteins: Hydroxyethylphosphonate dioxygenase and methylphosphonate synthase"
238. 2017 Society for Industrial Microbiology and Biotechnology Annual Meeting, Denver, CO, July 30-August 3, 2017.
"Biosynthesis and Engineering of Cyclic Peptide Antibiotics"
237. 2017 Gordon Research Conference (GRC) on Enzyme and Metabolic Pathways, Waterville Valley, NH, July 16-21, 2017.
"How Can One Enzyme Act on 30 Different Substrates?"
236. 2017 Gordon Research Seminar (GRS) on Enzymes, Coenzymes and Metabolic Pathways, Waterville Valley, NH, July 16, 2017.
"Phosphonate Biosynthesis: A Treasure Trove for Novel Enzymology"
235. 2017 American Peptide Symposium, Whistler, British Columbia, June 16-21, 2017.
"Combinatorial Lanthipeptide Biosynthesis"
234. 9th US-Japan Seminar on the Biosynthesis of Natural Products, Lake Arrowhead, CA, May 30-June 4, 2017.
"Biosynthesis of Cyclic Peptide Antibiotics"
233. Novartis Chemical Sciences Lectureship, University of Wisconsin-Madison, May 4, 2017.
"Biosynthesis and Engineering of Cyclic Peptide Antibiotics"
232. Directing Biosynthesis V, Coventry, UK, March 22-24, 2017.
"Directing RiPP Biosynthesis"
231. Washington University, St. Louis, MO, February 23, 2017.
"Biosynthesis of Cyclic Peptide Antibiotics"
230. Grinnell College, February 10, 2017.
"The looming antibiotics crisis: what can we do about it?"
229. Johns Hopkins University, Department of Chemistry, January 25, 2017.
"Biosynthesis of Cyclic Peptide Antibiotics"
228. Northwestern University, January 6, 2017.
"Biosynthesis of Cyclic Peptide Antibiotics"
227. Student Sponsored Nozaki Memorial Lecture Series, Dept. of Biochemistry, Duke University, December 2, 2016.
"Biosynthesis and Engineering of Cyclic Peptide Antibiotics"
226. Colloquium Series, University of Toronto, November 11, 2016.
"Biosynthesis of Cyclic Peptide Antibiotics"
225. Medicinal Chemistry and Pharmacognosy Seminar Series, University of Illinois at Chicago, November 4, 2016.
"Biosynthesis of Cyclic Peptide Antibiotics"
224. Pfizer Award Symposium, ACS National Meeting, Philadelphia, August, 21-25, 2016.
"RiPP biosynthesis: D-amino acids in ribosomally produced peptides"
223. Monsanto, St Louis, March 21, 2016.
"Production of cyclic peptide libraries in heterologous hosts"
222. 4th Frontier Chemistry Center International Symposium, Hokkaido University, Sapporo, Japan, February 23-24, 2016.
"Phosphonate Biosynthesis: A Treasure Trove for Novel Chemistry"
"Biosynthesis of Cyclic Peptide Antibiotics"

221. Metals in Biology, GRC, January 24-28, 2016.
"A Tale of Two Proteins: Hydroxyethylphosphonate Dioxygenase and Methylphosphonate Synthase"
220. Synthetic Biology Symposium, Salk Institute, La Jolla, January 20-22, 2016.
"Production of cyclic peptide libraries in heterologous hosts"
219. University of Alberta, Edmonton, Canada, January 11, 2016.
"Biosynthesis of Cyclic Peptide Antibiotics"
218. Pacifichem, Symposium: "Biosynthesis of Natural Products," December 15-19, 2015.
"How does one enzyme make and break 32 chemical bonds?"
217. Pacifichem, Symposium: "Enzymes Essential to Biosphere Health: Bioremediation and biogeochemical cycling," December 15-19, 2015.
"Formation and breakdown of compounds with phosphorus-carbon bonds"
216. Plenary Lecture, International Conference on Circular Proteins, November 1-4, 2015. Brisbane, Australia.
"Biosynthesis of lanthionine-containing peptides"
215. UC Berkeley/UCSF, SQB/Andrew Braisted Lecture, Oct 4, 2015
"Unexpected Posttranslational Modifications during Cyclic Peptide Biosynthesis"
214. Undergraduate Biochemistry Seminar, Marquette University, October 12, 2015.
"Why do we not have new antibiotics, and what can we do about it?"
213. Boston College, Dept of Chemistry, Sept 8, 2015.
"Biosynthesis of Cyclic Peptide Antibiotics". Novartis lecture.
212. Eli Lilly, Indianapolis, August 25, 2015.
211. Keynote lecture, Vanderbilt Institute for Chemical Biology Student Research Symposium, August 13, 2015.
"Evolution of peptide dehydratases involved in natural product biosynthesis"
210. American Society of Pharmacognosy, July 25-29, 2015.
"Biosynthesis of Cyclic Peptide Antibiotics"
209. 16th International Conference on Advancing the Chemical Sciences (ISACS 16), June 15-18, Zürich, Switzerland.
"Biosynthesis of Cyclic Peptide Antibiotics"
208. Durham University, UK, June 1, 2015.
"Biosynthesis of Cyclic Peptide Antibiotics"
207. University of Warwick, UK, May 27, 2015.
"Biosynthesis of Cyclic Peptide Antibiotics"
206. Oxford University, Department of Chemistry, May 28, 2015.
"Biosynthesis of Cyclic Peptide Antibiotics"
205. The Royal Society of Chemistry, London, May 26, 2015.
"Biosynthesis of Cyclic Peptide Antibiotics"
204. Frontier's in Chemical Research Lectures, Texas A&M, April 6-8, 2015.
"Phosphonate Biosynthesis: A Treasure Trove for Novel Chemistry"
"Genome Mining for Novel Natural Products"
"Biosynthesis of Cyclic Peptide Antibiotics"
203. American Society for Biochemistry and Molecular Biology annual meeting, March 28-April 1, 2015, Boston, MA.
202. Yale University, Department of Chemistry, March 3, 2015.
"Posttranslational Modifications in Natural Product Biosynthesis"
201. Harvard University, Department of Chemistry, March 2, 2015.
"Biosynthesis of Cyclic Peptide Antibiotics"

200. DuPont Central Station, Wilmington, Delaware, February 13, 2015.
"Biosynthesis and engineering of cyclic peptide natural products"
199. University of Texas Southwestern Medical School, January 29, 2015.
"Genome-Assisted Investigations of Natural Product Biosynthesis"
198. Natural Product Discovery and Development in the Post-Genomic Era Conference, Society for Industrial Microbiology, January 11-15, 2015.
"Posttranslational Modifications in Natural Product Biosynthesis"
197. University of Utah, Department of Chemistry, December 11, 2014.
"Biosynthesis of Cyclic Peptide Antibiotics"
196. TSRI, Scripps Florida, November 6, 2014.
"Biosynthesis of Cyclic Peptide Antibiotics"
195. University of Alberta, Department of Chemistry, September 29, 2014.
"Biosynthesis of Cyclic Peptide Antibiotics" CANCELLED
194. 22nd IUPAC International Conference on Physical Organic Chemistry, Ottawa, Canada, August 10-15, 2014.
"Use of tRNA in Natural Product Biosynthesis"
193. 2014 annual meeting Society for Industrial Microbiology and Biotechnology, St Louis, July 20-24
"Use of tRNA in Natural Product Biosynthesis"
192. Gordon Conference on Stereochemistry, Newport, RI, July 27-August 1, 2014.
"Understanding Phosphonate Biosynthesis Through Investigations of Stereochemistry"
191. Institute of Organic Chemistry and Biochemistry, Prague, Czech Republic, June 4, 2014.
"Biosynthesis of Cyclic Peptide Antibiotics"
190. 36th Steenbock Symposium- Enzyme Structure and Function, University of Wisconsin-Madison, May 22-24, 2014. "Applying Mo Cleland's Ideas to Phosphite Dehydrogenase"
189. 2014 HHMI Science Meeting, Janelia Farms Research Center, May 6-8, 2014.
"Non-Translational Functions of Aminoacyl tRNA in Natural Product Biosynthesis"
188. Institute for Cellular and Molecular Biology Seminar, University of Texas-Austin, April 24, 2014.
"Posttranslational Modifications in Natural Product Biosynthesis"
187. Harvard University, Chemical Biology Retreat, April 18-19, 2014.
"Combinatorial Biosynthesis of Cyclic Peptides"
186. Advances in Macrocyclic Peptide Synthesis and Applications Symposium, ACS National Meeting, March 19, 2014. "Preparation of cyclic peptides by posttranslational modifications"
185. Marine Natural Products GRC, Ventura, CA, March 2-7, 2014.
"Lanthipeptide Biosynthesis in Marine Cyanobacteria"
184. JoAnne Stubbe Symposium, University of Pennsylvania, February 18, 2014.
"Posttranslational Modifications in Natural Product Biosynthesis"
183. University of North Carolina-Chapel Hill, February 12, 2014.
"Biosynthesis of Cyclic Peptide Antibiotics"
182. North Carolina State University, February 11, 2014.
"Posttranslational Modifications in Natural Product Biosynthesis"
181. Keynote Lecture, NIH Chemical Biology Training Grant Symposium, University of Kansas, January 24, 2014. "Posttranslational Modifications in Natural Product Biosynthesis"
180. Amgen, Westlake Village, CA, November 20, 2013. "Cyclic peptide biosynthesis by posttranslational modifications"
179. Genentech Lecture 2013, Scripps Research Institute, La Jolla, CA, November 18, 2013. "Genome-Assisted Investigations of Natural Product Biosynthesis"
178. 23rd Solvay Conference on Chemistry, Brussels, Belgium, October 16-19, 2013.
"Natural Product Biosynthesis in the Genomic Age"

177. 2013 SIMB (Society for Industrial Microbiology and Biotechnology) Annual Meeting, San Diego, August 11-15, 2013.
"RiPPs: Ribosomally Synthesized and Posttranslationally Modified Peptide Natural Products"
176. 27th Annual Symposium of the Protein Society, Boston, July 22, 2013.
"RiPPs: Ribosomally Synthesized and Posttranslationally Modified Peptide Natural Products"
175. American Peptide Society Symposium, Kona, Hawaii, June 23, 2013.
"RiPPs: Ribosomally Synthesized and Posttranslationally Modified Peptide Natural Products"
174. Laptop (Lantibiotic production: technology, optimization and improved process) Workshop, Verona, Italy, June 16-17, 2013.
"In vitro studies of lantibiotic biosynthetic enzymes"
173. Novartis, San Francisco, May 8, 2013.
"Genome-Assisted Investigations of Natural Product Biosynthesis"
172. David Gin Memorial Symposium, Memorial Sloan Kettering Cancer Center, April 30, 2013.
"Genome-Assisted Investigations of Natural Product Biosynthesis"
171. MIT, Department of Chemistry, April 29, 2013.
"Phosphonate Biosynthesis: A Treasure Trove for Novel Chemistry"
170. ACS Chem. Biol. Lecture, ACS National Meeting, New Orleans, April 9, 2013.
"Stereochemistry and Mode of Action of Lantibiotics"
169. Society for General Microbiology, Manchester, UK, March 25-28, 2013.
"Posttranslational Modifications in Natural Product Biosynthesis"
168. UIUC, Department of Bioengineering, February 28, 2013.
"RiPPs: a Treasure Trove for Bioengineering"
167. Kharasch lectures, University of Chicago, January 25-30, 2013.
Lecture 1 "Phosphonate Biosynthesis: A Treasure Trove for Novel Chemistry"
Lecture 2 "Posttranslational Modifications in Natural Product Biosynthesis"
Lecture 3 "Genome Mining for New Natural Products"
166. 23rd Enzyme Mechanisms Conference, Coronado, CA. January 7, 2013.
"Evolution of Lanthipeptide Synthetases"
165. Annual Symposium on Recent Advances in Synthesis and Chemical Biology XI, Centre for Synthesis and Chemical Biology, Dublin, Ireland. December 14, 2012.
"Posttranslational modifications in natural product biosynthesis"
164. T.T. Tchen Memorial Lecture, Wayne State University, September 28, 2012.
"Posttranslational modifications in natural product biosynthesis"
163. University of Nebraska, Dept of Chemistry, August 24, 2012.
"Posttranslational modifications in natural product biosynthesis"
162. Colorado State University, Dept of Chemistry, August 23, 2012.
"Posttranslational modifications in natural product biosynthesis"
161. Natural Products GRC, July 22-26, 2012.
"Combining synthetic and biosynthetic chemistry to prepare natural product analogs"
160. Dowd lecturer, University of Pittsburgh, May 2012.
Lecture 1: "Posttranslational modifications in natural product biosynthesis"
Lecture 2: "Phosphonate Natural Products: Discovery and Biosynthesis"
159. Purdue University, Dept. of Biochemistry, April 3, 2012.
"Posttranslational modifications in Natural Product Biosynthesis"
158. ACS National Meeting, San Diego 2012.
"Chemical and Enzymatic Synthesis of S-linked Glycopeptides"
157. ACS National Meeting, San Diego 2012.
"Discovery and Biosynthesis of Phosphonate Natural Products"

156. Texas A&M University, Dept. of Chemistry, February 29, 2012.
"Posttranslational Modifications in Natural Product Biosynthesis"
155. HHMI meeting on Microbes and Immunology, February 14-17, 2012.
"Posttranslational Modifications in Secondary Metabolism"
154. 16th International Symposium on the Biology of Actinomycetes (ISBA16), Puerto Vallarta, Mexico, December 11-15, 2011.
"Biosynthesis of Lantipeptides in Actinomycetes"
153. Center for Integrated Protein Science Fest, Munich, September 14-17, 2011.
"Posttranslational modifications in natural product biosynthesis"
152. International Conference on the Chemistry of Antibiotics (ICCA-12), Berlin, September 9-13, 2011.
"Posttranslational modifications in natural product biosynthesis"
151. Chemistry Symposium, Boston University, June 24, 2011.
"Post-translational modifications in natural product biosynthesis"
150. UC Berkeley, May 2, 2011.
"Posttranslational modifications in natural product biosynthesis"
149. Princeton, April 20, 2011.
"Post-translational modifications in natural product biosynthesis: lantibiotics and S-linked glycopeptides"
148. University of East Anglia, Norwich, UK, March 9, 2011.
"Phosphonate Natural Products: Discovery and Biosynthesis"
147. University of Bristol, UK, March 7, 2011
"Phosphonate Natural Products: Discovery and Biosynthesis"
146. Case Western Reserve University, February 24, 2011.
"Post-translational modifications in natural product biosynthesis"
145. "Rockefeller University, January 12, 2011.
Post-translational modifications in cyclic peptide biosynthesis"
144. Pacifichem 2010, Honolulu, December 15-20.
"Post-translational modifications during lantibiotic biosynthesis"
143. University of Wisconsin, Department of Chemistry, December 7, 2010.
"Post-translational modifications in natural product biosynthesis"
142. Utrecht University, October 12, 2010.
"Post-translational modifications in natural product biosynthesis"
141. Universitaet des Saarlandes, October 7, 2010.
"Post-translational modifications in natural product biosynthesis"
140. International Symposium of the DFG Research, Post-Genomic Strategies for New Antibiotic Drugs and Targets Königswinter (Germany), October 4-6, 2010.
"Leader Peptide Directed Biosynthesis: Lantibiotics Engineering"
139. Directing Biosynthesis II: Discovery; Evolution; Function conference Durham, UK September 13-17, 2010.
"Leader Peptide Directed Biosynthesis: Lantibiotics Engineering"
138. 240th National ACS meeting, August 23, 2010, Boston.
"Post-translational modifications in natural product biosynthesis"
137. 240th National ACS meeting, August 24, 2010, Boston.
"Unusual Enzymatic Transformations during Phosphonate Biosynthesis"
Symposium in honor of Perry Frey receiving Gordon Hammes award.
136. NAICONS/Ktedogen, Milano, Italy, June 17, 2010.
"Post-translational modifications in natural product biosynthesis"

135. Trends in Enzymology Conference, Locarno, Switzerland, June 13-17, 2010.
"Leader Peptide Directed Biosynthesis: Lantibiotics Engineering "
134. Bürgenstock Conference, Brunnen, Switzerland, May 2-7, 2010.
"Genome-Assisted Investigations of Natural Product Biosynthesis"
133. University of Texas Southwestern Medical Center, Dept. of Biochemistry, May 20, 2010.
"Post-translational modifications in natural product biosynthesis"
132. Georgia Tech, Department of Chemistry, April 29, 2010.
"Post-translational modifications in natural product biosynthesis"
131. Howard Hughes Medical Institute, Chevy Chase, MD, April 18-21, 2010.
Conference on Infection, Inflammation and Immunity
"New Methods for the Discovery of Anti-infectives"
130. 239th National ACS meeting, March 2010, San Francisco.
"New methods for the discovery and synthesis of natural products"
129. UCLA, Department of Chemistry, February 26, 2010.
"Post-translational modifications in natural product biosynthesis"
128. Caltech, Department of Chemistry, February 24, 2010.
"Post-translational modifications in natural product biosynthesis"
127. Shanghai Institute of Organic Chemistry, December 23, 2009.
"New methods for the discovery and synthesis of natural products"
126. Albert Einstein College of Medicine, December 8, 2009.
"Post-translational modifications in natural product biosynthesis"
125. The Pennsylvania State University, Department of Chemistry, November 12, 2009.
"New Methods for the Discovery and Synthesis of Antibiotics"
124. Leiden University, the Netherlands, Department of Chemistry, October 30, 2009.
"Unusual Reactions Catalyzed by Non-heme Iron Proteins"
123. Albion College, Department of Chemistry, October 29, 2009.
"New methods for the Discovery and Synthesis of Natural Products "
122. Michigan State University, Department of Chemistry, East Lansing, MI, October 28, 2009.
"New methods for the Discovery and Synthesis of Natural Products "
121. Howard Hughes Medical Institute, Chevy Chase, MD. April 18-21, 2010.
Conference on Proteins: Structure, Function, Evolution
"Lords of the Rings: Lantibiotic Synthetases"
120. Cornell University, Department of Chemistry and Chemical Biology, September 14, 2009.
"New Methods for the Discovery and Synthesis of Antibiotics"
119. Chemical Biology Symposium, State University of New York, Buffalo, September 11, 2009.
"New methods for the discovery and synthesis of antibiotics"
118. OBC lecture. Royal Society of Chemistry/IUPAC Congress, Glasgow, Scotland, August 3-7, 2009.
"Biosynthesis of Lantibiotics, Polycyclic Thioether Antibiotics"
117. Enzymes, Coenzymes and Metabolic Pathways GRC, Waterville Valley, NH, July 5-10, 2009.
"Unusual Transformations during the Biosynthesis of Phosphonate Natural Products"
116. Conference on Pathways, Networks, and Systems, Corfu, Greece, June 6-9, 2009.
"Mining microbial genomes for novel antibiotics"
115. Memorial Sloan Kettering Cancer Center, May 12, 2009.
"New methods for the discovery and synthesis of antibiotics"
114. Queen's University, Dept. of Chemistry, Kingston, Ontario Canada, May 1, 2009.
"Biosynthesis of Lantibiotics, Polycyclic Thioether Antibiotics"
113. NIH Summit on Natural Products and Biomedical Science, April 28-29, 2009

"Genome Mining for Novel Lantibiotics"

112. University of South Florida, Dept. of Chemistry, Tampa, April 2, 2009.
"Biosynthesis of Lantibiotics, Polycyclic Thioether Antibiotics"

111. University of Maryland, Dept. of Chemistry, March 10, 2009.
"Biosynthesis of Lantibiotics, Polycyclic Thioether Antibiotics"

110. Wesleyan University, Dept. of Chemistry, Middletown, CT, February 27, 2009.
"Biosynthesis of Lantibiotics, Polycyclic Thioether Antibiotics"

109. Tufts University, Dept. of Chemistry, Medford, MA, January 27, 2009.
"Biosynthesis of Lantibiotics, Polycyclic Thioether Antibiotics"

108. University of Rochester, Department of Chemistry, Rochester, NY, December 5, 2008.
"Biosynthesis of Lantibiotics, Polycyclic Thioether Antibiotics"

107. University of Kentucky, Department of Pharmaceutical Sciences, College of Pharmacy, Lexington, KY, November 21, 2008.
"Biosynthesis of lantibiotics, complex macrocyclic thioethers"

106. ETH, Dept of Chemistry, October 13, 2008.
"Biosynthesis of Lantibiotics, Polycyclic Thioether Antibiotics"

105. Tour "3ème Cycle" of Swiss Universities: Universities of Geneva, Lausanne, Berne, Basel, Fribourg and Neuchâtel, Switzerland, October 6-13, 2008.
"Biosynthesis of Lantibiotics, Polycyclic Thioether Antibiotics" and "Discovery, Structure, and Biosynthesis of Phosphonate Natural Products"

104. University of Georgia, Department of Chemistry, September 11, 2008.
"Biosynthesis of Lantibiotics, Complex Macrocylic Thioethers"

103. MIT, Dept of Chemistry, July 12, 2008. Symposium in honor of JoAnne Stubbe.
"Biosynthesis of lantibiotics, complex macrocyclic antibiotics"

102. 7th US-Japan Seminar on Biosynthesis of Natural Products, San Diego, June 22- June 26, 2008
"Biosynthesis of lantibiotics, complex macrocylic thioethers"

101. Novartis Lecture, University of Michigan, Department of Chemistry, May 19, 2008.
"Biosynthesis of Lantibiotics, Polycyclic Thioether Antibiotics"

100. Massachusetts General Hospital Department of Molecular Biology/Harvard Medical School Department of Genetics, May 7, 2008.
"Biosynthesis of Lantibiotics, Polycyclic Thioether Antibiotics"

99. Johns Hopkins University School of Medicine, Department of Pharmacology, Baltimore, MD, April 23, 2008.
"Biosynthesis of lantibiotics, complex macrocyclic thioethers"

98. Illinois Wesleyan University, Department of Chemistry, April 4, 2008.
"Lacticin 481 Synthetase, the Lord of the Rings"

97. Plenary Lecture, Annual meeting of the German Society for General and Applied Microbiology and the German Society for Biochemistry and Molecular Biology, Frankfurt, Germany, March 9-12, 2008.
"Biosynthesis of lantibiotics, complex macrocylic thioethers"

96. University of Minnesota – Twin Cities, Department of Biochemistry, Molecular Biology & Biophysics, Minneapolis, MN, February 6, 2008.
"Biosynthesis of lantibiotics, complex macrocyclic thioethers"

95. University of British Columbia, Department of Chemistry and Simon Fraser University, Departments of Chemistry, Vancouver, BC, Canada, January 8 and 9, 2008.
"Biosynthesis of lantibiotics, complex macrocyclic thioethers"

94. John Innes Centre, Norwich Bioscience Institutes, Norwich, UK, October 5, 2007.
"Biosynthesis of lantibiotics, complex macrocylic thioethers"

93. Columbia University, Department of Biological Sciences, September 24, 2007.
"Post-translational modifications in lantibiotic biosynthesis"
92. American Chemical Society, 234th National Meeting, Boston, MA, August 19-23, 2007
"Biosynthesis of lantibiotics, complex macrocylic thioethers"
91. Society for Industrial Microbiology, Annual Meeting, Denver, CO, July 29-August 2, 2007
"Biosynthesis of the Lantibiotics Haloduracin and Nisin"
90. Tetrahedron 50th Anniversary Symposium, June 27-29, 2007, Berlin, Germany.
"Biosynthesis of lantibiotics, complex macrocylicthioethers"
89. The Ohio State University, CBIP Program Symposium, May 8, 2007.
"Biosynthesis of lantibiotics, complex macrocyclicthioethers"
88. Yale University, Dept. of Chemistry, April 18, 2007.
"Biosynthesis of lantibiotics, complex macrocyclicthioethers"
87. American Chemical Society National Meeting, Chicago, IL, March 26, 2007.
2007 Nakanishi Prize Symposium invited lecture:
"Posttranslationally modified antimicrobial peptides"
86. University of California, San Francisco, Dept. of Pharmaceutical Chemistry, March 15, 2007.
"Chemistry and Biology of Lanthionine Biosynthesis"
85. Massachusetts Institute of Technology, Department of Chemistry, February 13, 2007.
"Chemistry and Biology of Lanthionine Biosynthesis"
84. University of California – Berkeley, Dept. of Chemistry, February 5, 2007.
"Chemistry and Biology of Lanthionine Biosynthesis"
83. 20th Enzyme Mechanisms Conference, St. Pete Beach, Florida, January 3-6, 2007.
"Chemistry and Biology of Lanthionine Biosynthesis"
82. Syracuse University, Department of Chemistry, November 14, 2006.
"Chemistry and Biology of Lanthionine Biosynthesis"
81. University of Missouri – Columbia, Department of Chemistry, November 10, 2006.
"Chemistry and Biology of Lanthionine Biosynthesis"
80. Ohio University (Athens, OH), Dept. of Chemistry, September 25, 2005.
"Chemistry and Biology of Lanthionine Biosynthesis"
79. International Symposium on Medicinal Chemistry (ISMC), Istanbul, Turkey August 29-September 2, 2006.
"Re-engineering of lantibiotics"
78. Arthur C. Cope Scholar Award address. ACS meeting, San Francisco, August 27-31, 2006.
77. Gordon Research Conference on Bioorganic Chemistry, Oxford, England, July 30-August 4.
"Mechanism and application of lantibiotic synthetases"
76. Gordon Research Conference on Biocatalysis, Rhode Island, July 9-14, 2006.
"Using lantibioticsynthetases for protein engineering"
76. Utrecht University, Department of Medicinal Chemistry, April 4, 2006
"Synthesis of Peptide Conjugates"
75. Stanford University, Department of Chemistry, February 8, 2006.
"Chemistry and Biology of Lanthionine Synthesis"
74. Arizona State University, Department of Chemistry, February 6, 2006.
"Post-translational modifications during lantibiotic biosynthesis"
73. GRC, Program-Protein Derived Cofactors Radicals and Quinones, Ventura, CA January 22-27, 2006. "Post-translational modifications during lantibiotic biosynthesis"
72. Pacifichem, Honolulu, Hawaii, December 15-20, 2005.
"Mechanistic aspects of chlorinated ethylene degradation by vitamin B12"
71. Pacifichem, Honolulu, Hawaii, December 15-20, 2005.

"The structure of radical intermediates in lipoxygenase and cyclooxygenase"

70. ACS National Meeting, Washington, D.C., August 28-September 1, 2005. Symposium: Strategies and Molecular Mechanisms of Contaminant Degradation Chemistry.
69. GRC, Enzymes, Coenzymes, and Metabolic Pathways, Meriden, NH, July 17-22, 2005.
"Post-translational modifications during lantibiotic biosynthesis"
68. 19th American Peptide Symposium, San Diego, June 18-26, 2005.
"Post-translational modifications during lantibiotic biosynthesis"
66. Baker Symposium on Chemical Biology, Dept. of Chemistry and Chemical Biology, Cornell University, April 30, 2005.
"Post-translational modifications during lantibiotic biosynthesis"
65. ASBMB Meeting, San Diego, April 3-7, 2005.
"Mechanistic studies on cyclooxygenase and lipoxygenase"
64. Leveraging Natural Products for Drug Development, Conference, Crown Plaza Hotel, Philadelphia, February 28- March 1, 2005.
"Combinatorial Biosynthesis of Lantibiotics and Its Role in the Development of New Chemical Tools"
63. Harvard University, Dept. of Chemistry, February 28, 2005.
"Semisynthesis of Post-Translationally Modified Antibiotics"
62. Olivet Nazarene University, Dept. of Chemistry, Kankakee, IL, February 4, 2005.
"Chemistry and Biology of Antibiotics"
61. NRSCC / NIOK conference, January 5-7 2005. Noordwijkerhout, The Netherlands.
"Post-translational modifications during lantibiotic biosynthesis"
60. Universiteit Groningen, The Netherlands, January 4, 2005.
"Post-translational modifications during lantibiotic biosynthesis"
59. Pfizer Award Lecture, ACS National Meeting, Philadelphia, August 22-26, 2004.
"Biosynthesis of Lantibiotics"
58. Science@theInterface Conference, University of Chicago, June 3, 2004.
"Engineering of the Biosynthesis of Post-translationally modified peptide antibiotics"
57. Boston College, Department of Chemistry, May 12, 2003.
"Post-translational Modifications during Lantibiotic Biosynthesis"
56. Vrije Universiteit Amsterdam, April 20, 2004.
"Exercises in understanding enzyme mechanisms: cyclooxygenase and phosphite dehydrogenase"
55. Leiden University, Department of Chemistry, The Netherlands, April 19, 2004.
"Mechanistic Studies on the Vitamin B_{12} Catalyzed Dechlorination of Perchloroethylene"
54. 17th Wageningen Symposium on Organic Chemistry, Wageningen, The Netherlands, April 15-16, 2004.
"Chemical and Enzymatic Studies on Lanthionine Formation"
53. Washington State, Department of Chemistry, March 29, 2004.
"Engineering of Antibiotic Biosynthesis"
52. UPenn, Department of Chemistry, Philadelphia, March 25, 2004.
"Engineering of Antibiotic Biosynthesis"
51. University of Michigan, Ann Arbor, March 22, 2004.
"Engineering of Antibiotic Biosynthesis"
50. Isotopes Gordon Research Conference, Ventura, February 15-19, 2004.
"An unusual isotope effect on substrate inhibition in lipoxygenase"
49. University of Texas Health Science Center, Houston, Dept. of Biochemistry, January 12, 2004.
"Posttranslational Modifications Involved in Lantibiotic Biosynthesis"

48. University of Alberta, Dept. of Chemistry, Edmonton, October 3, 2003.
"Chemical and Enzymatic Studies on Lanthionine Formation"
47. Vitamin B_{12} Gordon Research conference, Colby College, Waterville, ME. July 6-10, 2003.
"Mechanistic Studies on the Vitamin B12 Catalyzed Dechlorination of Perchloroethylene"
46. University of Illinois at Chicago, Dept. of Chemistry, March 18, 2003.
"Radical chemistry in cyclooxygenase and lipoxygenase"
45. Johns Hopkins University, Dept. of Chemistry, Baltimore. March 4, 2003.
"Mechanistic studies on the vitamin B12 catalyzed dechlorination of perchloroethylene"
44. Vanderbilt University, Toxicology seminar, Nashville. November 8, 2002.
"Mechanistic Studies on Prostaglandin Synthase and Lipoxygenase"
43. Oregon Graduate Institute, Dept. of Biochemistry, Portland, November 1, 2002.
"Radical intermediates in cyclooxygenase catalysis"
42. University of Texas Southwestern, Dept. of Biochemistry, Dallas, October 24, 2002.
"Identification of Radical Intermediates in Prostaglandin H Synthase"
41. University of Wisconsin, Madison, September 27, 2002.
"Isotopically Labeled Arachidonic Acids for the Study of Prostaglandin Synthase and Lipoxygenase"
40. 3M Company, St Paul, Minnesota, June 3, 2002.
"Synthesis and applications of isotopically labeled arachidonic acids for the study of cyclooxygenase"
39. Invited speaker, 34th Great Lakes Regional Meeting, Minneapolis, Minnesota. June 4, 2002.
"Phosphite Dehydrogenase, an Unusual PhosphorylTransferase"
38. Invited speaker, 34th Great Lakes Regional Meeting, Minneapolis, Minnesota. June 2, 2002.
"Mechanistic studies on vitamin B_{12}-catalyzed dechlorination of perchloroethylene"
37. Stanford University, May 29, 2002.
"Synthesis of isotopically labeled arachidonic acids for the study of cyclooxygenase"
36. MIT, Dept. of Chemistry, April 29, 2002.
"Radically Different Enzymes: Cyclooxygenase, Lipoxygenase, and Cytochrome c Oxidase"
35. Notre Dame University, Dept. of Chemistry, March 20, 2002.
"Identification of Radical Intermediates in Cyclooxygenase"
34. University of California at San Diego, Dept. of Chemistry, March 18, 2002.
"Mechanistic Studies on the Vitamin B12 Catalyzed Dechlorination of Chloroalkene Priority Pollutants"
33. Scripps Research Institute, March 15, 2002.
"Radically Different Enzymes: Cyclooxygenase, Lipoxygenase, and Cytochrome c Oxidase"
32. University of Delaware, Dept. of Biochemistry, February 11, 2002.
"Exercises in Understanding Enzyme Mechanisms: Cyclooxygenase and Azurin"
31. Duke University, Dept. of Biochemistry, February 8, 2002.
"Exercises in Understanding Enzyme Mechanisms: Cyclooxygenase and Azurin"
30. Ohio State University, Dept. Chemistry, Columbus, OH, January 31, 2002.
"Identification of Radical Intermediates in Cyclooxygenase"
29. University of Michigan, Pfizer seminar in Medicinal Chemistry, January 24, 2002.
"Identification of Radical Intermediates in Cyclooxygenase"
28. Gordon Research Conference "Quinone and Amino Acid Radical Cofactors" January 13-18, 2002. Ventura, California.
"Identification of Radical Intermediates in Prostaglandin Synthase"
27. Rice University, Dept. of Chemistry, Houston, TX, November 30, 2001.
"Vitamin B_{12} as Remediation Catalyst for Dehalogenation of Priority Pollutants"

26. Texas A&M University, Dept. of Chemistry, College Station, November 29, 2001.
"Exercises in enzyme mechanisms: cyclooxygenase and azurin"
25. University of Texas, Dept. of Chemistry, Austin, November 28, 2001.
"Exercises in enzyme catalysis: phosphite dehydrogenase and azurin"
24. Colorado State University, Dept. of Chemistry, Fort Collins, Colorado, Oct. 23, 2001.
"Vitamin B_{12} as Remediation Catalyst for Dehalogenation of Priority Pollutants"
23. Brigham Young University, Dept. Chemistry, Provo Utah, October 19, 2001.
"Exercises in understanding enzyme mechanisms: cyclooxygenase and phosphite dehydrogenase"
22. University of Utah, Dept. Chemistry, October 18, 2001.
"Characterization of an Arachidonyl Radical during COX-2 Catalysis"
21. SUNY Stony Brook, Dept. of Chemistry, October 11, 2001.
"Characterization of an Arachidonyl Radical during COX-2 Catalysis"
20. 4th Annual Chinese-American Frontier of Science Symposium, sponsored by the National Academy of Sciences, Beijing, China, September 21-23, 2001, 2001.
19. Peking University, Department of Chemistry, Beijing, China, September 18, 2001.
"Understanding and manipulating enzymes using organic chemistry: prostaglandin synthase and azurin"
18. 222nd ACS National Meeting, Chicago. August 26-30, 2001. Invited Speaker for Symposium: "The Future is Now." Organized by John Schwab, NIGMS.
17. Burroughs-Wellcome Fund New Investigators Meeting, San Diego, July 27-29, 2001.
"The Biosynthesis of Lantibiotics" (poster)
16. Bioorganic Gordon Research Conference, Andover, NH, June 17-21, 2001.
"Radical Intermediates in Enzyme Catalysis"
15. Johnson Foundation Discussions, "40 Years of Tunneling in Biology." UPenn, May 2-5, 2001.
"Hydrogen Atom Transfer in Prostaglandin H Synthase"
14. UCLA, Dept. Chemistry, April 26, 2001.
"Formation of a Pentadienyl Radical during COX-2 Catalysis"
13. Washington University, St. Louis, Dept. Chemistry, April 24, 2001.
"Mechanistic Studies on Vitamin B_{12}-catalyzed dehalogenation of priority pollutants"
12. Columbia University, Dept.. Chemistry, February 8, 2001. "Mechanistic Studies on Vitamin B_{12}-catalyzed dehalogenation of chlorinated alkenes."
11. Northwestern University, Dept. Chemistry, January 25, 2001.
"Mechanistic Studies on Vitamin B_{12}-catalyzed dehalogenation of chlorinated alkenes"
10. 17th Enzyme Mechanisms Conference, January 3-6, 2001, Marco Island, Florida.
"Identification of a pentadienyl radical during COX-2 catalysis." Poster selected for Oral Presentation (4 out of 110 posters selected).
9. Baylor College of Medicine, Dept. of Biochemistry and Molecular Biology, Houston, TX, November, 30, 2000.
"Phosphite Dehydrogenase, an Unusual Phosphoryl Transfer Reaction"
8. Rose Hulman Institute, Dept. of Chemistry, October 26, 2000.
"Mechanistic Studies on Vitamin B_{12} Catalyzed Dechlorination of Organic Pollutants"
7. 5th European Symposium on Vitamin B_{12} and B_{12}-Proteins, Marburg, Germany, September 10-15, 2000.
"Mechanistic Studies on Vitamin B_{12}-Catalyzed Dechlorination of Chlorinated Alkenes"
6. 20th Midwest Enzyme Chemistry Conference, University of Chicago, September 23, 2000.
"Phosphite Dehydrogenase: an Unusual Phosphoryl Transfer Reaction"
5. Beckman Symposium, Beckman Institute, University of California, Irvine, August 25-26, 2000.
"Exploring the Post-Translational Modifications of Lantibiotics"

4. 220th ACS National Meeting August 20-24, 2000, Washington, D.C.
"Mechanistic Studies on Vitamin B_{12}-Catalyzed Dechlorination of Chlorinated Alkenes"
3. Enzyme Mechanisms Gordon conference, Meriden, New Hampshire, July 16-20, 2000.
"Phosphite Dehydrogenase: an Unusual Phosphoryl Transfer Reaction" (poster)
2. NSF Workshop on Physical Organic Chemistry, Warner Springs Ranch, California, June 24-27, 2000.
"Vitamin B12-Catalyzed Dechlorination of Perchloroethylene"
1. Bioorganic Chemistry Gordon Conference, Andover, New Hampshire, June 18-22, 2000.
"Synthesis of Isotopically Labeled Arachidonic Acids for Mechanistic Studies of Prostaglandin Synthase"

GRADUATE STUDENTS SUPERVISED

	NAME	DATE	PROGRAM	POSITION UPON GRADUATION/CURRENT
1	Nicole M. Okeley	1997-May 2002, Ph. D.	Org. Chem.	Postdoc Michael Gelb Now Seattle Genetics
2	Jennifer M. Vrtis	1997-June 2002, Ph. D.	Org. Chem.	Abbvie
3	Hao Zhou	1997-August 2002, Ph. D.	Org. Chem.	Postdoc James Cook Now Lundbeck Pharma.
4	Justin Shey	1997-August 2002, Ph. D.	Org. Chem.	USDA, Albany CA Now Customs & Border Protection Lab, San Francisco CA
5	Matt D. Gieselman	1998-August 2003, Ph. D.	Org. Chem.	Lubrizol
6	Kevin M. McCauley	1998-May 2003, Ph.D.	Org. Chem.	Postdoc Greg Fu, MIT Now Saint-Gobain Performance Plastics
7	Lili Xie	1998-Sept. 2003, Ph. D.	Org. Chem.	Postdoc J. Clardy, Harvard Now Novartis
8	Yantao Zhu	1998-June 2003, Ph.D.	Org. Chem.	General Electric Now SABIC, Mount Vernon, IN
9	Russell P. Pesavento	1999-August 2004, Ph.D.	Inorg. Chem.	Postdoc R. Holm, Harvard; Attorney, Sterne, Kessler, Goldstein & Fox; Dental School, U. Iowa Now: Visiting Scientist, U. Illinois Chicago College of Dentistry and Associate Dentist at Dr. Ginger Christian & Associates
10	Champak Chatterjee	1999-2005, Ph. D.	Chem. Biol.	Postdoc T. Muir, Rockefeller Now Associate Prof. U. Washington
1[a]	Erin Criswell	1999-2001, M.S.	Org. Chem.	Tate & Lyle, Decatur, IL Now E Ink Corp

11	Moushumi Paul	1999-2005, Ph.D.	Org. Chem.	Postdoc R. Raines, U. Wisconsin Now USDA, Philadelphia
2[a]	Joshua Wheatley	2000-2003, M.S.	Biochem.	ADM
3[a]	Wesley Swanson	2000-2003, M.S.	Org. Chem.	Polaris Laboratories Now Pfizer
12	Christopher McGinley	2000-2005, Ph. D.	Org. Chem.	Hospira Pharmaceuticals Now CareFusion
13	Danica Galonic Fujimori[1]	2000-2005, Ph. D.	Org. Chem.	Postdoc C. Walsh, Harvard Medical School Now Associate Prof. UCSF
14	Ryan Woodyer[2]	2001-2005, Ph. D.	Chem. Biol.	ZuChem, Peoria Tate & Lyle, Decatur Now Coca Cola, Atlanta
15	Heather Relyea	2001-2006, Ph.D.	Org. Chem.	Postdoc Tom O'Halloran Now Dow Biocides
16	Cyril Jacquot	2002-2008, Ph.D. 2011 M.D.	Org. Chem.	Pathology Residency, UCSF Now Children's National Health System
4[a]	Chris Kerwood	2003-2007, M.S.	Chem. Biol.	Tate & Lyle, Decatur, IL
17	Gregory Patton	2003-2008, Ph.D.	Org. Chem.	Postdoc L. Hedstrom, Brandei Now New England Biolabs
18	Matt Levengood	2003-2008, Ph.D.	Chem. Biol.	Postdoc L. Kiessling, U. Wisconsin Now Seattle Genetics
19	Young Ok You	2003-2008, Ph.D.	Biochemistry	Postdoc David Cane, Brown U. Now Asst Prof George Mason U.
20	Leigh Anne Furgerson	2004-2009, Ph.D.	Org. Chem.	Postdoc Dale Poulter Now GlaxoSmithKline
21	Jin-Hee Lee	2004-2010, Ph.D.	Org. Chem.	Postdoc John Denu, U. Wisconsin–Madison Now Pharmaceutical Product Development Inc, Madison
22	Lisa Cooper	2004-2009, Ph.D.	Biochemistry	Postdoc Tadgh Begley, Texas A&M Now Dow Microbial Control
23	Kevin Clark[3]	2004-2010, Ph.D. J.D.	Biochemistry	Franklin Pierce Law School Now Patent Counsel at Genentech
24	Bo Li	2004-2009, Ph.D.	Biochemistry	Postdoc C. Walsh, Harvard Medical School Now Asst Prof UNC Chapel Hill

5[a]	Abdul Gabisi	2004-2007, M.S.	Biochemistry	Researcher M.D. Anderson, Houston
25	Ian Gut[4]	2005-2011, Ph.D.	Microbiology	Postdoc US Army Now PI, Battelle National Biodefense Institute
26	John Whitteck	2005-2010, Ph.D.	Org. Chem.	New Leaf Symbiotics
27	Trent Oman	2006-2011, Ph.D.	Chem. Biol.	Eli Lilly
28	Juan Velásquez	2006-2011, Ph.D.	Chem. Biol.	Procter & Gamble
6[a]	Lindsey Johnstone Shea	2007-2011, M.S. 2015, M.D.	Chem. Biol.	Medical School, UIUC Now Resident, Indiana University School of Medicine
7[a]	Isabel Neacato	2010-2012, M.S. 2014, M.D.	Microbiology	Medical School, UIUC Now Resident, Beaumont Health, Royal Oak, Michigan
8[a]	Tong Hee Koh	2009-2012, M.S.	Biochemistry	Hanmi Pharmaceutical, S. Korea
29	Patrick Knerr	2008-2013, Ph.D.	Chem. Biol.	DuPont Crop Protection Now Novo Nordisk
30	Neha Garg[5]	2008-2013, Ph.D.	Biochemistry	Postdoc P. Dorrestein, Skaggs School of Pharmacy Now Asst Prof Georgia Tech
31	John Hung	2008-2013, Ph.D.	Chem. Biol.	Sigma-Aldrich Now Amyris
32	Yanxiang (Nancy) Shi	2008-2013, Ph.D.	Chem. Biol.	Syngenta Crop Protection
33	Noah Bindman	2008-2013, Ph.D	Chem. Biol.	Seattle Genetics
34	Ayse Okesli	2008-2014, Ph.D.	Chem. Biol.	Postdoc C. Khosla, Stanford Now Gilead, CA
35	Spencer Peck	2009-2014, Ph.D.	Chem. Biol.	Postdoc E. Balskus, Harvard Now Kintai Therapeutics, MA
36	Min Zeng[6]	2008-2015, Ph.D.	Cell Biol.	Lecturer Indiana U. – Purdue Now Data Analyst, AIDS Healthcare Foundation
37	Yi Yu	2009-2015, Ph.D.	Biochemistry	Postdoc Huimin Zhao Now Beam Therapeutics, MA
38	Weixin Tang	2009-2015, Ph.D.	Chem. Biol.	Postdoc David Liu, Harvard Fall 2019 Asst Prof U Chicago
39	Xiao Yang	2009-2015, Ph.D.	Chem. Biol.	Radiant Genomics, CA Now Zymergen, CA
40	Chantal Garcia De Gonzalo	2010-2015, Ph.D.	Chem. Biol.	Amyris, CA
41	Subha Mukherjee	2010-2015, Ph.D.	Chem. Biol.	Bristol-Myers-Squib
42	Manuel Ortega	2010-2015, Ph.D.	Biochemistry	Postdoc C. Drennan, MIT
43	Xiling Zhao	2011-2017, Ph.D.	Chem. Biol.	Amyris, CA
44	Nidhi Kakkar	2012-2018, Ph.D.	Chem. Biol.	Intel, Portland OR
45	Emily Ulrich	2012-2018, Ph.D.	Chem. Biol.	Postdoc C. Drennan, MIT
	Joshua Wagoner	2012-2015	Chem. Biol.	Not known

46	Kenton Hetrick	2013-2018, Ph.D.	Chem. Biol.	Postdoc R. Raines, MIT
47	Kwo-Kwang (Abe) Wang	2013-2018, Ph.D.	Chem. Biol.	Postdoc L. Nolan, MIT
48	Zhengan Zhang	2013-2018, Ph.D.	Chem. Biol.	Postdoc C. Voigt, MIT
	Silvia Bobeica	2013-present	Org. Chem	
	Linna An	2014-present	Chem. Biol.	
	Subhanip Biswas	2014-present	Org. Chem	
	Kuan-Yu (Nick) Lai	2014-present	Biochemistry	
	Chang He	2014-present	Chem. Biol.	
9[a]	Marc Gancayco	2015-2018, M.S.	Chem. Biol.	Not known
	Martin McLaughlin	2015-present	Chem. Biol.	
	Max Simon	2016-present	BioE	
	Imran Rahman	2016-present	Biochemistry	
	Page Daniels	2017-present	Biochemistry	
	Tung Le	2017-present	Chem. Biol.	
	Chunyu (Layla) Wu	2017-present	Biochemistry	
	Emily Desormeaux	2018-present	Chem. Biol.	
	Sara Eslami	2018-present	Chem. Biol.	
	Dinh Nguyen[7]	2018-present	Chem. Biol.	
	Raymond Sarksian	2018-present	Org. Chem	
	Haoqian (Lainey) Liang	2018-present	Biochemistry	

[a] Masters of Science. All others PhD. [1]Supervised jointly with David Y. Gin. [2] Supervised jointly with Huimin Zhao (Chem E). [3] Supervised jointly with Yi Lu. [4]Supervised jointly with Stephen Blanke (Microbiology).[5]Supervised jointly with Satish Nair (Biochemistry).[6]Supervised jointly with Jie Chen (Cell and Developmental Biology). [7]Supervised jointly with Douglas Mitchell.
Underlined: underrepresented minority student

POSTDOCTORAL ASSOCIATES SUPERVISED

	NAME	DATE	GRADUATE INSTITUTION	POSITION UPON LEAVING UIUC
1	Rashna Balsara	1998-2002	BARC[1]	Postdoc Victoria Ploplis Now Research Assoc. Prof. Notre Dame
2	Sheng Peng	1999-2003	SIOC[2]	Dupont
3	Xingang Zhang	2003-2007	SIOC[2]	Professor Shanghai Institute of Organic Chemistry
4	Derek Pratt	2003-2005	Vanderbilt	Prof. U of Ottawa, Canada
5	Michelle Ni	2004-2006	NC State	W.R. Grace
6	Gongyong Li	2005-2007	SIOC[2]	Shanghai Chemspec Corporation
7	Amanda McClerren	2005-2007	Duke University	Monsanto Corporation
8	Emily Fogle	2005-2007	UC Davis	Assoc Professor, California Polytechnical – San Luis Obispo
9	Robert Cicchillo	2006-2008	Penn State	Research Scientist – Dow, Indianapolis, IN
10	Svetlana Borisova	2007-2011	UT Austin	Amyris, Emeryville, CA

	(joint w/ W. Metcalf)			
11	Yuki Goto	2008-2009	U Tokyo	Associate Professor, U. Tokyo
12	Nicholas Llewellyn	2008-2009	U Cambridge, UK	Lecturer, Chemistry, Emory
13	Remco Merkx	2008-2009	Utrecht University The Netherlands	Netherlands Cancer Institute
14	Seung-Young Kim	2009-2011	University of Tokyo	Asst. Professor, Sun Moon U., Korea
15	Michael Kuemin	2009-2010	University of Basel, Switzerland	Bachem, Bubendorf, Switzerland
16	Heather Cooke	2009-2011	Boston College	Biogen
17	Huan Wang	2010-2013	U of Maryland	Asst. Prof. Nanjing U.
18	Gabrielle Thibodeaux	2010-2016	UT Austin	Research Asst. McGill U.
19	Despina Bougioukou	2010-2013	U of Florida	DuPont, Wilmington, DE
20	Jiangtao Gao	2010-2014	U Mississippi	Prof. Fujian Agriculture and Forestry University
21	Qi Zhang	2011-2014	SIOC[2]	Asst. Prof. Fudan U.
22	Ran Zhang	2011-2012	U British Columbia	Lecturer UBC-Okanagan
23	Rebecca Splain	2011-2014	U Wisconsin	GlaxoSmithKline
24	Zedu Huang	2012-2016	U Alberta	Asst. Prof. Fudan U.
25	Debapriya Dutta	2012-2018	U Florida Gainesville	Postdoc w/ Shuming Nie, U. Illinois
26	Christopher Thibodeaux (joint w/ TJ Ha)	2012-2016	UT Austin	Asst. Prof. McGill U.
27	Mark Walker	2013-2018	UC Berkeley	Asst. Prof. U. New Mexico
28	Lindsay Repka	2013-2017	Caltech	Asst. Prof. Middlebury College, Vermont
29	Liujie Huo	2014-2017	U Saarland, Germany	Asst. Prof. Shandong U.
30	Ian Bothwell	2015-present	Memorial Sloan-Kettering	
31	Michael Funk	2015-2017	MIT	Associate Editor, *Science*
32	Julian Hegemann	2016-2019	University of Marburg, Germany	Postdoc w/ Roderich Süssmuth, TU Berlin
33	Graeme Howe	2016-2019	University of Toronto	Asst Prof. Queen's University, Canada
34	Chi Ting	2017-present	UC Berkeley	
35	Jeella Acedo	2018-present	University of Alberta	Asst Prof. Mount Royal University, Calgary, CA
36	David Krist	2018-present	Northwestern University	
37	Daisuke Fujinami	2019-present	Kyushu University	

[1]Bhabha Atomic Research Center

[2] Shanghai Institute of Organic Chemistry

UNDERGRADUATE STUDENTS SUPERVISED ***Students listed in italics font are authors on papers***

	NAME	DATES	PROGRAM[1]	INSTITUTION	POSITION UPON LEAVING UIUC
1	*Joseph Dupont*[2]	Summer 1999 Snyder fellow	Sophomore Chemistry	Worcester Polytech	Continue BS in Worcester
2	Rohini Madigalker	Spring & Summer 1999	Sophomore Chem. Eng.	UIUC	unknown
3	*Anthony Dearth*	Summer & Fall 2000	Freshman Chem. Eng.	UIUC	Equistar Inc.
4	*Brian Young*	Spring 2000-Spring 2001	Junior Chemistry	UIUC	Graduate School Case Western
5	Mandy Chan	Summer 2000-Spring 2001	Senior Chemistry	UIUC	Cabrillo Labs San Diego
6	Leah Smith[3]	Summer 2000 (HURF)[3]	Freshman Biology	Howard Univ.	Pharmacy School U. Illinois, Chicago
7	Aaron Wilson	Summer 2000-Spring 2002	Junior Chemistry	UIUC	Magn. Reson. Microsensors Corp.
8	*Stacey Rimkus*	Fall 2000-Spring 2002	Junior Cell, Struct. Biol.	UIUC	Graduate School U. Wisconsin
9	Meera Raja	Summer 2001-present	Junior Chemistry	UIUC	Graduate School Northwestern U.
10	Carol Guerra[3]	Summer 2002-Spring 2003	Sophomore, Biochemistry	UIUC	Left UIUC before graduating
11	Katrina de Ocampo[3]	Summer 2002-2003	Senior Chemistry	UIUC	Abbott Labs
12	Monica Shete	Summer 2002-2005 (HURF)[3]	Freshman Biology	UIUC	Med School
13	Eric Bunnelle	Fall 2003-Spring 2004	Sophomore Chemistry	UIUC	Graduate School UC Berkeley
14	Phillip Stewart-Hutchinson	Summer 2003-2005	Junior Chemistry	UIUC	Graduate School NYU
15	*Jerry Jeffers*	Summer 2003-Summer 2004	Junior Chemistry	UIUC	deceased while at UIUC
16	Bryan Prendergast	Summer 2003-2005	Junior Chemistry	UIUC	Medical School
17	Juyoung Jang	Summer 2003-2005	Sophomore Biochemistry	UIUC	NIH
18	*Yong Leung*	Summer 2003-2005	Junior Chemistry	UIUC	
19	Katie Peterson	Summer 2004 Snyder fellow	Junior Chemistry	Illinois Wesleyan	Graduate School Indiana U.
20	*Akinola Soyode-Johnson*[3]	Summer 2004-2006	Sophomore Chemistry	UIUC	Johnson & Johnson Pharmaceutical Research & Development, La Jolla, CA

21	Daniel Delacruz[3]	Summer 2004-2006	Freshman Chemistry	UIUC	Kraft Inc
22	*Erik Plata*[3]	Summer 2005	Junior Chemistry	TAMU Kingsville	Now: Asst. Prof., U. Texas Rio Grande Valley Postdoc w/ Donna Blackmond, Scripps PhD, Chemistry, Texas A&M w/ Daniel Singleton
23	Nicole Andrusevich[3]	Summer 2006	Sophomore Chemistry	UIUC	Nursing School
24	Justin Poole[3]	Summer 2006-Spring 2007	Freshman Chemistry	UIUC	Med School, UIC
25	Gabe Hintzsche	Summer 2006-Spring 2008	Sophomore Chemistry	UIUC	Med School, Mid-western U, Glendale, AZ
26	Jose Israel Armendariz Guajardo[3]	Summer 2006	Sophomore	ITSM, Monterrey Mexico	
27	Jennifer Palow	Summer 2007	Junior	UConn	Graduate School Boston College
28	*Anita Chary*	Summer 2006-Spring 2008		UIUC	Teacher in Guatemala entered WUSTL MD/PhD program in Fall '09
29	Brittney Cole[3]	Fall 2007-Dec 2008	Junior	UIUC	MS program Biotechnology, Rush University
30	Michael Jellinek	Spring 2007-2009	Sophomore Biochemistry	UIUC	Rush Medical School, Chicago
31	Shelly Lim	Spring 2007-2009	Sophomore Biochemistry	UIUC	PhD from Princeton; postdoc in X. Zhao lab, Memorial Sloan Kettering; now medical writer at ICON
32	Luis Negron[3]	Summer 2007	Sophomore	University of Puerto Rico at Rio Piedras	PhD, U. Puerto Rico, Río Piedras; now Lilly del Caribe at Carolina
33	Daniela Irma Herrera[3]	Summer 2008	Sophomore	ITSM, Monterrey Mexico	

34	*Robert Koehler*[3]	Summer 2008 Summer 2009	Sophomore Junior, Biology	San Diego State	Graduated with BS 2011
35	Myrna Rivas[3]	Summer 2009	Junior, Chemistry	UIUC	Graduated with BS, 2011
36	*Xenia Okalibe*[3]	Summer 2009	Sophomore, pre-Pharmacy	U Michigan	Pharmacy School
37	Steven Martinez[3]	Summer 2009	Junior, Chemistry	Cal State Univ, Dominguez Hills	Graduate School, UC Santa Barbara
38	Amanda Brunner	Spring 2009-2011	Sophomore Biology	UIUC	Medical School
39	Claire Creed	Spring 2009-2011	Sophomore Biology	UIUC	Medical School
40	Victor Garcia-Lopez[3]	Summer 2010	Junior, Chemistry	ITESM	Graduate School, Rice University
41	Kwadwo (Kojo) Opoku-Nsiah[3]	Summer 2010	Senior, Chemistry	Colby College	Pharmacy School
42	*Nicholas Herrman*	Summer 2010	Junior, Chemistry	Albion College	Med School
43	*Alejandro Bueno*[3]	Fall 2010-Spring 2013	Sophomore	UIUC	North Shore Center for Medical Aesthetics
44	Vanessa Nepomuceno[3]	Summer 2010	Chemistry, Rising Senior	South Carolina State Univ.	Graduate School UIC Dept Med Chem & Pharmacognosy
45	Candace Wong	Spring 2011-Spring 2014	Freshman, MCB	UIUC	Graduate School Toxicology, U. Rochester
46	Nejmun Hussain[5]	Fall 2011-2012	Junior, MCB	UIUC	
47	Michael Celestine[3]	Summer 2010 & 2011	Chemistry, Rising Senior	Univ. of the Virgin Islands	Graduate School, Old Dominion University
48	*Ting Chen*	Spring 2012-Spring 2013	Junior, Chemistry	UIUC	Graduate School, Nursing & Public Health, Columbia University
49	*Yunli Ma*	Spring 2012-Spring 2013	Junior, Biochemistry	UIUC	Graduate School, Northwestern
50	Tia Harper	Spring 2012-Spring 2013	Sophomore, Chemical Engineering	UIUC	Transferred to Kansas State
51	Megan Dudek	Summer 2012	Senior, Biochem./Mol Biology	U. Wisconsin-Eau Claire	
52	*Rachel Joyce*	Summer 2012-Spring 2014	Junior, Molecular & Cell Biology	UIUC	Graduate school, LSU, Biology

53	Yunhong Wang	Fall 2012- Spring 2015	Sophomore, Biochemistry	UIUC	MS Bioengineering Johns Hopkins
54	Dhruv Kumar	Fall 2012- Spring 2014	Sophomore, Molecular & Cell Biology	UIUC	Research assistant, UC Berkeley
55	Katarzyna Dubiel	Fall 2012- Spring 2014	Junior, Molecular & Cell Biology	UIUC	Graduate school UW Madison, Integrated Biochemistry
56	Bryan Schaeffer	Spring 2013-Spring 2015	Freshman, Biology	UIUC	
57	Kyle Ridlen	Spring 2014-Spring 2015	Junior, Molecular & Cell Biology	UIUC	Graduate school, Indiana University-Purdue University, Indianapolis, Physiology
58	Rigoberto Hernandez Cervantes[3]	Summer 2014	Junior	Indiana University	
59	*Marc Gancayco*[3]	Summer 2014	Junior	San Jose State University	Graduate school, UIUC
60	Aaron Briggs[3,4]	Summer 2014	Senior	Dartmouth	Med School, Dartmouth
61	Shivaliben Patel	Spring 2015-Spring 2016	Sophomore, Molecular & Cell Biology	UIUC	
62	*See Hyun "Anna" Chee*	Spring 2015-Fall 2016	Sophomore, Chemical Engineering	UIUC	
63	Kyle McKillop	Spring 2015-Fall 2016	Freshman, Chemistry	UIUC	
64	Zack Foust	Spring 2015-Spring 2016	Sophomore, Molecular & Cell Biology	UIUC	
65	Shan Huang	Summer 2015	Junior, Chemistry	Fudan University	Graduate school, Caltech, S. Mayo lab
66	Sarah Ackenhusen	Fall 2015-Summer 2018	Sophomore, Chemistry	UIUC	Graduate school, U Michigan-Ann Arbor
67	Mary Hwang	Fall 2015-Spring 2016	Sophomore, Molecular & Cell Biology	UIUC	
68	Anjelica Kokinias	Spring 2016-Spring 2017	Sophomore, Molecular & Cell Biology	UIUC	Nursing School

69	*Terry Kim*	Spring 2016-Summer 2018	Sophomore, Molecular & Cell Biology	UIUC	Graduate school, Caltech
70	Yery Kim	Summer 2017-Spring 2018	Senior, Chemistry	UIUC	
71	Zhe Li	Summer 2017-Fall 2018	Junior, Chemistry	UIUC	
72	Alexander Pilski	Spring 2017-Fall 2018	Junior, Chemistry	UIUC	Applying to Graduate school
73	Yuanheng "Henry" Wang	Summer 2017-Fall 2017	Junior, Chemistry	UIUC	Graduate school, Stanford
74	Audrey Rex	Summer 2017	Junior	Eastern Illinois University	Graduate school, University of Georgia
75	Jonathan Gong	Spring 2018-Fall 2018	Freshman, ChBE	UIUC	
76	William Farrell	Summer 2018	Junior, Molecular & Cell Biology	UIUC	
77	Clara Frazier	Summer 2018	Senior, Biochemistry & Animal & Poultry Science	Virginia Tech	Graduate school, Integrated Program in Biochemistry, U. Wisconsin, Madison
78	Abby Trouth	Summer 2018	Junior, Biochem & Molecular Biology	Gustavus Adolphus College	Goldwater Scholar
79	Autumn King	Fall 2018-present	Junior, Chemistry	UIUC	
80	Alondra Sanchez[3]	Fall 2018-present	Junior, Chemistry	UIUC	
81	Margo van Loon	Fall 2018	Junior, Chemistry	UIUC	
82	Lark Moreno[3]	Spring 2019-present	Sophomore, ChBE	UIUC	
83	Ramiro Alvarado[3]	Summer 2019	Freshman, Chemistry	UIUC	
84	David Qiu	Summer 2019	Junior, Chemistry	Vanderbilt	

[1] Academic status and major of the student at the time of joining the laboratory
[2] Nineteen students, listed in italics, are co-authors on research papers in the period 2000-present
[3] Twenty-seven underrepresented minority students in the period 2000-present
[4] HURF = Howard Hughes Undergraduate Research Fellowship Program
[5] Adjunct advisor for Anne Baranger student after Anne left UIUC

At least 41 students went on to Graduate School (26), Medical School (9), Pharmacy School (3), or Nursing School (3). For many summer experience students from other institutions, it is not known to us what careers they pursued.

EDUCATIONAL ACTIVITIES

COURSE	LEVEL	DATE
Chemistry Laboratory 1	freshman	Fall 1997
Introduction to Organic Chemistry Research	graduate	Spring 1998
Advanced Physical Organic Chemistry	senior/graduate	Fall 1998
Organic Chemistry Seminar	graduate	Spring 1999
Advanced Physical Organic Chemistry	senior/graduate	Fall 1999
Enzyme Reaction Mechanisms and Drug Target Interactions	graduate	Spring 2000

Advanced Physical Organic Chemistry	senior/graduate	Fall 2000
Structure and Synthesis Laboratory	sophomore	Fall 2001
Enzyme Reaction Mechanisms and Drug Target Interactions	graduate	Spring 2002
Structure and Synthesis Laboratory	sophomore	Fall 2002
Advanced Physical Organic Chemistry	senior/graduate	Fall 2003
Enzyme Reaction Mechanisms and Drug Target Interactions	graduate	Spring 2004
Introduction to Organic Chemistry	sophomore	Fall 2004
Structure and Synthesis Laboratory	sophomore	Spring 2005
Introduction to Organic Chemistry	sophomore	Fall 2005
Chemical Biology Laboratory	senior/graduate	Spring 2007
Organic Chemistry Seminar	graduate	Fall 2007
Enzyme Reaction Mechanisms and Drug Target Interactions	senior/graduate	Spring 2008
Chemical Biology Laboratory	senior/graduate	Spring 2008
Introduction to Organic Chemistry	sophomore	Fall 2008
Chemical Biology Laboratory	senior/graduate	Spring 2009
Chemical Biology Seminar	graduate	Fall 2010
Physical Organic Chemistry	graduate	Fall 2011
Physical Organic Chemistry	graduate	Fall 2012
Physical Organic Chemistry	graduate	Fall 2013
Structure and Synthesis Laboratory	sophomore	Spring 2016
Structure and Synthesis Laboratory	sophomore	Spring 2017
Structure and Synthesis Laboratory	sophomore	Spring 2018
Structure and Synthesis Laboratory	sophomore	Spring 2019
Advanced Physical Organic Chemistry	senior/graduate	Fall 2019

Average student evaluations 1997-2015: 4.4 out of 5.0.

UNDERREPRESENTED MINORITY STUDENT MENTORING

Started exchange program with Texas A&M Kingsville's Bridges to Doctorate program
Involved in outreach activities as Director of the Chemistry-Biology Interface Training Grant
Established SACNAS chapter at UIUC and serves as co-faculty advisor with Prof. Rochelle Gutierrez (Math Education and Latino/Latina Studies)
Supervised 24 underrepresented minority undergraduate students, 6 underrepresented minority graduate students, and 1 underrepresented minority postdoc.

TEACHING AWARDS

Listed in 1998, 1999, 2000, 2003, 2007, and 2018 on the list of "Teachers ranked as excellent by their students" published in the *Daily Illini*. Results are based on Instructor and Course Evaluation (ICES) questionnaire forms maintained by the university's Measurement and Evaluation, Center for Innovation in Teaching and Learning and consists of the top 10% of instructors in all disciplines across campus based on student evaluations.
1999 School of Chemical Sciences Teaching Award
2008 School of Chemical Sciences Teaching Award