

Marc G Chevrette

☎ 401.269.9173 | ✉ mgchevrette@gmail.com | 🏠 chevrn.github.io | 🌐 chevrette | 🐦 wildtypeMC | 📄 Google Scholar

🎓 Education

University of Wisconsin-Madison

Doctor of Philosophy (PhD) – Genetics

Madison, WI

04/2019

Master of Science (MSc) – Genetics

10/2017

- **Advisor:** Cameron R Currie, PhD

- **Research Focus:** Evolution of Microbial Metabolic Diversity, Chemically-mediated Microbiome Interactions, & Antibiotic Discovery

- **Thesis:** Evolution of Antibiotic Biosynthesis in Actinobacteria: A Framework for Drug Discovery

Institut Pasteur

Annecy, France

Certificate – International Course on Antibiotics and Resistance

11/2017

Harvard University Extension

Cambridge, MA

Master of Liberal Arts (ALM) – Biotechnology (Bioengineering & Nanotechnology)

03/2015

- **Advisor:** Tomás Maira-Litrán, PharmD, PhD

- **Research Focus:** Genome-wide Experimental & Computational Characterization of *In Vivo* Fitness Factors in Bacterial Infections

- **Thesis:** Transposon-Directed Insertion Site Sequencing for Determination of Fitness Factors in Pulmonary Infection by *A. baumannii*.

Rensselaer Polytechnic Institute

Troy, NY

Bachelor of Science (BSc) – Molecular Biology & Bioinformatics

12/2010

🏢 Experience

Wisconsin Institute for Discovery & University of Wisconsin-Madison

Madison, WI

Postdoctoral Associate - Department of Plant Pathology - Advisor: Jo Handelsman, PhD

06/2019–present

Genomics Lead - Tiny Earth Chemistry Hub

06/2019–present

WiSolve Consulting

Madison, WI

Co-Founder & Senior Consultant

03/2016–present

Director of Technology

01/2018–09/2019

University of Wisconsin-Madison

Madison, WI

Postdoctoral Associate - Department of Bacteriology - Advisor: Cameron R Currie, PhD

04/2019–05/2019

PhD Candidate - Department of Genetics - Advisor: Cameron R Currie, PhD

08/2015–04/2019

Harvard & Georgetown Universities

Cambridge, MA

Lead Computational Biologist - Departments of Biology and Planetary Science - Advisor: Sarah S Johnson, PhD

10/2013–10/2015

Warp Drive Bio

Cambridge, MA

Head of Experimental Genomics

04/2013–08/2015

Brigham & Women's Hospital

Boston, MA

Research Assistant, Microbiology & Computational Biology - Advisor: Tomás Maira-Litrán, PharmD, PhD

03/2013–08/2015

Broad Institute of MIT & Harvard

Cambridge, MA

Research Associate II, Molecular Biology Process Development

01/2011–03/2013

Rensselaer Polytechnic Institute

Troy, NY

Research Associate, Molecular Genetics - Advisor: Eric Rutledge, PhD

05/2010–12/2010

BCR Biotech

Jamestown, RI

Research Assistant, Microbiology

09/2009–12/2009

📖 Publications, Talks, & Abstracts

Peer-reviewed Publications

*Co-first author, contributed equally

25 **MG Chevrette***, A Gavrilidou*, S Mantri*, N Selem-Mojica, N Ziemert, F Barona-Gómez. "The confluence of Big Data and evolutionary genome mining for the discovery of natural products." *Natural Product Reports*. In press.

- EJN Helfrich*, R Ueoka*, **MG Chevrete***, F Hemmerling, X Lu, S Leopold-Messner, AY Burch, SE Lindow, J Handelsman, J Piel, MH Medema. "Evolution of combinatorial diversity in *trans*-acyltransferase polyketide synthase assembly lines across bacteria." *Nature Communications*. [10.1038/s41467-021-21163-x](https://doi.org/10.1038/s41467-021-21163-x)
- A Hurley, **MG Chevrete**, DD Acharya, GL Lozano, M Garavito, J Heinritz, L Balderrama, M Beebe, ML DenHartog, K Corinaldi, R Engels, A Gutierrez, O Jona, JHI Putnam, B Rhodes, T Tsang, S Hernandez, C Bascom-Slack, JE Blum, PA Price, D Davis, J Klein, J Pultorak, NL Sullivan, NJ Mouncey, PC Dorrestein, S Miller, NA Broderick, J Handelsman. "Tiny Earth a big idea for STEM education and antibiotic discovery." *mBio*. [10.1128/mBio.03432-20](https://doi.org/10.1128/mBio.03432-20)
- MA Schorn*, S Verhoeven*, et al. [104 authors including **MG Chevrete**]. "Standardized links between genomic and metabolomic data facilitate integrative mining." *Nature Chemical Biology*. [10.1038/s41589-020-00724-z](https://doi.org/10.1038/s41589-020-00724-z)
- HE Ortega*, VB Lourenzon*, **MG Chevrete***, LG Ferreira, M Zhao, RFR Alvarenga, WGP Melo, T Venâncio, DR Andes, CR Currie, AD Andricopulo, TS Bugni, MT Pupo. "Antileishmanial macrolides from ant-associated *Streptomyces* sp. ISID311." 2021. *Bioorganic & Medicinal Chemistry*. [10.1016/j.bmc.2021.116016](https://doi.org/10.1016/j.bmc.2021.116016)
- F Zhang, M Zhao, DR Braun, A Audhya, SS Ericksen, JS Piotrowski, J Nelson, J Peng, GE Ananiev, S Chanana, K Barns, J Fossen, **MG Chevrete**, IA Guzei, C Zhao, L Guo, W Tang, CR Currie, SR Rajske, DR Andes, TS Bugni. "A marine microbiome antifungal targets urgent-threat drug-resistant fungi." 2020. *Science*. [10.1126/science.abd6919](https://doi.org/10.1126/science.abd6919)
[Highlighted by Science]
- Q Wu, K Throckmorton, M Maity, **MG Chevrete**, DR Braun, SR Rajske, CR Currie, MG Thomas, TS Bugni. "Bacillibactins E and F from a marine sponge-associated *Bacillus* sp." 2020. *Journal of Natural Products*. [10.1021/acs.jnatprod.0c01170](https://doi.org/10.1021/acs.jnatprod.0c01170)
- F Zhang, TP Wyche, Y Zhu, DR Braun, J Yan, Y Ge, IA Guzei, **MG Chevrete**, CR Currie, MG Thomas, SR Rajske, TS Bugni. "MS-derived isotopic fine structure reveals forazoline A as a thioketone-containing marine-derived natural product." 2020. *Organic Letters*. [10.1021/acs.orglett.9b04535](https://doi.org/10.1021/acs.orglett.9b04535)
- MG Chevrete**, K Gutiérrez-García, N Selem-Mojica, C Aguilar-Martínez, A Yañez-Olvera, HE Ramos-Aboites, PA Hoskisson, F Barona-Gómez. "Evolutionary dynamics of natural product biosynthesis in bacteria." 2020. *Natural Product Reports*. [10.1039/c9np00048h](https://doi.org/10.1039/c9np00048h)
- EJ Caldera*, **MG Chevrete***, BR McDonald, CR Currie. "Local adaptation of bacterial symbionts within a geographic mosaic of antibiotic coevolution." 2019. *Applied & Environmental Microbiology*. [10.1128/AEM.01580-19](https://doi.org/10.1128/AEM.01580-19)
[Cover Image for Issue]
- MG Chevrete**, C Carlos-Shanley, KB Louie, BP Bowen, TR Northen, CR Currie. "Taxonomic and metabolic incongruence in the ancient genus *Streptomyces*." 2019. *Frontiers in Microbiology*. [10.3389/fmicb.2019.02170](https://doi.org/10.3389/fmicb.2019.02170)
- K Throckmorton*, V Vinnik*, R Chowdhury, TB Cook, **MG Chevrete**, CD Maranas, BF Pfeleger, MG Thomas. "Directed evolution of an adenylation domain specificity code." 2019. *ACS Chemical Biology*. [10.1021/acschembio.9b00532](https://doi.org/10.1021/acschembio.9b00532)
- J Yan, **MG Chevrete**, D Braun, MK Harper, CR Currie, TS Bugni. "Madurastatin D1 and D2, oxazoline containing siderophores isolated from an *Actinomadura* sp." 2019. *Organic Letters*. [10.1021/acs.orglett.9b02159](https://doi.org/10.1021/acs.orglett.9b02159)
- MG Chevrete***, JR Bratburd*, CR Currie, RM Stubbendieck. "Experimental microbiomes: models not to scale." 2019. *mSystems*. [10.1128/mSystems.00175-19](https://doi.org/10.1128/mSystems.00175-19)
- MG Chevrete**, CM Carlson, HE Ortega, C Thomas, GE Ananiev, KJ Barns, AJ Book, J Cagnazzo, C Carlos, W Flanigan, KJ Grubbs, HA Horn, FM Hoffmann, JL Klassen, JJ Knack, GR Lewin, BR McDonald, L Muller, WGP Melo, AA Pinto-Tomás, A Schmitz, E Wendt-Pienkowski, S Wildman, M Zhao, F Zhang, TS Bugni, DR Andes, MT Pupo, CR Currie. "The antimicrobial potential of *Streptomyces* from insect microbiomes." 2019. *Nature Communications*. [10.1038/s41467-019-08438-0](https://doi.org/10.1038/s41467-019-08438-0)
[Highlighted by NPR]
- RM Stubbendieck, DS May, **MG Chevrete**, MI Temkin, E Wendt-Pienkowski, J Cagnazzo, CM Carlson, JE Gern, CR Currie. "Competition among nasal bacteria suggests a role for siderophore-mediated interactions in shaping the human nasal microbiota." 2019. *Applied & Environmental Microbiology*. [10.1128/AEM.02406-18](https://doi.org/10.1128/AEM.02406-18)
- N Liu,* H Li,* **MG Chevrete**, L Zhang, L Cao, H Zhou, X Zhou, Z Zhou, PB Pope, CR Currie, Y Huang, Q Wang. 2019. "Functional metagenomics reveals polysaccharide-degrading gene clusters and cellobiose utilization pathways in gut microbiota of a wood-feeding termite." *ISME Journal*. [10.1038/s41396-018-0255-1](https://doi.org/10.1038/s41396-018-0255-1)
- MG Chevrete**, CR Currie. "Emerging evolutionary paradigms in antibiotic discovery." 2019. *Journal of Industrial Microbiology & Biotechnology*. [10.1007/s10295-018-2085-6](https://doi.org/10.1007/s10295-018-2085-6)
- N Adnani, **MG Chevrete**, SN Adibhatla, F Zhang, Q Yu, D Braun, J Nelson, SW Simpkins, BR McDonald, CL Myers, J Piotrowski, C Thompson, CR Currie, L Li, SR Rajske, TS Bugni. "Co-culture of marine invertebrate-associated bacteria and interdisciplinary technologies enable biosynthesis and discovery of a new antibiotic, keyicin." 2017. *ACS Chemical Biology*. [10.1021/acschembio.7b00688](https://doi.org/10.1021/acschembio.7b00688)
[Highlighted by Nature]
- AF Sanchez-Larrayoz, NM Elshamy, **MG Chevrete**, Y Fu, P Giunta, RG Spallanzani, K Ravi, GB Pier, S Lory, T Maira-Litrán. "Complexity of complement-resistance factors expressed by *Acinetobacter baumannii* needed for survival in human serum." 2017. *Journal of Immunology*. [10.4049/jimmunol.1700877](https://doi.org/10.4049/jimmunol.1700877)

- 5 **MG Chevrette**, F Aicheler, O Kohlbacher, CR Currie, MH Medema. "SANDPUMA: Ensemble predictions of nonribosomal peptide chemistry reveals biosynthetic diversity across Actinobacteria." 2017. *Bioinformatics*. [10.1093/bioinformatics/btx400](https://doi.org/10.1093/bioinformatics/btx400)
- 4 IJ Miller, **MG Chevrette**, JC Kwan. (2017). "Interpreting microbial biosynthesis in the genomic age: Biological and practical considerations." 2017. *Marine Drugs*. [10.3390/md15060165](https://doi.org/10.3390/md15060165)
[Cover Image for Issue]
- 3 K Blin, T Wolf, **MG Chevrette**, X Lu, CJ Schwalen, SA Kautsar, HG Suarez Duran, ELC de los Santos, HUK Kim, M Nave, JS Dickschat, DA Mitchell, E Shelest, R Breitling, E Takano, SY Lee, T Weber, MH Medema. "antiSMASH 4.0 - Improvements in chemistry prediction and gene cluster boundary identification." 2017. *Nucleic Acids Research*. [10.1093/nar/gkx319](https://doi.org/10.1093/nar/gkx319)
- 2 GR Lewin, C Carlos, **MG Chevrette**, HA Horn, BR McDonald, RJ Stankey, BG Fox, CR Currie. "Ecology and evolution of Actinobacteria and their bioenergy applications." 2016. *Annual Review of Microbiology*. [10.1146/annurev-micro-102215-095748](https://doi.org/10.1146/annurev-micro-102215-095748)
- 1 SS Johnson, **MG Chevrette**, BL Ehlmann, KC Benison. "Insights from the metagenome of an acid salt lake: The role of biology in an extreme depositional environment." 2015. *PLOS ONE*. [10.1371/journal.pone.0122869](https://doi.org/10.1371/journal.pone.0122869)

Book Chapters

- 2 **MG Chevrette**, N Selem-Mojica, C Aguilar, K Labby, ED Bustos-Diaz, J Handelsman, F Barona-Gómez. "Evolutionary genome mining for the discovery and engineering of natural product biosynthesis." 2019. *Methods in Molecular Biology - Engineering Natural Product Biosynthesis: Methods and Protocols*. In press.
- 1 **MG Chevrette**, PA Hoskisson, F Barona-Gómez. "Enzyme evolution in secondary metabolism." 2019. *Comprehensive Natural Products III: Chemistry and Biology*. [10.1016/B978-0-12-409547-2.14712-2](https://doi.org/10.1016/B978-0-12-409547-2.14712-2)

Publications, Editorial Review Only

- 6 **MG Chevrette**, J Handelsman. "From metagenomes to molecules: Innovations in functional metagenomics unlock hidden chemistry in the human microbiome." 2020. *Biochemistry*. [10.1021/acs.biochem.0c00033](https://doi.org/10.1021/acs.biochem.0c00033)
- 5 **MG Chevrette**. "Natural products reawakened: New trends in discovery and development." 2018. *SIMB News Magazine, Society for Industrial Microbiology and Biotechnology*.
- 4 DR Braun, **MG Chevrette**, D Acharya, CR Currie, SR Rajsiki, TS Bugni. "Draft genome of *Micromonospora* sp. WMMA1996, a marine sponge-associated bacterium." 2018. *Genome Announcements*. [10.1128/genomeA.00077-18](https://doi.org/10.1128/genomeA.00077-18)
- 3 DR Braun, **MG Chevrette**, D Acharya, CR Currie, SR Rajsiki, K Ritchie, TS Bugni. "Complete genome of *Dietzia* sp. WMMA184, a marine coral-associated bacterium." 2018. *Genome Announcements*. [10.1128/genomeA.01582-17](https://doi.org/10.1128/genomeA.01582-17)
- 2 N Adnani, DR Braun, BR McDonald, **MG Chevrette**, CR Currie, TS Bugni. "Draft genome of *Micromonospora* sp. WMMB-235, a marine ascidian-associated bacterium." 2017. *Genome Announcements*. [10.1128/genomeA.01369-16](https://doi.org/10.1128/genomeA.01369-16)
- 1 N Adnani, DR Braun, BR McDonald, **MG Chevrette**, CR Currie, TS Bugni. "Complete genome sequence of *Rhodococcus* sp. strain WMMA185, a marine sponge-associated bacterium." 2016. *Genome Announcements*. [10.1128/genomeA.01406-16](https://doi.org/10.1128/genomeA.01406-16)

Patents

- 1 DC Gray, E Li, BR Bowman, GL Verdine, K Robison, **MG Chevrette**, D Udway, PS Wang, A Li, JP Morgenstern. Compositions and methods for the production of compounds. Priority 2016-10-28, filed 2017-10-27, published 2019-08-29. [US20190264184A1](https://patents.google.com/patent/US20190264184A1)

Preprints, Submitted, and Under Review

- 7 BD Lee, A Gitter, CS Greene, S Raschka, F Maguire, AJ Titus, MD Kessler, AJ Lee, **MG Chevrette**, PA Stewart, T Britto-Borges, EM Cofer, KH Yu, JJ Carmona, EJ Fertig, AA Kalinin, B Signal, BJ Lengerich, TJ Triche Jr, SM Boca. "Ten quick tips for deep learning in biology." Under review. [Preprint available](#)
- 6 Q Wu, JX Yan, **MG Chevrette**, S Chanana, BA Bell, M Maity, DR Braun, IA Guzei, MG Thomas, SR Rajsiki, TS Bugni. "Ecteinamines A and B: new nonribosomal peptides with an unprecedented skeleton from marine bacterium *Micromonospora* sp." Submitted.
- 5 R Zarnowski, A Noll, **MG Chevrette**, H Sanchez, R Jones, H Anhalt, J Fossen, A Jaromin, CR Currie, JE Nett, A Mitchell, DR Andes. "Coordination of fungal biofilm development by extracellular vesicle cargo." Submitted.
- 4 **MG Chevrette**, J Handelsman. "Pulling needles from the haystack: high-throughput discovery of bacterial secondary metabolites." Under review.
- 3 GR Lewin, NM Davis, BR McDonald, AJ Book, **MG Chevrette**, S Suh, A Boll, CR Currie. "Long-term cellulose enrichment selects for highly cellulolytic consortia and competition for public goods." Submitted. [Preprint available](#)
- 2 J Yan, Q Wu, EJN Helfrich, **MG Chevrette**, DR Braun, H Heyman, GE Ananiev, SR Rajsiki, CR Currie, J Clardy, TS Bugni. "Bacillimidazoles A-F, imidazolium-containing antibacterial compounds isolated from a marine *Bacillus*." Submitted.

BR McDonald, **MG Chevette**, JL Klassen, HA Horn, EJ Caldera, E Wendt-Pienkowski, MJ Cafaro, AC Ruzzini, EB Van Arnam, GM Weinstock, NM Gerardo, M Poulsen, G Suen, J Clardy, CR Currie. "Biogeography and microscale diversity shape the biosynthetic potential of fungus-growing ant-associated *Pseudonocardia*." *In revision*. [Preprint available](#)

Invited Talks

- TBD. International Symposium on the Biology of Actinomycetes. Toronto, ON. Originally scheduled for Jun 23, 2020. Postponed due to COVID-19.
- "Evolution of antibiotic biosynthesis as a framework for drug discovery." Biotechnology Institute Seminar Series. University of Minnesota. St. Paul, MN (remote). Dec 17, 2020.
- "Evolution of antibiotic biosynthesis as a framework for drug discovery." Whitney Laboratory for Marine Bioscience Seminar Series. University of Florida. Gainesville, FL (remote). Sep 25, 2020.
- "The Earth's bounty: antibiotic discovery from soil." Gairdner Symposium, McMaster University. Hamilton, ON. Nov 15, 2019.
- "Drugs from bugs of bugs: a novel source for antimicrobials." American Society for Microbiology Microbe. San Francisco, CA. Jun 21, 2019.
- "Mining microbiomes for antimicrobials." Synthetic Biology for Natural Products Conference. Puerto Vallarta, Mexico. Jun 02, 2019.
- "Drugs from bugs of bugs: microbiomes as a source of new antibiotics." Wisconsin Institute for Discovery. Madison, WI. Jan 24, 2019.
- "Drugs & bugs of bugs: insect microbiomes as a source of new antibiotics." McMaster University. Hamilton, ON. Jun 21, 2018.
- "Host-associated microbes as a source of new antimicrobials." Natural Product Discovery & Development in the Genomic Era, Society for Industrial Microbiology & Biotechnology. Clearwater Beach, FL. Jan 22, 2018.
- "Natural natural products: Leveraging chemical ecology in the search for new drugs." Evolution Seminar Series, JF Crow Institute for the Study of Evolution. Madison, WI. Oct 26, 2017.
- "Computational insights into the diverse nonribosomal peptide chemistry of Actinobacteria." Synthetic Biology for Natural Products Conference. Cancun, Mexico. Mar 6, 2017.
- [\[Highlighted in ACS Synthetic Biology\]](#)
- "Darwinian drug discovery: Chemical ecology at fine and coarse evolutionary scales." International Chemical Biology Society Annual Conference. Madison, WI. Oct 24, 2016.
- [\[Highlighted in ACS Chemical Biology\]](#)

Internal Seminars

- "Using antiSMASH as both an antibiotic discovery & teaching tool." Tiny Earth Symposium 2020, UW-Madison. Jun 12, 2020.
- "Tiny Earth Chemistry Hub: the next stop for your samples." Tiny Earth Symposium 2019, UW-Madison. Jul 10, 2019.
- "Drugs & bugs of bugs: Insect microbiomes as a source of new antibiotics." Genetics Colloquium, UW-Madison. Aug 8, 2018.
- "Host-microbe interactions as a source of new antimicrobials." Highlights at the Chemistry-Biology Interface Colloquium, UW-Madison. Dec 12, 2017.
- "Genome-based natural product discovery, modular biosynthesis, & applications." Highlights at the Chemistry-Biology Interface Colloquium, UW-Madison. Feb 2, 2017.
- "Genome assembly: Tools & analysis." Computational Biology, Ecology, & Evolution (ComBEE), UW-Madison. Apr 27, 2016.

Abstracts

- S Magesh, A Hurley, JF Nepper, **MG Chevette**, J Handelsman. "Genetic determinants of surface colonization by the rhizosphere bacterium *Flavobacterium johnsoniae*." Presented at: World Microbe Forum; Online; Jun 20, 2021.
- MG Chevette**, A Hurley, J Handelsman. "Tiny Earth Genomics: Mining bacterial genomes for antibiotic chemistry." Presented at: Wisconsin Institute for Discovery Illuminating Connections; Madison, WI; Feb 12, 2020.
- A Hurley, DD Acharya, **MG Chevette**, W Chezem, G Lozano, M Garavito, J Heinritz, L Balderrama, M Beebe, M DenHartog, K Corinaldi, R Engels, A Gutierrez, O Jona, J Putnam, B Rhodes, T Tsang, S Hernandez, C Bascom-Slack, D Davis, S Miller, N Broderick, J Handelsman. "Tiny Earth Chemistry Hub: Command center for studentsourcing antibiotic discovery." Presented at: Wisconsin Institute for Discovery Illuminating Connections; Madison, WI; Feb 12, 2020.
- MG Chevette**, D Acharya, A Hurley, M Beebe, M Garavito, S Miller, J Handelsman. "Tiny Earth Chemistry Hub: From soil to antibiotics." Presented at: Tiny Earth Symposium; Madison, WI; Jul 10, 2019.
- K Throckmorton, V Vinnik, TB Cook, R Chowdhury, **MG Chevette**, CD Maranas, BF Pfleger, MG Thomas. "Directed evolution of an adenylation domain specificity code." Presented at: Synthetic Biology for Natural Products Conference; Puerto Vallarta, Mexico; Jun 2, 2019.

- CL Hansen, **MG Chevrette**, M Selvaraj, A Vasquez Echeverri, D Maldonado Perez, C Eno, J Hernandez-Ortiz, F Pelegri.
27 "Helical supramolecular assembly of a germline specific membraneless organelle." Presented at: Phase Separation in
Biology & Disease; New York, NY; Feb 20, 2019.
- MG Chevrette**, CM Carlson, H Ortega, F Zhang, KJ Grubbs, MT Pupo, TS Bugni, DR Andes, CR Currie. "Insect-associated
26 *Streptomyces* are a rich source of new antimicrobials." Presented at: Beneficial Microbes; Madison, WI; Jul 9, 2018.
- HA Horn, E Gemperline, K Delaney, **MG Chevrette**, L Li, CR Currie. "Host specificity influences chemical response in *in vivo*
25 symbiotic interactions." Presented at: Beneficial Microbes; Madison, WI; Jul 9, 2018.
- BR McDonald, **MG Chevrette**, J Klassen, HA Horn, EJ Caldera, E Wendt-Pienkowski, MJ Cafaro, AC Ruzzini, EB Van Arnam,
24 GM Weinstock, NM Gerardo, MG Poulsen, G Suen, J Clardy, CR Currie. "Biogeography and microscale diversity shapes
the biosynthetic potential of fungus-growing ant associated *Pseudonocardia*." Presented at: Beneficial Microbes; Madison,
WI; Jul 9, 2018.
- MG Chevrette**, CM Carlson, H Ortega, F Zhang, KJ Grubbs, MT Pupo, TS Bugni, DR Andes, CR Currie. "Insect-associated
23 *Streptomyces* are a rich source of new antimicrobials with activity against resistant human pathogens." Presented at:
Perlman Antibiotic Discovery and Development Symposium; Madison, WI; Apr 27, 2018.
- DD Acharya, IJ Miller, Y Cui, DR Braun, **MG Chevrette**, M Berres, L Li, J Kwan, CR Currie, TS Bugni. "Chemical cross-talk in
22 bacterial co-cultures affects differential gene expression and antibiotic production." Presented at: Perlman Antibiotic
Discovery and Development Symposium; Madison, WI; Apr 27, 2018.
- R Zarnowski, **MG Chevrette**, E Dominguez, DR Andes. "Modeling high-throughput proteomics into predictive metabolomics
21 - A novel tool for studies of medical device-associated *Candida spp.* biofilm infections." Presented at: Metabolomics Circle
2017 - Bioanalytical & Omics Science, Wrocław, Poland; Nov 18, 2017.
- D Acharya, N Adnani, D Braun, IJ Miller, Q Yu, **MG Chevrette**, M Berres, CR Currie, L Li, JC Kwan, TS Bugni. "Chemical
20 cross-talk in bacterial co-cultures affects differential gene expression and antibiotic production." Presented at: American
Society for Pharmacognosy Annual Meeting, Portland, OR; Jul 30, 2017.
- AF Sanchez-Larrayoz, NM Elhosseiny, **MG Chevrette**, Y Fu, P Giunta, G Spallanzani, GB Pier, S Lory, T Maira-Litrán. "The
19 membrane lipid asymmetry transport system plays a key role in protecting *Acinetobacter baumannii* against killing by
human complement via the alternative pathway." Presented at: American Society for Microbiology Microbe, New
Orleans, LA; Jun 2, 2017.
- MG Chevrette**, CM Carlson, C Thomas, TS Bugni, DR Andes, CR Currie. "Evolutionary trends in secondary metabolism reveal
18 insect-associated *Streptomyces* as an underexploited antibiotic resource." Presented at: Perlman Antibiotic Discovery and
Development Symposium; Madison, WI; Mar 31, 2017.
- EJ Caldera, **MG Chevrette**, CR Currie. "The geographic mosaic of antibiotic coevolution in a bacterial symbiont of the
17 fungus-farming ant *Apterostigma dentigerum*." Presented at: Perlman Antibiotic Discovery and Development Symposium;
Madison, WI; Mar 31, 2017.
- J Bratburd, C Keller, E Vivas, **MG Chevrette**, F Rey, L Li, CR Currie. "The human gut microbiota metabolomic response to
16 infection." Presented at: Perlman Antibiotic Discovery and Development Symposium; Madison, WI; Mar 31, 2017.
- MG Chevrette**, CR Currie, MH Medema. "prediCAT: An accurate predictive method for substrate specificity of nonribosomal
15 peptide synthetase adenylation domains." Presented at: Kenneth B. Raper Symposium on Microbial Research; Madison,
WI; Sep 2, 2016.
- J Bratburd, BR McDonald, **MG Chevrette**, JL Klassen, HA Horn, CR Currie. "Comparative genomics of fungus-growing
14 ant-associated *Pseudonocardia*." Presented at: Kenneth B. Raper Symposium on Microbial Research; Madison, WI; Sep 2,
2016.
- HA Horn, E Gemperline, **MG Chevrette**, BR McDonald, J Bratburd, E Mevers, J Clardy, L Li, CR Currie. "Mass spectrometry
13 imaging reveals differential chemical response to pathogens in an ancient ant-microbe symbiosis." Presented at: ISME
International Symposium on Microbial Ecology; Montreal, QC, Canada; Aug 21-26, 2016.
- MG Chevrette**, CR Currie, MH Medema. "Computational predictions of substrate specificity in nonribosomal peptide
12 synthetases through comparative adenylation domain trees." Presented at: American Society for Microbiology Microbe;
Boston, MA; Jun 16-20, 2016.
- SS Johnson, ML Soni, DJ Collins, KC Benison, MR Mormile, **MG Chevrette**, BL Ehlmann. "Biosignatures in mars analog acid
11 salt lakes." Presented at: USRA Biosignature, Preservation and Detection in Mars Analog Environments; Lake Tahoe,
Nevada; May 16-19, 2016.
- MG Chevrette**, C Carlson, C Thomas, TS Bugni, CR Currie. "Multifaceted antibiotic profiling across Actinomycete chemical
10 ecology." Presented at: Perlman Antibiotic Discovery and Development Symposium; Madison, WI; Apr 29, 2016.
- N Adnani, S Adibhatla, E Vazquez-Rivera, GA Ellis, D Braun, **MG Chevrette**, BR McDonald, C Thompson, JS Piotrowski, Q Yu,
9 L Li, CR Currie, TS Bugni. "Driving production of novel natural products through marine microbial interspecies
interactions." Presented at: Gordon Marine Natural Products; Ventura, CA; Mar 6-11, 2016.
- MG Chevrette**, DW Udway, CR Currie, SS Johnson. "Functional classification and secondary metabolism of an extreme
8 metagenome." Presented at: Kenneth B. Raper Symposium on Microbial Research; Madison, WI; Sep 1, 2015.

- 7 **MG Chevette**, BL Ehlmann, KC Benison, SS Johnson. "Microbial diversity and biosynthetic potential of an extreme sediment metagenome." Presented at: Gordon Applied and Environmental Microbiology; South Hadley, MA; Jul 12-17, 2015.
- 6 **MG Chevette**, M Vinacur, T Maira-Litrán. "Transposon-directed insertion site sequencing reveals *in vivo* fitness factors in *Acinetobacter baumannii* lung infections." Presented at: Boston Bacterial Meeting; Cambridge, MA; Jun 18-19, 2015.
- 5 **DW Udway**, K Robison, **MG Chevette**, GL Verdine. "Lessons from long read assembly of 100+ Actinomycete genomes." Presented at: Gordon Marine Natural Products; Ventura, CA; Mar 2-7, 2014.
- 4 **K Robison**, **DW Udway**, **MG Chevette**, GL Verdine. "Long read assembly of >100 Actinomycete genomes." Presented at: Advances in Genome Biology & Technology; Marco Island, FL; Feb 12-15, 2014.
- 3 **S Young**, S Steelman, R Daza, **MG Chevette**, R Lintner, S Gnerre, A Berlin, B Walker, C Nusbaum, R Nicol. "Generation of high-quality draft assemblies with a single sequencing library." Presented at: Sequencing, Finishing, Analysis in the Future; Santa Fe, NM; May 29-31, 2013.
- 2 **S Steelman**, R Daza, **MG Chevette**, P Kompella, P Trang, T Surabian, R Lintner, CZ Zhang, J Jung, M Meyerson, C Nusbaum, R Nicol. "Automated low input mate-pair library construction for Illumina sequencing." Presented at: Advances in Genome Biology & Technology; Marco Island, FL; Feb 15-18, 2012.
- 1 **S Steelman**, R Daza, **MG Chevette**, P Kompella, P Trang, T Surabian, R Lintner, R Nicol. "Microbial mate-pair library construction for de novo detection of structural rearrangements." Presented at: Broad Institute Symposium; Boston, MA; Nov 7-8, 2011.

Grants & Awards

Grants

- Novel secondary metabolite-producing bacteria for plant disease control** JGI
 Proposal ID 506816, JGI Community Sequencing Project, *PacBio sequencing for 540 strains* 2020
 Roles: Co-PI
- Genetic and metabolic meteterminants of microbial interactions in the rhizosphere** USDA, NIFA
[2020-67012-31772](#), USDA NIFA Fellowship, \$164,786 2020
 Roles: Project director
- Genetic and metabolic meteterminants of microbial interactions in the rhizosphere** NSF
 NSF Postdoctoral Research Fellowship in Biology, \$138,000 2020
 Awarded, but declined. Proposed roles: Project director
- Identification of novel MDR antimicrobials from insect-*Streptomyces* symbioses** NIH, NIAID
[1U19AI142720-01](#), NIH U19, \$1,057,133 2019
 Roles: Contributed to project inception, preliminary data, and writing.

Awards

- Young Investigator Award** Society for Industrial Microbiology & Biotechnology 2021
- NIFA Postdoctoral Fellowship** USDA 2020-present
- Postdoctoral Research Fellowship in Biology** NSF, Awarded, but declined 2020
- Wisconsin Scientific Teaching Design Institute Fellowship** UW-Madison 2019-present
- Schlimgen Award for Outstanding Scholarship in Doctoral Studies in Genetics** UW-Madison 2019
- Ira L Baldwin Distinguished Predoc. Fellowship for Excellence in Research** Bacteriology, UW-Madison 2018-2019
- Chemistry-Biology Interface Predoctoral Fellowship** National Institutes of Health, NIGMS 2016-2018
- Bacteriology Departmental Travel Grant** University of Wisconsin-Madison 2016
- Vilas Travel Grant** University of Wisconsin-Madison 2016
- Dean's Academic Achievement Award** Harvard University Extension 03/2015
- Finalist, Core Value Award: "Courageous: Uncompromising Science"** Warp Drive Bio 2014
- Finalist, Core Value Award: "Unbounded: Reimagining the Possible"** Warp Drive Bio 2014
- Featured Scientific Researcher – "Who is Broad?"** Broad Institute of MIT & Harvard 01/2012
- Rensselaer Alumni Scholarship** Rensselaer Polytechnic Institute 2004-2008
- Sal H. Alfiero Scholarship** Rensselaer Polytechnic Institute 2004-2008
- Rhode Island State Scholarship** Rensselaer Polytechnic Institute 2004-2008

Teaching Experience

Evolutionary Biology, Rutgers University Newark	Guest Lecturer	Sp 2021
Chem 1003: General, Organic, and Biological Chemistry, Point Loma University	Guest Lecturer	Fa 2020
Tiny Earth: Chemistry, UW-Madison	Course Development, Curriculum Committee	2020–present
Tiny Earth: Data Analytics for Biologists, UW-Madison	Course Development	Sp 2020
Certified Tiny Earth Partner Instructor		2020–present
Wisconsin Scientific Teaching Design Institute Fellow	Course Development	2019–present
Tiny Earth: Genomics & Chemistry of Soil Bacteria, UW-Madison	Lead Lecturer, Course Development	Su 2019
Micro 450: Diversity, Ecology, & Evolution of Microorganisms, UW-Madison	Guest Lecturer	Fa 2018
Programming in R, ComBEE, UW-Madison	Lead Lecturer, Course Development	Sp 2016
Genetics 468: General Genetics II, UW-Madison	Lecturer, TA	Sp 2016
Micro 450: Diversity, Ecology, & Evolution of Microorganisms, UW-Madison	Guest Lecturer, TA	Fa 2016

Service & Outreach

Ad hoc Reviewer Antonie van Leeuwenhoek, Bioinformatics, Biology, Critical Reviews in Microbiology, FEMS Microbiology Letters, Frontiers in Microbiology, G3 (Genes, Genomes, & Genetics), mBio, Microbial Cell Factories, Microbial Ecology, Microbial Genomics, Molecular Biology & Evolution, mSystems, World Journal of Microbiology & Biotechnology; Publons		
On-air Guest PBS Wisconsin, Link		06/2020
On-air Guest Natural Prodcast, Joint Genome Institute, Link		02/2020
Mentor Tiny Earth Summer Program, Tiny Earth Partner Instructor Training		2019–present
On-air Guest Perpetual Notion Machine, WORT FM, Link		02/2019
Evolution Coordinating Committee JF Crow Institute for the Study of Evolution, UW-Madison		01/2017–present
Mentor Google Summer of Code – antiSMASH, Open Bioinformatics Foundation		03/2016–09/2017
Co-chair Computational Biology, Ecology, & Evolution (ComBEE), UW-Madison		01/2016–08/2018
Co-organizer Discovery Niche, Wisconsin Institutes for Discovery		10/2015–11/2015
Volunteer Wisconsin Science Festival		10/2015
Open Genomics Adviser Revive & Restore, Long Now Foundation		04/2014–10/2015
Environmental, Health, and Safety Representative Broad Institute of MIT & Harvard		01/2011–03/2013

Professional Societies & Groups

American Society of Pharmacognosy	2020–present
International Chemical Biology Society	2016–present
Natural Products Discovery and Bioengineering Network	2016–present
American Society for Microbiology	2015–present
Computational Biology, Ecology, & Evolution (ComBEE) – UW-Madison	2015–present
JF Crow Institute for the Study of Evolution	2015–present
Society for Industrial Microbiology and Biotechnology	2014–present
Laboratory Robotics Interest Group – New England Chapter	2011–2015