

JONATHAN M. CONWAY, Ph.D.

jmconway@princeton.edu 609-258-7975 <https://conwaylab.princeton.edu>

EXPERIENCE

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- Assistant Professor** **August 2021 - present**
Department of Chemical and Biological Engineering, Princeton University, Princeton, NJ
Associated Faculty, High Meadows Environmental Institute, 2023-present
Associated Faculty, Andlinger Center for Energy and the Environment, 2023-present
Associated Faculty, Omenn-Darling Bioengineering Institute, 2023-present
- Postdoctoral Research Associate** **October 2017 – July 2021**
Department of Biology and Howard Hughes Medical Institute, University of North Carolina, Chapel Hill, NC
PI: Dr. Jeffery L. Dangl
Research Focus: Engineering the plant root microbiome to investigate and modify root colonization, hormone homeostasis, and plant immune system activation for the improvement of plant growth, health, and productivity
- Postdoctoral Research Scholar** **May 2017 – September 2017**
Graduate Research Assistant **August 2011 – May 2017**
Department of Chemical and Biomolecular Engineering, North Carolina State University, Raleigh, NC
PI: Dr. Robert M. Kelly
Thesis: *In vitro* and *in vivo* analysis of the role of multi-domain glycoside hydrolases from extremely thermophilic *Caldicellulosiruptor* species in the degradation of plant biomass

EDUCATION

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- Ph.D., Chemical Engineering, North Carolina State University, Raleigh, NC May 2017
M.S., Chemical Engineering, North Carolina State University, Raleigh, NC December 2013
B.S., Chemical Engineering, cum laude, University of Notre Dame, Notre Dame, IN May 2011

HONORS AND AWARDS

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- E. Lawrence Keys, Jr. / Emerson Electric Co. Faculty Advancement Award, Princeton SEAS 2024
New Investigator Award, Joint Genome Institute Community Science Program 2024
NC State Chemical Engineering Department James K. Ferrell Outstanding Ph.D. Graduate Award 2018
NC State Chemical Engineering Schoenborn Graduate Research Symposium, 2nd Place Oral Presentation Award 2017
NC State Graduate Student Association, Award for Excellence in Mentorship 2016
NC State Graduate Student Association, Recognition for Excellence in Laboratory Teaching 2016
Department of Education Graduate Assistance in Areas of National Need (GAANN) Fellowship 2012-2014

PEER REVIEWED PUBLICATIONS

GOOGLE SCHOLAR LINK: [HTTPS://SCHOLAR.GOOGLE.COM/CITATIONS?USER=AVSHMMCAAAJ&HL=EN](https://scholar.google.com/citations?user=AVSHMMCAAAJ&hl=en)

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- Tjo, H., and **J.M. Conway**. (2024) Sugar transport in thermophiles: Bridging lignocellulose deconstruction and bioconversion. *J Ind Microbiol Biotechnol.* 51, kuae020, DOI: 10.1093/jimb/kuae020
- Conway, J.M.**[†], W.G. Walton[†], I. Salas-González[†], T.F. Law, C.A. Lindberg, L.E. Crook, S.M. Kosina, C.R. Fitzpatrick, A.D. Lietzan, T.R. Northen, C.D. Jones, O.M. Finkel, M.R. Redinbo, and J.L. Dangl. (2022) Diverse MarR bacterial regulators of auxin catabolism in the plant microbiome. *Nat. Microbiol.* 7(11), 1817-1833. Doi: 10.1038/s41564-022-01244-3 († These authors contributed equally to this work).
- Teixeira, P.J.P.L.[†], N.R. Colaianni[†], T.F. Law[†], **J.M. Conway**[†], S. Gilbert, H. Li, I. Salas-González, D. Panda, N.M. Del Risco, O.M. Finkel, G. Castrillo, P. Mieczkowski, C.D. Jones, and J.L. Dangl. (2021) Specific Modulation of the Root Immune System by a Community of Commensal Bacteria. *PNAS.* 118(16):e2100678118. Doi: 10.1073/pnas.2100678118 († These authors contributed equally to this work).

- Colaianne, N.R., K. Parys, H.-S. Lee, **J.M. Conway**, N.H. Kim, N. Edelbacher, T.S. Mucyn, M. Madalinski, T.F. Law, C.D. Jones, Y. Belkhadir, J.L. Dangl. (2021) A Complex Immune Response to Flagellin Epitope Variation in Commensal Communities. *Cell Host Microbe*. 29(4):635-649. Doi: 10.1016/j.chom.2021.02.006
- Finkel, O.M.[†], I. Salas-González[†], G. Castrillo[†], **J.M. Conway**[†], T.F. Law, P.J.P.L. Teixeira, E.D. Wilson, C.R. Fitzpatrick, C.D. Jones, J.L. Dangl. (2020) A single bacterial genus maintains root development in a complex microbiome. *Nature*. 587(7832):103-108. Doi: 10.1038/s41586-020-2778-7 († These authors contributed equally to this work)
- Fitzpatrick, C.R.[†], I. Salas-González[†], **J.M. Conway**, O.M. Finkel, S. Gibert, D. Russ, P.J.P.L. Teixeira, and J.L. Dangl. (2020) The Plant Microbiome: From Ecology to Reductionism and Beyond. *Annu. Rev. Microbiol.* 74:81-100. Doi: 10.1146/annurev-micro-022620-014327 († These authors contributed equally to this work).
- Wang, B., Z. Z. Zhao, L. Jabusch, D. Chiniquy, K. Ono, **J.M. Conway**, Z. Zhang, G. Wang, D. Robinson, J.-F. Cheng, J.L. Dangl, T. Northen, and Y. Yoshikuni. (2020) CRAGE-Duet Facilitates Modular Assembly of Biological Systems for Studying Plant-Microbe Interactions. *ACS Synth. Biol.* 9(9):2610-2615. Doi: 10.1021/acssynbio.0c00280
- Straub, C.T., P.A. Khatibi, J.P. Wang, **J.M. Conway**, A.M. Williams-Rhaesa, I.M. Peszlen, V.L. Chiang, M.W.W. Adams, and R.M. Kelly. (2019) Quantitative Fermentation of Unpretreated Transgenic Poplar by *Caldicellulosiruptor bescii*. *Nat. Commun.* 10(1):1-6. Doi: 10.1038/s41467-019-11376-6
- Conway, J.M.**, J.R. Crosby, A.P. Hren, R.T. Southerland, L.L. Lee, V.V. Lunin, P. Alahuhta, M.E. Himmel, Y.J. Bomble, M.W.W. Adams, and R.M. Kelly. (2018) Novel Multidomain, Multifunctional Glycoside Hydrolases from Highly Lignocellulolytic *Caldicellulosiruptor* Species. *AIChE J.* 64(12):4218-4228. Doi: 10.1002/aic.16354
- Levy, A., **J.M. Conway**, J.L. Dangl, and T. Woyke. (2018) Elucidating Bacterial Gene Functions in the Plant Microbiome. *Cell Host Microbe*. 24(4):475-485. Doi: 10.1016/j.chom.2018.09.005
- Conway, J.M.**, J.R. Crosby, B.S. McKinley, N.L. Seals, M.W.W. Adams, and R.M. Kelly. (2018) Parsing *in vitro* and *in vivo* Contributions to Microcrystalline Cellulose Hydrolysis by Multidomain Glycoside Hydrolases in the *Caldicellulosiruptor bescii* Secretome. *Biotechnol. Bioeng.* 115(10):2426-2440. Doi: 10.1002/bit.26773
- Williams-Rhaesa, A.M., N.K. Awuku, G.L. Lipscomb, F.L. Poole, G.M. Rubinstein, **J.M. Conway**, R.M. Kelly, and M.W.W. Adams. (2018) Native Xylose-Inducible Promoter Expands the Genetic Tools for the Biomass-Degrading, Extremely Thermophilic Bacterium *Caldicellulosiruptor bescii*. *Extremophiles*. 22(4):629-638. Doi: 10.1007/s00792-018-1023-x
- Straub, C.T., J.A. Counts, D.M.N. Nguyen, C.-H. Wu, B.M. Zeldes, J.R. Crosby, **J.M. Conway**, J.K. Otten, G.A. Lipscomb, G.J. Schut, M.W.W. Adams, and R.M. Kelly. (2018) Biotechnology of Extremely Thermophilic Archaea. *FEMS Microbiol. Rev.* 42(5):543-578. Doi: 10.1093/femsre/fuy012
- Lee, L.L., S.E. Blumer-Schuette, J.A. Izquierdo, J.V. Zurawski, A.J. Loder, **J.M. Conway**, J.G. Elkins, M. Podar, A. Clum, P.C. Jones, M.J. Piatek, D.A. Weighill, D.A. Jacobson, M.W.W. Adams, and R.M. Kelly. (2018) Genus-wide Assessment of Lignocellulose Utilization in the Extremely Thermophilic Genus *Caldicellulosiruptor* by Genomic, Pangenomic and Metagenomic Analyses. *Appl. Environ. Microbiol.* 84(9):e02694-17. Doi: 10.1128/AEM.02694-17
- Conway, J.M.**, B.S. McKinley, N.L. Seals, D. Hernandez, P.A. Khatibi, S. Poudel, R.J. Giannone, R.L. Hettich, A.M. Williams-Rhaesa, G.L. Lipscomb, M.W.W. Adams, and R.M. Kelly. (2017) Functional Analysis of the Glucan Degradation Locus (GDL) in *Caldicellulosiruptor bescii* Reveals Essential Roles of Component Glycoside Hydrolases in Plant Biomass Deconstruction. *Appl. Environ. Microbiol.* 83(24):e01828-17. Doi: 10.1128/AEM.01828-17. Spotlight article selected by AEM editors.
- Zurawski, J.V., P.A. Khatibi, H.O. Akinosho, C.S. Straub, S.H. Compton, **J.M. Conway**, L.L. Lee, A.J. Ragauskas, B.H. Davidson, M.W.W. Adams, and R.M. Kelly. (2017) Bioavailability of Carbohydrate Content in Natural and Transgenic Switchgrasses for the Extreme Thermophile *Caldicellulosiruptor bescii*. *Appl. Environ. Microbiol.* 83(17):e00969-17. Doi: 10.1128/AEM.00969-17
- Williams-Rhaesa, A.M., F.L. Poole, J. Dinsmore, G.L. Lipscomb, G.M. Rubinstein, I.M. Scott, **J.M. Conway**, L.L. Lee, P.A. Khatibi, R.M. Kelly, and M.W.W. Adams. (2017) Genome Stability in Engineered Strains of the Thermophilic, Lignocellulose-Degrading Bacterium *Caldicellulosiruptor bescii*. *Appl. Environ. Microbiol.* 83(14):e00444-17. Doi: 10.1128/AEM.00444-17. Spotlight article selected by AEM editors.

- Blumer-Schuetz, S.E., J.V. Zurawski, **J.M. Conway**, Piyum A. Khatibi, D.L. Lewis, Q. Li, V.L. Chiang, and R.M. Kelly. (2017) *Caldicellulosiruptor saccharolyticus* transcriptomes reveal consequences of chemical pre-treatment and genetic modification of lignocellulose. *Microb. Biotechnol.* Doi: 10.1111/1751-7915.12494
- Lipscomb, G.L., **J.M. Conway**, S.E. Blumer-Schuetz, R.M. Kelly, and M.W.W. Adams. (2016) Highly Thermostable Kanamycin Resistance Marker Expands the Toolkit for Genetic Manipulation of *Caldicellulosiruptor bescii*. *Appl. Environ. Microbiol.* AEM-00570. Doi: 10.1128/AEM.00570-16
- Conway, J.M.**, W.S. Pierce, J.H. Le, J.H. Wright, G.W. Harper, A.L. Tucker, J.V. Zurawski, L.L. Lee, S. E. Blumer-Schuetz, R.M. Kelly. (2016) Multi-Domain, Surface Layer Associated Glycoside Hydrolases Contribute to Plant Polysaccharide Degradation by *Caldicellulosiruptor* Species. *J. Biol. Chem.* 291, 6732-6747. Doi: 10.1074/jbc.M115.707810
- Zurawski, J.V., **J.M. Conway**, L.L. Lee, H. Simpson, J.A. Izquierdo, S.E. Blumer-Schuetz, I. Nookaew, M.W.W. Adams, R.M. Kelly. (2015) Comparative analysis of extremely thermophilic *Caldicellulosiruptor* species reveals common and differentiating cellular strategies for plant biomass utilization. *Appl. Environ. Microbiol.* 81(20):7159-7170. Doi: 10.1128/AEM.01622-15
- Lee, L.L., J.A. Izquierdo, S.E. Blumer-Schuetz, J.V. Zurawski, **J.M. Conway**, R.W. Cottingham, M. Huntemann, A. Copeland, I.-M.A. Chen, N. Kyrpides, V. Markowitz, K. Palaniappan, N. Ivanova, N. Mikhailova, G. Ovchinnikova, E. Andersen, A. Pati, D. Stamatis, T.B.K. Reddy, N. Shapiro, H.P. Nordberg, M.N. Cantor, S.X. Hua, T. Woyke, R.M. Kelly. (2015) Complete Genome Sequences of *Caldicellulosiruptor* sp. Strain Rt8.B8, *Caldicellulosiruptor* sp. Strain Wai35.B1, and "*Thermoanaerobacter cellulolyticus*". *Genome Announc.* 3(3). Doi:10.1128/genomeA.00440-15
- Blumer-Schuetz, S.E., M. Alahuhta, **J.M. Conway**, L.L. Lee, J.V. Zurawski, R.J. Giannone, R.L. Hettich, V.V. Lunin, M.E. Himmel, R.M. Kelly. (2015) Discrete and structurally unique proteins (täpirins) mediate attachment of extremely thermophilic *Caldicellulosiruptor* species to cellulose. *J. Biol. Chem.* 290(17): 10645-10656. Doi: 10.1074/jbc.M115.641480
- Blumer-Schuetz, S.E., S.D. Brown, K.B. Sanders, E.A. Bayer, I. Kataeva, J.V. Zurawski, **J.M. Conway**, M.W.W. Adams, R.M. Kelly. (2014) Thermophilic lignocellulose deconstruction. *FEMS Microbiol. Rev.* 38(3):393-448. Doi: 10.1111/1574-6976.12044
- Deshlahra, P., **J. Conway**, E.E. Wolf, and W.F. Schneider. (2012) Influence of Dipole-Dipole Interactions on Coverage-Dependent Adsorption: CO and NO on Pt(111). *Langmuir* 28(22):8408-8417.

BOOK CHAPTERS

- Loder, A.J., B.M. Zeldes, **J.M. Conway**, J.A. Counts, C.T. Straub, P.A. Khatibi, L.L. Lee, N.P. Vitko, M.W. Keller, A.M. Rhaesa, G.M. Rubenstein, I.M. Scott, G.L. Lipscomb, M.W.W. Adams, and R.M. Kelly. (2017) Extreme Thermophiles as Metabolic Engineering Platforms: Strategies and Current Perspective. In: *Industrial Biotechnology: Microorganisms* (C. Whittmann and J. Liao, editors). Wiley-VCH Verlag GmbH & Co. pp 507-580. Doi: 10.1002/9783527807796.ch14
- Conway, J.M.**, J.V. Zurawski, L.L. Lee, S.E. Blumer-Schuetz, R.M. Kelly. (2015) Lignocellulosic Biomass Degradation by the Extremely Thermophilic Genus *Caldicellulosiruptor*. In: *Thermophilic Microorganisms*. (Fuli Li, editor). Caister Academic Press. pp 91-120. ISBN: 978-1-910190-13-5
- Zurawski, J.V., S.E. Blumer-Schuetz, **J.M. Conway**, R.M. Kelly. (2014) The Extremely Thermophilic Genus *Caldicellulosiruptor*: Physiological and Genomic Characteristics for Complex Carbohydrate Conversion to Molecular Hydrogen. In: *Microbial BioEnergy: Hydrogen Production, Advances in Photosynthesis and Respiration Vol 38*. (D. Zannoni and R. De Philippis, editors). Springer Science. pp 177-195. Doi: 10.1007/978-94-017-8554-9_8

PUBLICATIONS IN PRESS

- Conway, J.M.**, P.J. Martinez, N. Del Risco, E.D. Wilson, and J.L. Dangl. Arabidopsis Root Microbiome Microfluidic (ARMM) Device for Imaging Bacterial Colonization and Morphogenesis of Arabidopsis Roots. Accepted for inclusion in: *Methods in Molecular Biology - Tissue Morphogenesis*. Editor, Celeste Nelson.
- Kozaeva, E., A.A. Eida, E.F. Gunady, J.L. Dangl, **J.M. Conway**, and J.A.N. Brophy. (2024) Roots of synthetic ecology: microbes that foster plant growth in a changing climate. *Curr Opin Biotechnol.* Accepted June 2024. In Press.

PUBLICATIONS IN REVIEW

Eastman, S.[†], T. Jiang[†], K. Ficco[†], C. Liao, B. Jones, S. Wen, Y. Olivas-Biddle, A. Eyceoz, I. Yatsishin, T.A. Naumann, **J.M. Conway**. (2024) A type II secreted subtilase from commensal rhizobacteria disarms the immune elicitor peptide flg22. ([†] These authors contributed equally to this work). Available on *bioRxiv* at <https://doi.org/10.1101/2024.05.07.592856>

INVITED SEMINAR PRESENTATIONS

- Conway, J.M.** Engineering Plant-Microbe Interactions Towards Advanced Agriculture Biotechnologies. North Carolina State University: Chemical & Biomolecular Engineering Department, Department Seminar. Raleigh, NC. February 2024.
- Conway, J.M.** Engineering Commensal Bacteria from the Rhizosphere to Elucidate Mechanisms of Plant-Microbe Interaction. University of Delaware: Department of Plant & Soil Science, Department Seminar. Newark, DE. September 2023.
- Conway, J.M.** Engineering Commensal Bacteria from the Rhizosphere to Elucidate Mechanisms of Plant-Microbe Interaction. Michigan State University: Molecular Plant Sciences Program Seminar. East Lansing, MI. September 2023.
- Conway, J.M.** Engineering Non-Model Bacteria to Dissect & Manipulate Plant-Microbe Interactions. Oklahoma State University: Department of Biochemistry and Molecular Biology, Department Seminar. Virtual. September 2022.
- Conway, J.M.** Engineering Non-Model Bacteria to Dissect & Manipulate Plant-Microbe Interactions. Princeton Energy & Climate Scholars (PECS) Invited Faculty Lecture. February 2022.

CONFERENCE PRESENTATIONS

- Conway, J.M.** Characterization of the *lad* Operon Provides New Insight into Auxin Balancing Performed by *Variovorax* Species in the Root Microbiome. American Institute of Chemical Engineers (AIChE) Annual Meeting. Orlando, FL. November 2023.
- Conway, J.M.** Elucidating and characterizing mechanisms of plant host immune suppression by commensal microbiota. American Chemical Society (ACS) Fall Meeting. San Francisco, CA. August 2023.
- Conway, J.M.** Engineering Commensal Bacteria from the Rhizosphere to Uncover Mechanisms of Plant-Microbe Interaction. International Society of Molecular Plant Microbe Interactions (IS-MPMI). Providence, RI. July 2023.
- Conway, J.M.** Engineering Bacteria from the Plant Root Microbiome to Explore & Manipulate Plant Microbe Interactions. **Session Keynote.** American Institute of Chemical Engineers (AIChE) Annual Meeting. Phoenix, AZ. November 2022.
- Conway, J.M.** Engineering the Plant Microbiome for Improved Plant Health, Growth, and Resilience. Climate Change, Planetary, and Human Health Regional Symposium. Rutgers University, New Brunswick, NJ. October 2022.
- Conway, J.M.**, I. Salas-González, W.G. Walton, M.R. Redinbo, J.L. Dangl. Maintaining Auxin Hormone Homeostasis in the Plant Root Microbiome. American Chemical Society (ACS) Spring Meeting. San Diego, CA. March 2022.
- Conway, J.M.**, I. Salas-González, W.G. Walton, M.R. Redinbo, J.L. Dangl. Mechanism, Regulation, and Ecology of Bacterial Auxin Degradation by the Genus *Variovorax* in the Complex Root Microbiome. Society for Biological Engineering: 5th International Conference on Plant Synthetic Biology, Bioengineering, and Biotechnology. Virtual. November 2021.
- Conway, J.M.**, I. Salas-González, O.M. Finkel, W.G. Walton, M.R. Redinbo, J.L. Dangl. Mechanisms, Regulation, and Ecology of Bacterial Auxin Degradation in the Complex Root Microbiome. Nature Conferences: Harnessing the Plant Microbiome. Virtual. October 2021.
- Conway, J.M.**, I. Salas-González, O.M. Finkel, W.G. Walton, M.R. Redinbo, J.L. Dangl. Auxin Degradation by *Variovorax* Maintains Stereotypic Plant Root Development in a Complex Microbiome. Microbiome Movement – AgBioTech Summit. Virtual. February 2021.
- Conway, J.M.** The Biology and Biotechnology of Plant-Microbe Interfaces. American Institute of Chemical Engineers (AIChE) Annual Meeting. Virtual. November 2020.

- Conway, J.M.**, I. Salas-González, O.M. Finkel, W.G. Walton, M.R. Redinbo, J.L. Dangi. Auxin Degradation by *Variovorax* Maintains Stereotypic Plant Root Development within the Complex Plant Microbiome. American Institute of Chemical Engineers (AIChE) Annual Meeting. Virtual. November 2020.
- Conway, J.M.**, J.R. Crosby, C.T. Straub, M.W.W. Adams, R.M. Kelly. Exploring *in Vitro* and *in Vivo* Contributions to Lignocellulose Degradation by Multi-Domain Enzymes from Extremely Thermophilic *Caldicellulosiruptor* Species. American Institute of Chemical Engineers (AIChE) Annual Meeting. Virtual. November 2020.
- Conway, J.M.** Engineering Bacteria and Plants to Dissect and Manipulate Plant-Microbe Interactions. Meet the Faculty & Post-Doc Candidates Poster Session. American Institute of Chemical Engineers (AIChE) Virtual Annual Meeting. November 2020.
- Conway, J.M.**, E.D. Wilson, E.J. Getzen, P.J. Martinez, D. Panda, I.N. Castillo, N.M. Del Risco, C.A. Lindberg, J.L. Dangi. Genetic Engineering of Plant-associated Bacteria to Interrogate Plant-Microbe Interactions in the *Arabidopsis thaliana* Microbiome. NCSU-UNC-Duke Post-Doc Research Symposium Poster Session. Raleigh, NC. May 2019.
- Conway, J.M.** and R.M. Kelly. Building a Better Biofuels Bug: Engineering Plant Biomass Deconstruction and Conversion in *Caldicellulosiruptor bescii*. NC State Chemical Engineering Department Schoenborn Graduate Research Symposium. Raleigh, NC. January 2017. *2nd Place Oral Presentation Award*.
- Conway, J.M.**, W.S. Pierce, J.H. Le, J.V. Zurawski, L.L. Lee, S.E. Blumer-Schuetz, and R.M. Kelly. S-layer associated, multi-domain enzymes mediate deconstruction of lignocellulosic biomass by extremely thermophilic *Caldicellulosiruptor* species. BioEnergy Science Center (BESC) annual science retreat. Chattanooga, TN. June 2016.
- Conway, J.M.**, J.V. Zurawski, L.L. Lee, P.A. Khatibi, S.E. Blumer-Schuetz, and R.M. Kelly. Improving Plant Biomass Degradation in *Caldicellulosiruptor bescii*: Genetic Manipulation and Protein Expression in a Non-Model Organism. NC State Chemical Engineering Department Graduate Student Association - Student Seminar Series. Raleigh, NC. October 2015.
- Conway, J.M.**, W.S. Pierce, J.H. Le, J.V. Zurawski, L.L. Lee, S.E. Blumer-Schuetz, and R.M. Kelly. Lignocellulose degradation at high temperatures: the use of multi-domain, surface layer associated enzymes by the extremely thermophilic genus *Caldicellulosiruptor*. Society of Industrial Microbiology and Biotechnology annual meeting. Philadelphia, PA. August 2015.
- Conway, J.M.**, W.S. Pierce, A.L. Tucker, J.V. Zurawski, L.L. Lee, S.E. Blumer-Schuetz, and R.M. Kelly. Role of novel, multi-domain, cell surface associated, glycoside hydrolases during lignocellulose degradation by extremely thermophilic *Caldicellulosiruptor* species. American Chemical Society national meeting. Denver, CO. March 2015.
- Conway, J.M.**, J.V. Zurawski, L.L. Lee, S.E. Blumer-Schuetz, and R.M. Kelly. Multi-domain glycoside hydrolases from *Caldicellulosiruptor* species: Biochemical and physiological insights. BioEnergy Science Center (BESC) Focus Area 2 meeting. National Renewable Energy Laboratory (NREL), Golden, CO. March 2015.
- Conway, J.M.**, W.S. Pierce, J.H. Le, J.V. Zurawski, L.L. Lee, P.A. Khatibi, S.E. Blumer-Schuetz, and R.M. Kelly. Characterizing the role of extracellular multi-domain glycoside hydrolases from *Caldicellulosiruptor* species in biomass degradation. BioEnergy Science Center (BESC) annual science retreat Poster Session. Chattanooga, TN. June 2015.
- Conway, J.M.**, W.S. Pierce, A.L. Tucker, J.V. Zurawski, L.L. Lee, S.E. Blumer-Schuetz, and R.M. Kelly. The role of cell surface-associated enzymes in lignocellulose degradation by extremely thermophilic *Caldicellulosiruptor* species. NC State Molecular Biotechnology Training Program Annual Symposium. Raleigh, NC. November 2014.
- Conway, J.M.**, I. Ozdemir, S.E. Blumer-Schuetz, J.V. Zurawski, L.L. Lee, J.A. Izquierdo, A.L. Tucker, R.M. Kelly. Lignocellulose deconstruction at the cell surface: *Caldicellulosiruptor* SLH proteins. BioEnergy Science Center (BESC) Focus Area 2 meeting. Oak Ridge National Laboratory. Oak Ridge, TN. March 2014.
- Conway, J.M.**, S.E. Blumer-Schuetz, J.V. Zurawski, J.D. Tang, and R.M. Kelly. Role of multi-domain, surface layer homology proteins in biomass degradation by the genus *Caldicellulosiruptor*. NC State Chemical Engineering Department Schoenborn Graduate Research Symposium Poster Session. January 2014.

Conway, J.M., S.E. Blumer-Schette, J.V. Zurawski, and R.M. Kelly. The role of cell surface proteins in plant biomass degradation by the genus *Caldicellulosiruptor*. NC State Molecular Biotechnology Training Program Annual Symposium Poster Session. November 2012. *Outstanding Poster Award Winner*.

TEACHING

Spring 2024 - CBE/MOL 438 Biomolecular Engineering
 Fall 2023 - EGR 152 Foundations of Engineering: The Mathematics of Shape and Motion
 Spring 2023 - CBE/MOL 438 Biomolecular Engineering
 Fall 2022 - EGR 152 Foundations of Engineering: The Mathematics of Shape and Motion
 Fall 2021 - CBE/MOL 438 Biomolecular Engineering

SERVICE ACTIVITIES

Princeton CBE Department

Graduate committee: Fall 2022-present
 Department Seminar Organization: Fall 2023
 Class of '25 CBE advising: Fall 2022-present

Princeton SEAS

First-Year BSE advising Class of '26, Class of '27, Class of '28: Fall 2022-present

Princeton University

Faculty Committee on Examinations and Standing: 2023-2025
 Faculty Committee on Undergraduate Admission and Financial Aid: 2023
 HMEI Summer of Learning Symposium session moderator: 2023

External

DOE Joint Genome Institute DNA Synthesis Science User Advisory Committee: 2022-present
 Organizing Committee Member and Session Chair "Climate Change, Planetary, and Human Health Regional Symposium" at Rutgers University: October 2022
 American Chemical Society (ACS) fall BIOT division area coordinator and session chair: August 2023
 American Institute of Chemical Engineers (AIChE) annual meeting session chair: November 2023
 American Chemical Society (ACS) spring BIOT division session chair: March 2024
 Invited peer reviewer for: Nature Communications, Nature Microbiology, Biotechnology Advances, Trends in Microbiology, Industrial Microbiology and Biotechnology

OUTREACH ACTIVITIES

Princeton "Spring into Science" 4 th -10 th grade outreach event participant	2023-2024
Princeton Pathways to Academia – Panelist	2022-2024
Princeton Pathways to Graduate School – Panelist	2022
Show Stoppers of Middlesex County 4H Club – Guest Speaker	2021
UNC Assisting in Development and Mentoring an Innovative Research Experience in Science (ADMIREs), <i>mentor</i>	2019-2020
UNC Microbiology and Immunology Department Prelim Consulting Corps	2019-2020
UNC Science and Math Achievement and Resourcefulness Track (SMART) Program, <i>research mentor</i>	Summer 2018
Notre Dame Club of Eastern North Carolina, <i>Board Member, Communications Co-Chair, Vice President</i>	2018-2021
North Carolina State Science & Engineering Fair Scientific Review Committee, <i>Reviewer</i>	2018-2019
NC State BioLunch Graduate Seminar Series, <i>Graduate Student Coordinator</i>	2016
Fort Bragg Biotechnology Career Seminar, <i>Discussion Panelist</i>	December 2015
NC State Chemical Engineering Department, <i>Graduate Recruiting Student Coordinator</i>	2013
NC State Chemical Engineering Department Graduate Student Association, <i>Secretary</i>	2012-2013