

Jennifer L. Goff

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Updated 04/26/2022

EDUCATION

Ph.D. in Microbial Biology, 2020

Rutgers, Piscataway, NJ

B.S. in Biology, 2014

Georgia Institute of Technology, Atlanta, GA

PROFESSIONAL APPOINTMENTS

Post-Doctoral Research Associate

Department of Biochemistry and Molecular Biology, University of Georgia, 2021-Present

Post-Doctoral Research Associate

Department of Earth and Planetary Sciences, Rutgers, 2020-2021

PUBLICATIONS

**authors contributed equally | undergraduate mentee coauthor*

Refereed journal articles and chapters

[9] **Goff JL**, **Szink EG**, Thorgersen MP, Putt AD, Fan Y, Lui LM, Nielsen TN, Hunt KA, Michael JP, Wang Y, Ning D, Fu Y, Van Nostrand JD, Poole II FL, Hazen TC, Stahl DA, Zhou J, Arkin AP, Adams MWW. Ecophysiological and genomic analyses of a highly abundant *Bacillus cereus* strain reveal niche adaptation to contaminated subsurface sediments. *Under review*.

[8] Hao J*, Liu W*, **Goff JL**, Steadman JA, Large RR, Falkowski PG, Yee N. Anoxic photochemical weathering of pyrite. *Under review*.

[7] **Goff JL***, Lui LM*, Nielsen TN, Thorgersen MP, **Szink EG**, Chandonia J-M, Poole II FL, Zhou J, Hazen TC, Arkin AP, Adams MWW. 2022. Complete Genome Sequence of *Bacillus cereus* strain CPT56D-587-MTF, Isolated from a Nitrate- and Metals-Contaminated Subsurface Environment. *Microbiology Resource Announcements*. *Accepted*.

[6] **Goff JL**, Wang Y, Boyanov MI, Yu Q, Kemner KM, Fein JB, Yee N. 2021. Tellurite adsorption onto bacterial surfaces. *Environmental Science & Technology*. 55: 10378-10386. <https://doi.org/10.1021/acs.est.1c01001>.

[5] **Goff JL**, Boyanov MI, Kemner KN, Yee N. 2021. The role of cysteine in tellurate reduction and toxicity. *BioMetals*. 34: 937-946. <https://doi.org/10.1007/s10534-021-00319-8>

[4] **Goff JL**, Shaefer JK, Yee N. 2021. Extracellular sulfite is protective against reactive oxygen species and antibiotic stress in *Shewanella oneidensis* MR-1. *Environmental Microbiology Reports*. 13: 394-400. <https://doi.org/10.1111/1758-2229.12947>

[3] **Goff J***, Terry L*, Mal J, Schilling K, Pallud C, Yee N. 2019. Role of extracellular reactive sulfur metabolites on microbial Se(0) dissolution. *Geobiology* 17:320-329. <https://doi.org/10.1111/gbi.12328>

[2] **Goff J**, Yee, N. 2017. Tellurate enters *E. coli* K-12 cells via the SulT-type sulfate transporter CysPUWA. *FEMS Microbiology Letters* 364. <https://doi.org/10.1093/femsle/fnx241>

[1] Cooper RE, **Goff JL**, Reed BC, Sekar R, DiChristina TJ. 2016. Breathing Metals: Molecular Mechanism of Microbial Iron Reduction by *Shewanella oneidensis* (Chapter). *Manual of Environmental Microbiology*. <https://doi.org/10.1128/9781555818821.ch5.2.1>

Published datasets

[2] **Goff J**. 2022. Geochemical and sequencing data from Goff et. al. 2022. DOE Systems Biology KnowledgeBase. <https://doi.org/10.25982/112150.61/1863566>

[1] **Goff J**. 2022. Complete Genome Sequence of *Bacillus cereus* strain CPT56D-587-MTF Isolated from a Nitrate and Metals Contaminated Subsurface Environment. DOE Systems Biology KnowledgeBase. <https://doi.org/10.25982/105874.55/1844990>.

FELLOWSHIPS

- Presidential Fellowship, Rutgers, \$75,000 (2014-2019)
- Graduate School Excellence Fellowship, Rutgers, \$26,500 (2014-2015)

AWARDS

- Microbial Biology Graduate Program Travel Award, Rutgers, 2019
- Teaching Assistant and Graduate Assistant Professional Development Fund Award, Rutgers, 2018
- School of Graduate Studies Conference Travel Award, Rutgers, 2018
- Hamo Hachnasarian Scholarship, Rutgers, 2015
- Cherry L. Emerson Research Award, Georgia Institute of Technology, 2014
- Outstanding Undergraduate Researcher Award, Georgia Institute of Technology, 2014
- President's Undergraduate Research Award, Georgia Institute of Technology, 2013

CONFERENCE PRESENTATIONS

*JLG presenter | undergraduate mentee contributor | #undergraduate mentee presenter

[20] "Characterization of a *Bacillus cereus* Strain Isolated from a Nitrate and Metal Contaminated Subsurface Environment." (Talk), #**E.G. Szink**, M.W.W. Adams, and **J.L.Goff**, UGA AICHe Undergraduate Life Sciences 3 Minute Research Showcase, 2022

[19] "Genomic and proteomic analyses of a highly-abundant *Bacillus cereus* isolate reveal niche adaptation to mixed-waste subsurface site." (Talk), ***J.L. Goff**, Y. Chen, L.M. Lui, T.N. Nielsen,

E.G. Szink, M.P. Thorgersen, A.D. Putt, K.A. Hunt, Y. Fan, J.P. Michael, Y. Wang, D. Ning, Y. Fu, J.D. Van Nostrand, F.L. Poole II, C.J. Petzold, Terry C. Hazen, D.A. Stahl, J. Zhou, A.P. Arkin, and M.W.W. Adams, 9th Annual Southeastern Biogeochemistry Symposium, Atlanta, GA, upcoming 2022

[18] “Anoxic photochemical weathering of pyrite on Archean continents.” (proposed talk), J. Hao, W. Liu, **J.L. Goff**, J.A. Steadman, R.R. Large, P.G. Falkowski, and N. Yee, Goldschmidt2022, Honolulu, Hawai‘i, upcoming 2022

[17] “Characterization of a *Bacillus cereus* Strain Isolated from a Nitrate and Metal Contaminated Subsurface Environment.” (Talk), **E.G. Szink** and **J.L. Goff**, 2022 CURO Symposium, University of Georgia, Athens, GA, 2022

[16] “Investigating the abiotic control of denitrification processes using synthetic communities and laboratory simulations.” (Poster), J.J. Valenzuela, J. Wilson, S. Turkarslan, H. Smith, A. Otwell, K. Hunt, F. Poole, X. Ge, **J.L. Goff**, M. Thorgersen, M. Wells, P. Walian, A.M. Deutschbauer, T.R. Northen, M.W.W. Adams, R. Chakraborty, D.A. Elias, D.A. Stahl, M.W. Fields, N.S. Baliga, A.P. Arkin, and P.D. Adams, DOE Genome Sciences Program PI Meeting (online due to COVID-19), 2022

[15] “Diurnal and Seasonal Fluctuations with the Subsurface: A 17-Week Survey of Groundwater and Sediment in 27 Contaminated Wells.” (Poster), K.F. Walker, E.R. Dixon, D.C. Joyner, K.A. Lowe, F.L. Poole, X. Ge, M.P. Thorgersen, D. Ning, Y. Fan, J.P. Michael, J.D. Van Nostrand, L.M. Lui, X. Wu, **J.L. Goff**, M.W.W. Adams, R. Chakraborty, D.A. Elias, R.L. Wilpiseski, J. Zhou, M.W. Fields, T.C. Hazen, A.P. Arkin, and P.D. Adams, DOE Genome Sciences Program PI Meeting (online due to COVID-19), 2022

[14] “Characterization of a Nitrate-Respiring, Multi-Metal-Resistant *Bacillus* Species Highly Abundant in Heavily Contaminated ORR FRC Subsurface.” (Poster), **J.L. Goff**, **E.G. Szink**, M.P. Thorgersen, L.M. Lui, T.N. Nielsen, F.L. Poole II, A.D. Putt, Y. Fan, J.P. Michael, Y. Wang, D. Ning, Y. Fu, J.D. Van Nostrand, E.R. Kelly, K.A. Lowe, M. Rodriguez Jr., Y. Chen, C.J. Petzold, M.W.W. Adams, J.-M. Chandonia, T. C. Hazen, J. Zhou, A.P. Arkin, and P.D. Adams, DOE Genome Sciences Program PI Meeting (online due to COVID-19), 2022

[13] “The ENIGMA Subsurface Observatory: A high resolution approach to studying a shallow contaminated groundwater system.” (Poster), A.D. Putt, E.R. Kelly, K.F. Walker, M. Newcomer, M.W. Fields, **J.L. Goff**, **E.G. Szink**, M.P. Thorgersen, F.L. Poole II, Y. Fan, J.P. Michael, P.J. Walian, D. Ning, J.D. Van Nostrand, T. C. Hazen, M.W.W. Adams, J. Zhou, A.P. Arkin, and P.D. Adams, DOE Genome Sciences Program PI Meeting (online due to COVID-19), 2022

[12] “Metals influence nitrate respiration by ORR isolates: discovery-to-core success story.” (Talk), **J. Goff**, ENIGMA LBNL DOE Reverse Site Visit (online due to COVID-19), 2021

[11] “Spatiotemporal dynamics of groundwater and sediment: geochemistry, microbial communities and subsurface structure of contaminated aquifer.” (Poster), K. F. Walker, E. R. Dixon, D. C. Joyner, K. A. Lowe, A. D. Putt, F. L. Poole, **J. L. Goff**, X. Ge, M. P. Thorgersen, D. Ning, Y. Fan, J. P. Michael, Y. Fu, R. Tian, Y. Wang, J. D. Van Nostrand, L. M. Lui, X. Wu, K. J. Davis, R. L. Wilpiseski, M. W. W. Adams, R. Chakraborty, D. A. Elias, J. Zhou, M. W. Fields, T. C. Hazen, A. P. Arkin, and P. D. Adams, ENIGMA LBNL DOE Reverse Site Visit (online due to COVID-19), 2021

- [10] “Understanding the abiotic control of denitrification processes partitioned among synthetic communities.” (Poster), J. J. Valenzuela, J. Wilson, A. Carr, S. Turkarlan, H. J. Smith, A. Otwell, K. Hunt, **J. Goff**, F. L. Poole, X. Ge, M. P. Thorgersen, M. Wells, Y. Chen, C. J. Petzold, A. M. Deutschbauer, T. R. Northern, M. W. W. Adams, R. Chakraborty, D. A. Elias, D. A. Stahl, M. W. Fields, N. S. Baliga, A. P. Arkin, and P. D. Adams, ENIGMA LBNL DOE Reverse Site Visit (online due to COVID-19), 2021
- [9] “Teaching microbiology laboratory with tablets.” (Poster and Demonstration), A. Walczak, S. Skelly, and ***J. Goff**, Office of STEM Education Symposium, Rutgers, New Brunswick NJ, 2019
- [8] “Production of extracellular sulfite by *Shewanella oneidensis* MR1.” (Poster), ***J. Goff**, J. Schaefer, K. Dawson, and N. Yee, Goldschmidt, Barcelona, Spain, 2019
- [7] “Extracellular sulfur metabolite production by bacteria.” (Poster), ***J. Goff** and N. Yee, NEMPET, Blue Mountain Lake, NY, 2019
- [6] “Tellurate enters *Escherichia coli* K-12 cells via the sulfate transporter CysPUWA.” (Poster), ***J. Goff** and N. Yee, ASM Microbe, Atlanta, GA, 2018
- [5] “Abiotic and biotic oxidation of chemically synthesized Se(0) nanoparticles.” (Talk), J. Mal, N. Yee, K. Schilling, **J. Goff**, K. Dhillon, C. Pallud, Goldschmidt, Boston, MA, 2018
- [4] “A role for the sulfate assimilation pathway in tellurate resistance in Enterobacteriaceae.” (Poster), ***J. Goff**, **C. Ekedede**, and N. Yee, Microbiology at Rutgers Symposium, New Brunswick, NJ, 2017
- [3] “Identification of genes involved in tellurate reduction.” (Poster), **#C. Ekedede**, **J. Goff**, and N. Yee, Rutgers Undergraduate Research Symposium, New Brunswick, NJ, 2016.
- [2] “Characterization of amino acid biosynthesis mutants of *Shewanella oneidensis* MR1.” (Poster), ***J. Goff** and T. DiChristina, School of Biology Senior Poster Session, Atlanta, GA, 2014
- [1] “An intragenic complementation approach to engineer a faster fluorescence biosensor.” (Poster and Talk), M. Agrawal, J. Boothby, N. Chilcutt, J. Elsherbini, and ***J. Goff**, iGEM America’s East Regional Jamboree, Pittsburgh, PA, 2012

SEMINARS

“Tungsten utilization by ORR isolates”, ENIGMA Seminar Series, Lawrence Berkeley National Lab (online), 2021

TEACHING EXPERIENCE

University of Georgia

Guest Lecturer

Introductory Microbiology, “Human Microbiota”, S 2022

Rutgers

Summer Session Instructor

Microbiology for the Health Sciences Lecture (Su 2019, Su 2020 [online])

Coadjutant (instructional designer role)

Microbiology Lab for the Health Sciences (Su 2018)

Graduate Teaching Assistant

Microbiology Lab for the Health Sciences (F 2017, S 2018, F 2018, S 2019, F 2019)

Head TA (F 2018, S 2019, F 2019)

Genetics Lecture (F 2016, S 2017)

General Microbiology Lab (F 2015, S 2016)

Georgia Institute of Technology

Undergraduate Teaching Assistant (2011-2014)

Honors Introduction to Organismal Biology Lab

Biological Principles Lab

Molecular and Cell Biology Lab

MENTORSHIP

Elizabeth Szink – Biochemistry and Molecular Biology Independent Research Student (2021-2022), University of Georgia

- CURO Research Award recipient (Spring 2022). Project title: “Investigation of nitrite utilization by environmental isolates grown under varying environmental parameters”
- Highlight: “ENIGMA science engages undergraduate researcher in environmental microbiology.”

Cristian Sanlatte Reyes – Post-Baccalaureate Research Education Program Scholar, University of Georgia, 2021

Richard Bennett – Undergraduate Research Assistant, Rutgers, 2018

Chioma Ekedede – Aresty Undergraduate Research Fellow, Rutgers, 2016-2018

OUTREACH AND SERVICE

Journal Reviewer: *Geochemica et Cosmochimica Acta; Environmental Pollution; Letters in Applied Microbiology; Environmental Science and Pollution Research; International Journal of Environmental Research and Public Health*

Conference Abstract Reviewer: Council on Undergraduate Research Posters on the Hill (2022)

Committee Membership:

Early Career Scientist Committee Chair (2022, ENIGMA SFA, Lawrence Berkeley National Lab)

Lab Manual Review Committee (2022, Department of Microbiology, University of Georgia)

Outreach:

Judge for Annual Biomedical Conference Research Conference for Minority Students (ABRCMS) ePoster Spring Symposium for Emerging Scientists (2022)

Faculty moderator for National Conference on Undergraduate Research (NCUR) (2022)

COURSES AND CERTIFICATIONS

Certificate in Diversity and Inclusion, 2022, University of Georgia – Office of Institutional Diversity and Human Resources Training and Development Department

The American Society for Microbiology 2018 Improving Undergraduate Biology Education Based on Research in Science Learning Online Course

The American Society for Microbiology 2017-2018 Best Practices in Curriculum Design, Teaching, and Assessment Online Course

PROFESSIONAL MEMBERSHIP

American Society for Microbiology (2014-present)

Geochemical Society (2018-2020)

American Geophysical Union (2021-present)

Society for Advancement of Biology Education Research (2022-present)