

## CURRICULUM VITAE

### **Robert A. Quinn**

Associate Professor with tenure  
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**Personal Statement** – Microbiomes are diverse consortia of microorganisms associated with all macroorganisms on this planet, including humans. Though recent research has revealed which microorganisms make up our microbiome, how they function to shape health and disease is more poorly understood. My laboratory focuses on understanding the function and dynamics of microbiomes and how they use small molecule chemistry to interact with their hosts. Using multi-omics methods, culture microcosms, animal models, and microbial ecology theory, my laboratory aims to decipher the language of this molecular crosstalk and use that knowledge to promote human and animal health. Our group focuses on three microbiomes of interest: the human lung, human gut, and coral reefs.

Since establishing my laboratory at Michigan State University in 2018, I have developed an active and productive research group studying human and animal microbiomes. I have given seminars at international meetings, published dozens of articles in the world's best journals, developed national and international collaborations, and received over \$7 million in US federal funding to support our work.

### CURRENT POSITION

**Associate Professor (Tenured). Department of Biochemistry and Molecular Biology and Department of Microbiology, Genetics and Immunology. Michigan State University.**

June-2024 – Present.

**Assistant Professor. Department of Biochemistry and Molecular Biology. Michigan State University.**

Start date August 16, 2018.

### PAST POSITIONS

**Associate Project Scientist. University of California at San Diego.** Specialization: Multi-omics research on human and animal disease. June 2017-July 2018.

**Assistant Project Scientist. University of California at San Diego.** Specialization: Multi-omics research on human and animal disease. May 2015-June 2017.

### POSTDOCTORAL POSITION

**Postdoctoral Scholar. San Diego State University.** Specialization: Microbial Ecology of Cystic Fibrosis. Fellowship funding awarded by the Cystic Fibrosis Research Inc. May 2012-May 2015.

### EDUCATION

**PhD. in Environmental and Evolutionary Biology, University of Louisiana at Lafayette, Lafayette, Louisiana, 2008 – 2012.**

*Specialization:* Microbiology of Aquatic Animal Disease.

*Advisor:* Dr. Andrei Y. Chistoserdov.

*Dissertation:* Shell Disease in the American Lobster (*Homarus americanus*): Microbiology and Microbial Ecology of a Complex Polymicrobial Disease

**M.Sc. in Microbiology, University of Guelph, Guelph, Ontario, 2005-2007.**

*Specialization:* Molecular and Microbiological Diagnostics of Finfish Disease.

*Advisor:* Dr. Roselynn M.W. Stevenson

*Thesis: Non-lethal Detection of Bacterial Fish Pathogens with DGGE and the Molecular Epizootiology of Aeromonas salmonicida*

**B.Sc. Microbiology with Honors, University of Guelph, Guelph, Ontario, 2001 - 2005.**

Department of Molecular and Cellular Biology. Specialization in Microbiology and Molecular Biology of Bacteria, Fungi and Viruses.

## FUNDING AND AWARDS

### Awards

**Michigan State College of Human Medicine.** Early Career Research Award. Nov 2025.

**Metabolomics Association of North America Early Rising Star Award.** Oct 2021.

**Cystic Fibrosis Research Innovation Award. (PI).** Vertex Pharmaceuticals. July 2016- July 2017.

**Elizabeth Nash Memorial Postdoctoral Fellowship.** Cystic Fibrosis Research Inc. May 2012-May 2015

### Current Funding

**NIH R01DK140854. (PI). 08/01/2024-05/31/2029.** Prioritization and Bioactivity Characterization of Novel Bile Acids Produced by the Microbiome. \$2,558,294

**Corewell Health MSU Alliance (PI). 02/01/23-02/01/226.** Determining the Role of Small Molecule Virulence Factors from *Pseudomonas aeruginosa* in Chronic Lung Allograft Dysfunction (PI). \$386,000.

**National Science Foundation (PI). 08/15/2023-08/14/2026.** The Role of Betaine Lipid Biochemistry in Coral Thermal Tolerance. \$1,890,000

**MSU Climate Change Research Support (PI). 01/01/2023-12/32/2023.** Determining the Role of Betaine Lipids in Coral Thermal Tolerance. \$55,000

### Past Funding

**NIH RO1AI145925 (PI). 07/17/2019-06/30/2023 – National Institute of Allergy and Infectious Diseases.** Determining how a dynamic microbiome contributes to cystic fibrosis lung disease. \$2,653,163 direct cost.

**Global Grants for Gut Health (PI). 05/31/2022 – 05/30/2023.** Understanding the Role of Microbially Conjugated Bile Acids in the Developing Mammalian Gut. \$109,683.

**Tetrad MSU Internal (PI). 07/01/2024-06/30/2025.** Determining the Breadth of Acyl Conjugation by Bile Salt Hydrolase from the Human Gut Microbiome. \$30,000 direct costs.

**NIH R03HD101654 – (Co-PI). 09/16/2020 – 08/31/2022.** Determination of the microbiome of growth restricted mice. \$156,500

**Corewell Health Digestive Disease Institute (PI). 02/01/2023-12/31/2023.** Microbially Conjugated Bile Acids in the Upper GI Tract. \$11,000

**California Prune Industry (Co-PI). September 2020 – September 2022.** Collaborative with Dr. Laura McCabe, MSU. Establishing the role of dried plums in the prevention of glucocorticoid induced osteoporosis in mice. \$200,000

**USDA Agriculture and Food Research Initiative Foundational Applied Sciences Program.**

**(Co-PI). February 2020 – January 2023.** Impact of dietary flavones from whole foods on gut microbiome, adipose tissue, macrophages – crosstalk in reducing obesity-induced inflammation. \$499,999.99.

**Cystic Fibrosis Foundation Research Grant (Co-PI). January 2019.** Collaborative grant with Dr. Ryan Hunter (PI), University of Minnesota. *In vivo* microbial activity associated with CF CLAD. \$120,000

**Accelerating Innovations to Market Grant. (PI). April 2017.**

\$20,000 of funds to advance Rapid Response Precision Microbiome to commercialization.

**Cystic Fibrosis Research Innovation Award. (PI).** Vertex Pharmaceuticals. July 2016- July 2017. \$100,000 research funding

**Elizabeth Nash Memorial Postdoctoral Fellowship. May 2012-May 2015 (PI).**

\$120,000 total salary funding for three years.

Postdoctoral fellowship grant from the Cystic Fibrosis Research Inc. to work in Dr. Forest Rohwer's lab at San Diego State University

**Award Extended August 2014.** Based on a proposal submitted to continue the research.

## PUBLICATIONS

\*Denotes Quinn RA as corresponding author

### 2025

86. Dean AED, Guzior DV, **Quinn RA**, Gaulke CA, Anakk S. 2025. Serum cholic acid and cecal *Faecalibaculum* increase in a male specific manner in a murine hepatocellular carcinoma model. *Journal of Lipid Research*. 100954.
85. Roach TNF, Drury C, Caruso C, Hancock JR, Martin C, Neugebauer K, Majerova E, Matsuda SB, McClintock R, Santoro EP, van der Geer A, Varela A, **Quinn RA\***. Intergenerational metabolomic signatures of bleaching resistance in corals. *Nature Communications*. 16(1):5971.
84. Graf M, Murgueitio N, Sheridan MA, **Quinn RA**, Carlson AL, Vogel SC, Styner MA, Alex AM, Stephens RL, Roach J, Sagarnaga N, Mills-Koonce WR, Azcarate-Peril MA, Short SJ, Knickmeyer RC, Propper CB. 2025. Gut microbiome is associated with insula structure in neonates. *Physiology and Behavior*. 115001.
83. Gonzalez C, Martin C, Crane M, Gutierrez K, Thomas J, Remisoski L, Okros M, Fu Y, Guzior DV, Finkhouse D, Bridges C, Mielke J, Querido G, Padillo L, Girgis R, McClelland M, Conrad D, Li X, **Quinn RA\***. 2025. Microenvironmental effects of a non-antibiotic therapy for a chronic polymicrobial infection alters microbial physiology, competition and virulence. *ISME J*. wraf125. ISMEJ Editors Pick: [Article Feature Editor's Pick](#)
82. Karunarathne PH, Bridges C, Remioski L, Crane M, Soria Casanova C, Kinne SN, Bahena AC, Gil M, Padillo L, Querido G, Mielke J, McClelland M, Conrad C, **Quinn RA\***. 2025. Linking volatile metabolites from bacterial pathogens to exhaled breath condensate in people with cystic fibrosis. *Microbiology*. 171(2):001536.
81. Fu Y, Guzior D, Okros M, Bridges C, Rosset S, Gonzalez C, Martin C, Karunarathne H, Watson V. and **Quinn RA\***. 2025. Balance between bile acid conjugation and hydrolysis activity can alter outcomes of gut inflammation. *Nature Communications*. 16(1):3434.
80. Tortorelli GT, Rosset SL, Clarisse ES, Woo S, Johnston EC, Walker N, Hancock JR, Caruso C, Varela AC, Hughes K, Martin C, **Quinn RA**, Drury C. 2025. Heat-induced stress modulates cell surface glycans and membrane lipids of coral symbionts. *ISME J*. 19(1):wraf073.
79. Won TH, Arifuzzaman M, Parkhurst CN, Miranda IC, Zhang B, Hu E, Kashyap S, Letourneau J, Jin W-B, Fu Y, Guzior D V, **Quinn RA**, Guo C-J, David LA, Artis D, Schroeder FC. 2025. Host metabolism balances microbial regulation of bile acid signaling. *Nature*. Published: Jan 8, 2025.

### 2024

78. Wu H, Guzior D V., Martin C, Neugebauer KA, Rzepka MM, Lumeng JC, **Quinn RA\***, de los Campos G. 2024. Longitudinal analyses of infants' microbiome and metabolome reveal microbes and metabolites with seemingly coordinated dynamics. *Communications Biology* 2024 7:1 7:1–10.
77. Martin C, Mahan KS, Wiggen TD, Gilbertsen AJ, Hertz MI, Hunter RC, **Quinn RA\***. 2024. Microbiome and metabolome patterns after lung transplantation reflect underlying disease and chronic lung allograft dysfunction. *Microbiome* 2024 12:1 12:1–12.
76. Vasco KA, Hansen ZA, Schillmiller AL, Bowcutt B, Carbonell SL, Ruegg PL, **Quinn RA**, Zhang L, Manning SD. 2024. Untargeted metabolomics and metagenomics reveal signatures for intramammary ceftiofur treatment and lactation stage in the cattle hindgut. *Front Mol Biosci* 11:1364637.
75. Hansen ZA, Schillmiller AL, Guzior DV, Rudrik JT, **Quinn RA**, Vasco KA, Manning SD. 2024. Shifts in the functional capacity and metabolite composition of the gut microbiome during recovery from enteric infection. *Front Cell Infect Microbiol*. 14:1359576.
74. Williams J, Pettorelli N, Hartmann AC, **Quinn RA**, Plaisance L, O'Mahoney M, Meyer CP, Fabricius KE, Knowlton N, Ransome E. 2024. Decline of a distinct holobiont community under ocean acidification. *Microbiome*. 12(1):75.
73. Chargo NJ, Neugebauer K, Guzior DV, **Quinn RA**, Parameswaran N, McCabe L. 2024. Glucocorticoid-induced osteoporosis is prevented by dietary prune in female mice. *Front Cell Dev Biol*. 11:1324649.
72. Guzior DV, Okros M, Shivel M, Armwald D, Bridges C, Fu Y, Martin C, Schillmiller A, Miller WM, Ziegler K, Sims M, Maddens ME, Graham SF, Hausinger RP, **Quinn RA\***. 2024. Bile salt hydrolase acyltransferase activity expands bile acid diversity. *Nature*. 626:852-858.

Article featured: [here](#); [here](#)

### 2023

71. Martin C., Guzior, DV, Gonzalez CT, Orkos M, Mielke J, Padillo L, Querido G, Gil M, Thomas R, McClelland M, Conrad D, Widder S and **Quinn RA\***. 2023. Longitudinal microbial and molecular dynamics in the cystic fibrosis lung after Elexacaftor–Tezacaftor–Ivacaftor therapy. *Respir Res.* 24, 317.
70. Roach TNF, Matsuda SB, Martin C, Huckeba G, Huckeba J, Kahkejian V, Santoro EP, van der Geer A, Drury C, **Quinn RA**. 2023. Single-Polyp metabolomics reveals biochemical structuring of the coral holobiont at multiple scales. *Commun Biol.* 6(984).
69. **Quinn RA\***, Martin C, Guzior D. A multiomic trip through the human gut. *Nat Metabol.* 2023. doi.org/10.1038/s42255-023-00773-3
68. Kang HJ, Chargo N, Chennupati S, Neugebauer K, Cho JY, **Quinn RA**, McCabe L, Parameswaran N. 2023. Korean Red Ginseng extract treatment prevents post-antibiotic dysbiosis-induced bone loss in mice. *J Ginseng Res.* 47:265-273.

### 2022

67. Neugebauer KA, Okros M, Guzior DV, Feiner J, Chargo NJ, Rzepka M, Schillmiller AL, O'Reilly S, Jones AD, Watson VE, Luyendyk JP, McCabe L, **Quinn RA\***. 2022. BAAT gene knockout alters early life development, the gut microbiome and reveals unusual bile acids in mice. *J Lipid Res.* 63(12):100297.
66. Quinn MA, Pritchard AE, Visker JR, McPeck AC, Raghuvanshi R, Martin H C, Wellette-Hunsucker AG, Leszczynski EC, McCabe LR, Pfeiffer KA, **Quinn RA**, Ferguson DP. 2022. Longitudinal effects of growth restriction on the murine gut microbiome and metabolome. *Am J Physiol Endocrinol.* 323:E159–E170
65. Kang HJ, Chargo N, Chennupati S, Neugebauer K, Cho JY, **Quinn RA**, McCabe LR, Parameswaran N. 2022. Korean red ginseng extract treatment prevents post-antibiotic dysbiosis-induced bone loss in mice. *J Ginseng Res.* 47(2):265-273.
64. Drury C, Bean NK, Harris CI, Hancock JR, Huckeba J, H CM, Roach TNF, **Quinn RA**, Gates RD. 2022. Intrapopulation adaptive variance supports thermal tolerance in a reef-building coral. *Commun Biol* 5:486.
63. Ghuneim L-AJ, Raghuvanshi R, Neugebauer KA, Guzior D v, Christian MH, Schena B, Feiner JM, Castillo-Bahena A, Mielke J, McClelland M, Conrad D, Klapper I, Zhang T, **Quinn RA\***. 2022. Complex and unexpected outcomes of antibiotic therapy against a polymicrobial infection. *ISME J* 16:2065–2075.
62. Mills RH, Dulai PS, Vázquez-Baeza Y, Saucedo C, Daniel N, Gerner RR, Batachari LE, Malfavon M, Zhu Q, Weldon K, Humphrey G, Carrillo-Terrazas M, Goldasich LD, Bryant M, Raffatellu M, **Quinn RA**, Gewirtz AT, Chassaing B, Chu H, Sandborn WJ, Dorrestein PC, Knight R, Gonzalez DJ. 2022. Multi-omics analyses of the ulcerative colitis gut microbiome link *Bacteroides vulgatus* proteases with disease severity. *Nat Microbiol.* 7:262–276.

### 2021

61. Wurster JI, Peterson, RL, Brown CE, Penumutthu S, Guzior DV, Neugebauer K, Sano WH, Sebastian MM, **Quinn RA**, Belenky P. 2021. Streptozotocin-induced hyperglycemia alters the cecal metabolome and exacerbates antibiotic-induced dysbiosis. *Cell Reports.* 37(11)-110-113.
60. **Quinn RA\***, Higawara KA, Goudarzi M, Pathmasiri W, Sumner L, Metz TO. 2021. Bridging the gap between analytical and microbial sciences in microbiome research. *mSystems.* E00585-21
59. Sosinski L, Martin-Hernandez C, Neugebauer K, Ghuneim L., Guzior DV, Castillo-Bahena A, Mielke J, Thomas R, McClelland M, Conrad D, **Quinn RA\***. 2021. A restructuring of microbiome niche space is associated with elexacaftor-tezacaftor-ivacaftor therapy in the cystic fibrosis lung. *J Cyst Fib.* 21(6):996-1005.
58. Ho B, Ryback D, Benson B, Mason CN, Torres PJ, **Quinn RA**, Thachray VG, Kelly ST. 2021. Gut metabolites are more predictive of diseased and cohoused states than gut bacterial features in a polycystic ovary syndrome-like mouse model. *mSystems.* 6(5):e01149-20.
57. Guzior, D and **Quinn, RA\***. 2021. Microbial transformations of human bile acids. *Microbiome.* 9: 140.
56. Little M, George EE, Arts MGI, Shivak J, Benler S, Huckeba J, Quinlan ZA, Boscaro V, Mueller B, Güemes AGC, Rojas MI, White B, Petras D, Silveira CB, Haas AF, Kelly LW, Vermeij MJA, **Quinn**

RA, Keeling PJ, Dorrestein PC, Rohwer F, Roach TNF. 2021. Three-Dimensional Molecular Cartography of the Caribbean Reef-Building Coral *Orbicella faveolata*. *Front Mar Sci*. doi.org/10.3389/fmars.2021.627724

55. Roach TNF, Dilworth J, Martin-Hernandez C, Jones AD, **Quinn RA\***, Drury C\*. 2021. Metabolomic signatures of coral bleaching history. *Nat Ecol Evol*. 5:495-503.  
Article Featured: [here1](#), [here2](#), [here3](#), and on CBC national radio [here4](#)
54. Moyné O, Castelli F, Bicout DJ, Bocard J, Camara B, Cournoyer B, Faudry E, Terrier S, Hannani D, Huot-Marchand S, Léger C, Maurin M, Ngo T-D, Plazy C, **Quinn RA**, Attree I, Fenaille F, Toussaint B, Le Gouëllec A. 2021. Metabotypes of *Pseudomonas aeruginosa* correlate with antibiotic resistance, virulence and clinical outcome in cystic fibrosis chronic infections. *Metabolites*. 11(2):63.
53. Morton J, McDonald, D, Aksenov AA, Nothias LF, Foulds R, **Quinn RA**, Badri, MH, Swenson TL, Van Goethem MV, Northen TR, Vazquez-Baeza Y, Wang W Bokulich NA, Watters A, Song SJ, Bonneau R, Dorrestein PC, Knight, R. 2021. Reply to: Examining microbe-metabolite interactions. *Nat. Methods*. 18:40-41.

## 2020

52. Lybbert AC, Williams JC, Raghuvanshi R, Jones AD, **Quinn RA\***. 2020. Mining public mass spectrometry data to characterize the diversity and ubiquity of *Pseudomonas aeruginosa* specialized metabolites. *Metabolites*. 10(11):445.
51. Aksenov AA, Laponogov I, Zhang Z, Doran SLF, Belluomo I, Veselkov D, Bittremieux W, Nothias LF, Nothias-Esposito M, Maloney KN, Misra BB, Melnik A V, Smirnov A, Du X, Jones KL, Dorrestein K, Panitchpakdi M, Ernst M, van der Hooft JJJ, Gonzalez M, Carazzone C, Amézquita A, Callewaert C, Morton JT, **Quinn RA**, et al., Scher JU, Knight R, Wang M, Hanna GB, Dorrestein PC, Veselkov K. 2021. Auto-deconvolution and molecular networking of gas chromatography-mass spectrometry data. *Nat Biotechnol*. 39:169-173
50. Nothias L.-F, Petras D, Schmid R, Dührkop K, Rainer J, Sarvepalli A, Protsyuk I, Ernst M, Tsugawa H, Fleischauer M, ... **Quinn RA**, ... Dorrestein PC. 2020. Feature-based molecular networking in the GNPS analysis environment. *Nat. Methods*. 17:905-908.
49. Vrbanac A, Patras KA, Jarmusch AK, Mills RH, Shing SR, **Quinn RA**, Vargas F, Gonzalez DJ, Dorrestein PC, Knight R. 2020. Evaluating organism-wide changes in the metabolome and microbiome following a single dose of antibiotic. *mSystems*. 5:e00340-20
48. Jarmusch AK, Wang M, Aceves CM, Advani RS, Aguirre S, Aksenov AA, Aleti G, Aron AT, Bauermeister A, Bolleddu S, Bouslimani A, Caraballo Rodriguez AM, Chaar R, Coras R, Elijah EO, Ernst M, Gauglitz JM, Gentry EC, Husband M, et al., **Quinn RA**, Sikora N, van der Hooft JJJ, Vargas F, Vrbanac A, Weldon KC, Knight R, Bandeira N, Dorrestein PC. 2020. ReDU: a framework to find and reanalyze public mass spectrometry data. *Nat Methods*. 17:901-904.
47. Raghuvanshi R, Vasco K, Vazquez-Baeza Y, Jiang L, Morton JT, Li D, Gonzalez A, DeRight Goldasich L, Humphrey G, Ackermann G, Swafford AD, Conrad D, Knight R, Dorrestein PC, **Quinn RA\***. 2020. High-Resolution longitudinal dynamics of the cystic fibrosis sputum microbiome and metabolome through antibiotic therapy. *mSystems*. 5:e00292-20.
46. Roach TNF, Little M, Arts MG, Huckeba J, Haas AF, George EE, Quinn RA, Cobian-Guemes AG, Naliboff DS, Silveira CB, Vermeij MJA, Wegley L, Dorrestein PC, Rohwer F. 2020. A multiomic analysis of in situ coral-turf algal interactions. *PNAS*. 117(24):13588-13595.
45. Dethloff F, Vargas F, Elijah E, **Quinn RA**, Park DI, Herzog DP, Muller MB, Gentry EC, Knight R, Gonzalez A, Dorrestein PC, Turk CW. 2020. Paroxetine administration affects microbiota and bile acid levels in mice. *Front Psychiatry*. 11:518.
44. **Quinn RA**, Melnik A V., Vrbanac A, Fu T, Patras KA, Christy MP, Bodai Z, Belda-Ferre P, Tripathi A, Chung LK, Downes M, Welch RD, Quinn M, Humphrey G, Panitchpakdi M, Weldon KC, Aksenov A, Silva R da, Avila-Pacheco J, Clish C, Bae S, Mallick H, Franzosa EA, Lloyd-Price J, Bussell R, Thron T, Nelson AT, Wang M, Leszczynski E, Vargas F, Gauglitz JM, Meehan MJ, Gentry E, Arthur TD, Komor AC, Poulsen O, Boland BS, Chang JT, Sandborn WJ, Lim M, Garg N, Lumeng JC, Xavier RJ, Kazmierczak BI, Jain R, Egan M, Rhee KE, Ferguson D, Raffatellu M, Vlamakis H, Haddad GG, Siegel D, Huttenhower C, Mazmanian SK, Evans RM, Nizet V, Knight R, Dorrestein PC. 2020. Global chemical effects of the microbiome include new bile-acid conjugations. *Nature*. 579: 123-129.  
Article Highlighted: [here](#), [here](#), [here](#), [here](#)

43. Wang M, Jarmusch AK, Vargas F, Aksenov AA, Gauglitz JM, Weldon K, Petras D, da Silva R, **Quinn RA**, Melnik A V., van der Hooft JJJ, Caraballo-Rodríguez AM, Nothias LF, Aceves CM, Panitchpakdi M, Brown E, Di Ottavio F, Sikora N, Elijah EO, Labarta-Bajo L, Gentry EC, Shalapour S, Kyle KE, Puckett SP, Watrous JD, Carpenter CS, Bouslimani A, Ernst M, Swafford AD, Zúñiga EI, Balunas MJ, Klassen JL, Loomba R, Knight R, Bandeira N, Dorrestein PC. 2020. Mass spectrometry searches using MASST. *Nat Biotechnol.* **38**:23–26.
42. Gauglitz JM, Aceves CM, Aksenov AA, Aleti G, Almaliti J, Bouslimani A, Brown EA, Campeau A, Caraballo-Rodríguez AM, Chaar R, da Silva RR, Demko AM, Di Ottavio F, Elijah E, Ernst M, Ferguson LP, Holmes X, Jarmusch AK, Jiang L, Kang K Bin, Koester I, Kwan B, Li J, Li Y, Melnik A V., Molina-Santiago C, Ni B, Oom AL, Panitchpakdi MW, Petras D, **Quinn RA**, Sikora N, Spengler K, Teke B, Tripathi A, Ul-Hasan S, van der Hooft JJJ, Vargas F, Vrbanac A, Vu AQ, Wang SC, Weldon K, Wilson K, Wozniak JM, Yoon M, Bandeira N, Dorrestein PC. 2020. Untargeted mass spectrometry-based metabolomics approach unveils molecular changes in raw and processed foods and beverages. *Food Chem.* **302**:125290.

### 2019

41. Schepper JD, Collins F, Rios-Arce ND, Kang HJ, Schaefer L, Gardinier JD, Raghuvanshi R, **Quinn RA**, Britton R, Parameswaran N, McCabe LR. 2019. Involvement of the gut microbiota and barrier function in glucocorticoid induced osteoporosis. *J Bone Miner Res.* **35**: 801-820
40. Melnik A V, Vázquez-Baeza Y, Aksenov AA, Hyde E, McAvoy AC, Wang M, da Silva RR, Protsyuk I, Wu J V, Bouslimani A, Lim YW, Luzzatto-Knaan T, Comstock W, **Quinn RA**, Wong R, Humphrey G, Ackermann G, Spivey T, Brouha SS, Bandeira N, Lin GY, Rohwer F, Conrad DJ, Alexandrov T, Knight R, Dorrestein PC, Garg N. 2019. Molecular and Microbial Microenvironments in Chronically Diseased Lungs Associated with Cystic Fibrosis. *mSystems* **4**:e00375-19.
39. Morton JT, Aksenov AA, Nothias LF, Foulds JR, **Quinn RA**, Badri MH, Swenson TL, Van Goethem MW, Northen TR, Vazquez-Baeza Y, Wang M, Bokulich NA, Watters A, Song SJ, Bonneau R, Dorrestein PC, Knight R. 2019. Learning representations of microbe–metabolite interactions. *Nat Methods.* **16**:1306-1314.
38. Cao L, Gurevich A, Alexander KL, Naman CB, Leão T, Glukhov E, Luzzatto-Knaan T, Vargas F, **Quinn RA**, Bouslimani A, Nothias LF, Singh NK, Sanders JG, Benitez RAS, Thompson LR, Hamid M-N, Morton JT, Mikheenko A, Shlemov A, Korobeynikov A, Friedberg I, Knight R, Venkateswaran K, Gerwick WH, Gerwick L, Dorrestein PC, Pevzner PA, Mohimani H 2019. MetaMiner: A Scalable Peptidogenomics Approach for Discovery of Ribosomal Peptide Natural Products with Blind Modifications from Microbial Communities. *Cell Syst.* **9**:600-608
37. Sanders, JG, Nurk, S, Salido, R, Minich, J, Xu, Z, Zhu, Q, Martino, Q, Fedarko, M, Arthur, TD, Chen, F, Boland, BS, Humphrey, GC, Brennan, C, Sanders, K, Gaffney, J, Jepsen, K, Khosroheidari, M, Green, C, Liyanage, M, Dang, JW, Phelan, VV, **Quinn, RA**, Bankevich, A, Chang, JT, Rana, TM, Conrad, DJ, Sandborn, WJ, Smarr, L, Dorrestein, PC, Pevzner, PA, and R Knight. 2019. Optimizing sequencing protocols for leaderboard metagenomics by combining long and short reads. *Genome Biology.* **1**:1-14.
36. Raghuvanshi, R, Grayson, AG, Schena, I, Amanze, O, Suwintono, K, **Quinn, RA\***. 2019. Microbial transformations of organically fermented foods. *Metabolites.* **9**(8):165
35. Cobian Guemes AG, Lim YW, **Quinn RA**, Conrad DJ, Benler S, Maughan H, Edwards R, Brettin T, Cantu, VA, Cuevas D, Himidi R, Dorrestein P and Rohwer F. 2019. Cystic Fibrosis Rapid Response: Translating Multi-omics data into clinically relevant information. *mBio.* **10**(2) e00431-19
34. **Quinn, RA**, Adem, S, Mills, RH, Comstock, W, DeRight Goldasich, L, Humphrey, G, Aksenov, AA, Melnik, AV, da Silva, R, Ackermann, G, Bandeira, N, Gonzalez, DJ, Conrad, D, O'Donoghue, AJ, Knight, R, Dorrestein PC. 2019. Neutrophilic proteolysis in the cystic fibrosis lung favors a pathogenic microbiome. *Microbiome.* **7**:23.

### Independent PI Position Gained August 2018

### 2018

33. **Quinn, RA**, Comstock, W, Zhang, T, Morton, JT, da Silva, R, Tran, A, Aksenov, A, Nothias-Scaglia, L, Wangpraseurt, D, Melnik, AV, Ackerman, G, Conrad, D, Klapper, I, Knight, R, and PC Dorrestein. 2018. Niche partitioning of a pathogenic microbiome driven by chemical gradients. *Science Advances.* **4**(9):eeau1908.

**Article Highlighted:** [here1](#), [here2](#), [here3](#)

32. Knight R, Vrbanac A Taylor BC, Aksenov AA, Callewaert C, Debelius J, Gonzalez A, Kosciolk T, McCall L-I, McDonald D, Melnik AV, Morton JT, Navas J, **Quinn RA**, Sanders JG, Swafford AD, Thompson LR, Tripathi A, Xu ZZ, Zaneveld JR, Zhu Q, Caporaso JG, Dorrestein PC 2018. Best practices for analyzing microbiomes. *Nat. Rev. Microbiol.* **16**:410-422.
31. Galtier d'Auriac, I, **Quinn, RA**, Maughan, H, Nothias, L-F, Little, M, Kapon, C, Cobian, A, Reyes, BT, Green, K, Quistad, SD, Leray, M, Smith, JE, Dorrestein, PC, Rohwer, F, Deheyn, DD, and Aaron C Hartmann. 2018. Before platelets: the production of platelet activating factor during growth and stress in a basal marine organism. *Proceedings of the Royal Society B.* 285:4. DOI: 10.1098/rspb.2018.1307

#### 2017

30. Hartmann, AC, Petras, D, **Quinn, RA**, Protsyuk, I, Archer, FI, Ransome, EJ, Williams, GJ, Bailey, BA, Vermeij, MJA, Alexandrov, T, Dorrestein, PC, Rohwer F. 2017. Meta-mass shift chemical (MeMChem) profiling of metabolomes on coral reefs. *PNAS.* **114**:11685-11690.
29. **Quinn RA**. \* 2017. Integrating microbiome and metabolome data to understand infectious airway disease. *American Journal of Respiratory and Critical Care Medicine.* doi.org/10.1164/rccm.201704-0671ED, \*corresponding author
28. Comstock, W J, Huh, E, Weekes, R, Watson, C, Xu, T, Dorrestein, PC, **Quinn RA** \*. 2017. The WinCF Model - An Inexpensive and Tractable Microcosm of a Mucus Plugged Bronchiole to Study the Microbiology of Lung Infections. *Journal Vis Exp.* (123), e55532, doi.org/10.3791/55532. \*corresponding author
27. **Quinn RA**, Hazra AY, Smolowitz R, Chistoserdov AY. 2017. Real-time PCR assay for *Aquimarina macrocephali* subsp. *homaria* and its distribution in shell disease lesions of *Homarus americanus*, Milne-Edwards, 1837, and environmental samples. *Journal of Microbiological Methods.* 139:61-67. doi.org/10.1016/j.mimet.2017.04.001
26. Morton JT, Sanders J, **Quinn RA**, McDonald D, Gonzalez A, Vasquez-Baeza Y, Navas-Molina JA, Hyde ER, Song SJ, Metcalf JL, Lladser M, Dorrestein PC, Knight R. 2016. Balance trees provide useful insights into community structure. *mSystems.* 10.1128/mSystems.00162-16.

#### 2016

25. **Quinn RA**, Whiteson K, Lim YW, Zhao J, Conrad D, LiPuma J, Rohwer F, Widder S. 2016. Ecological Networking of Cystic Fibrosis Lung Infections. *Nature Biofilms and Microbiomes.* 2(1):4. doi.org/10.1038/s41522-016-0002-1.
24. Petras D\*, Notias L-F\*, **Quinn RA**\*, Alexandrov T, Bandiera N, Bouslimani A, Castro-Falcon G, Chen L, Dang T, Dorrestein, P, et al. 2016. The chemistry associated with built human habitats and transport. *Analytical Chemistry.* 88(22): 10775-10784 \*Denotes co-first author.
23. **Quinn RA**, Nothias L-F, Vining O, Meehan M, Esquenazi E, Dorrestein PC. 2016. Mass spectral molecular networking as a pharmaceutical, pharmacological and clinical tool. *Trends in Pharmacological Sciences.* doi.org/10.1016/j.tips.2016.10.011
22. **Quinn RA**, Lim YW, Whiteson K, Furlan M, Conrad D, Rohwer F, Dorrestein PC. 2016. Metabolomics of Pulmonary Exacerbations Reveals the Personalized Nature of Cystic Fibrosis Disease. *PeerJ.* doi.org/10.7717/peerj.2174  
**Article highlighted here:** <http://cysticfibrosisnewstoday.com/2016/09/26/>
21. Wang, M, Carver, J, Phelan, V, Sanchez, L, Garg, N, Peng, Y, Nguyen, D, Watrous, D, Kapon, C, Luzzatto-Knaan, T, Porto, C, Bouslimani, A, Melnik, A, Meehan, M, Liu, W, Cruesemann, M, Boudreau, P, Esquenazi, E, Sandoval-Calderón, M, Kersten, R, Pace L, **Quinn RA**, et al... W, Moore, B, Dorrestein, P, Bandiera, N. 2016. Sharing and community curation of natural products data with Global Natural Products Social molecular networking. *Nat Biotech.* 34:828-837. doi.org/10.1038/nbt.3597
20. Gilbert, J, **Quinn, RA**, Debelius, J, Xu, ZZ, Morton, J, Garg, N, Jansson, J, Dorrestein, PC, Knight R. 2016. Microbiome-wide association studies link dynamic microbial consortia to disease. *Nature.* 535:94-103. doi.org/10.1038/nature18850.
19. **Quinn, RA**, Vermeij, MA, Hartmann, AC, Galtier d'Auriac, I, Benler, S, Haas, A, Quistad, SD, Lim, YW, Little, M, Sandin, S, Smith, JE, Dorrestein, PC, Rohwer F. 2016. Metabolomics of reef benthic interactions reveals a bioactive lipid involved in coral defense. *Proceedings of the Royal Society B.* 283:20160469. doi.org/10.1098/rspb.2016.0469

Article highlighted: [here1](#), [here2](#)

18. **Quinn, RA**, Navas-Molina, J, Hyde, E, Song, S J, Vazquez-Baeza, Y, Humphrey, G, Gaffney, J, Minich, J, Melnik, A V, Herschend, J, DeReus, J, Durant, A, Dutton, R, Khosroheidari, M, Green, C, da Silva, R, Dorrestein, PC, Knight r. 2016. From sample to multi-omics conclusions in under 48 hours. *mSystems*. 1(2):e00038-16. doi:10.1128/mSystems.00038-16.

Article highlighted: [here1](#)

17. Widder, S, Allen, R, Pfeiffer, T, Thomas, C P, Wiuf, C, Sloan, W T, Cordero, O, Brown, S, Momeni, B, Shou, W, Kettle, H, Flint, HJ, Haas, A, Laroche, B, Kreft, J, **Quinn, RA**, Rainey, P, Isaac Newton Institute Fellows. 2016. Changes in microbial ecology: building predictive understanding of community function and dynamics. *ISME J*. 10(11):2557-2568. doi.org/10.1038/ismej.2016.45

#### 2015

16. **Quinn RA**, Phelan V P, Whiteson K, Garg N, Bailey B, Lim YW, Conrad D, Dorrestein PC, Rohwer F. 2015. Microbial, host and xenobiotic diversity in the cystic fibrosis sputum metabolome. *ISME J*. 10(6):1483-1498. doi.org/10.1038/ismej.2015.207
15. da Silva, R, Dorrestein, P, **Quinn RA**. 2015. Illuminating the dark matter in metabolomics. *PNAS*. 112(41): 12549-12550. doi.org/10.1073/pnas.1516878112

#### 2014

14. **Quinn RA**, Whiteson K, Lim YW, Salamon P, Bailey B, Meinardi S, Sanchez S, Blake D, Conrad D Rohwer F. 2014. A Winogradsky-based culture system reveals an association between microbial fermentation and cystic fibrosis exacerbation. *ISME J*. 9(4):1024-1038.
13. **Quinn RA**, Alexandrov T. 2014. The community ecology of microbial molecules. *Journal of Chemical Ecology*. 40(11):1161-1162.
12. **Quinn RA**, Lim YW, Maughan H, Conrad D, Rohwer F, Whiteson K. 2014. Biogeochemical forces shape the composition and physiology of polymicrobial communities in the cystic fibrosis lung. *mBio*. 5(2):e00956-13. doi:10.1128/mBio.00956-13
- Article Highlighted in: Molloy, S. 2014. A metabolic milieu. *Nat. Rev. Microbiol*. 12:315.
11. Whiteson, K, Bailey, B, Bergkessel, M, Conrad, D, Delhaes, L, Felts, B, Harris, JK, Hunter, R, Lim, YW, Maughan, H, **Quinn, RA**, Salamon, P, Sullivan, J, Wagner, B, and PB Rainey. 2014. The upper respiratory tract as a microbial source for pulmonary infections in cystic fibrosis patients: parallels from island biogeography. *American Journal of Respiratory and Critical Care Medicine*. 189(11):1309-1315.
10. Whiteson, K, Meinardi, S, Lim, YW, Schmieder, R, Maughan, H, **Quinn, RA**, Black, D, Conrad, D, and F Rohwer. 2014. Breath gas metabolites and bacterial metagenomes from cystic fibrosis airways indicate active pH neutral 2,3-butanedione fermentation. *ISME J*. 8:1247-1258.
9. Smolowitz, R, **Quinn, RA**, Cawthorn, RJ, Summerfield, RL, Chistoserdov AY. 2014. Pathology of two forms of shell disease in the American lobster (*Homarus americanus*, Milne Edwards) in Atlantic Canada. *Journal of Fish Diseases*. 37:577-581.

#### 2013

8. Cheng-Chi Hsu, El Naggar, M, Peng, Y, Fang, J, Sanchez, LM, Mascuch, S, Møller, A, Alazzeah, E K, Pikula, J, **Quinn, RA**, Zeng, Y, Wolfe, BE, Dutton, RJ, Gerwick, L, Zhang, L, Liu, X, Månsson, M, Dorrestein PC. 2013. Real-Time Metabolomics on Living Microorganisms Using Ambient Electrospray Ionization Flow-Probe. *Analytical Chemistry*. 85(15):7014-7018.
7. **Quinn, RA**, Cawthorn, RJ, Summerfield, RL, Smolowitz, R, Chistoserdov AY. 2013. Bacterial communities associated with lesions of two forms of shell disease in the American lobster (*Homarus americanus*, Milne Edwards) from Atlantic Canada. *Canadian Journal of Microbiology*. 59(6):380-390.
6. **Quinn, RA**, Smolowitz, RM, Gubbala, SL, Chistoserdov AY. 2013. Culture-independent analysis of bacterial communities in the hemolymph of American lobsters with epizootic shell disease using PCR-DGGE. *Diseases of Aquatic Organisms*. 103:141-148.

#### 2012

5. **Quinn, RA**, Metzler, A, Smolowitz, R M, Tlusty, M, Chistoserdov AY. 2012. Exposures of *Homarus americanus* shell to three bacteria isolated from naturally occurring epizootic shell disease lesions. *Journal of Shellfish Research*. 31(2):485-493.

4. Chistoserdov, A, **Quinn, RA**, Gubbala, SL, Smolowitz R. 2012. Bacterial communities associated with lesions of shell disease in the American lobster (*Homarus americanus*, Milne-Edwards). *Journal of Shellfish Research*. 31(2):449-462.
3. **Quinn, RA**, Metzler, A, Tlusty, M, Smolowitz, RM, Leberg, P, Chistoserdov AY. 2012. Lesion bacterial communities of American lobsters with diet induced shell disease. *Diseases of Aquatic Organisms*. 98:221-233.
2. **Quinn, RA**, R. Stevenson. 2012. Denaturing gradient gel electrophoresis for nonlethal detection of *Aeromonas salmonicida* in salmonid mucus and its potential for other bacterial fish pathogens. *Canadian Journal of Microbiology*. 58(5):563-571.

#### 2009

1. **Quinn, RA**, Smolowitz, RM, Chistoserdov AY. 2009. Analysis of eukaryotic communities of American lobsters with epizootic shell disease using PCR-DGGE. *Journal of Shellfish Research*. 28:913-922.

#### PATENTS

**Quinn, R. A.**, Melnik, A., Aksenov, A.A, and P. Dorrestein. 2019. Assignment. Bile Acids, Synthesis and Use in Disease. Patent UCSD Reference Number: SD2019-209. [US11980645B2](#)

#### ACADEMIC SERVICE

##### GRANT REVIEW PANELS

*NIH Interspecies Microbial Interactions and Infections, Jan 2026 (nominated as permanent member Jan 2026)*  
*NIH Gastroenterology in Disease Grant Review Panel, July 2025*  
*NIH Cystic Fibrosis Translational Research Center Grant Panel, Nov 2024*  
*NIH F31 Graduate and Postdoctoral Fellowship Panel, June 2024*  
*Cystic Fibrosis Canada, Research Grant Review, Jan 2024*  
*NIH Microbiome Special Interest Panel, 2022, three grants reviewed for special interest panel*  
*NIH Infectious Disease Panel, 2021, four grants reviewed as temporary panel member*  
*NIH SBIR-STTR Lung Disease Drug Development, 2021, four grants reviewed for business plan panel*  
*NSF Rules of Life Symbiosis Panel Member, 2020, Four grants reviewed as full panel member*  
*NSF Ad Hoc, Microbiome Metabolites, 2021, Reviewed one grant*  
*Cystic Fibrosis Research Inc., Lung Microbiome Expert Review, 2023, Two grants reviewed*

##### EDITORIAL SERVICE

*Microbiology (Editor, 2021-Present, 5-8 manuscripts/year)*  
*Frontiers in Microbiology (Guest Editor)*  
*Metabolites (Guest Editor)*

##### MANUSCRIPT REVIEW

*Nature*  
*Cell*  
*Nature Communications*  
*Science Advances*  
*American Journal of Respiratory and Critical Care Medicine*  
*Coral Reefs*  
*mSystems*  
*Clinical Toxicology*  
*Journal of Cystic Fibrosis*  
*Frontiers in Microbiology*  
*Metabolites*

#### TEACHING EXPERIENCE

**Professor. Methods of Macromolecular Analysis and Synthesis. Michigan State University 2021 – present.** Responsible for teaching mass spectrometry to graduate level students at MSU. 5-15 students, 9 contact hours

**Professor. Advanced Biochemistry II. Michigan State University. 2019 - present.** Responsible for senior level biochemistry class in the MSU Biochemistry and Molecular biology department. 50-100 students, 10 contact hours

**Professor. Senior Seminar. Michigan State University. 2019 - present.** Provide one lecture and paper assignment on bile acid metabolism. 30-40 students, 1 contact hour

**Professor. Integrative Microbial Biology. Michigan State University. 2019 - present.** Microbes and Microbiomes. Responsible for 2 lectures and student assignment. 15-20 students, 2 contact hours

**Laboratory Instructor. San Diego State University. 2015.** Molecular Microbiology Laboratory. Ran laboratory and mentored student independent research projects in an advanced molecular biology laboratory.

**Teaching Assistant, University of Louisiana at Lafayette, Lafayette, Louisiana, 2010. Instructor.** Taught lecture and lab for a sophomore microbiology laboratory worth 3 credit hours.  
**2008, 2009 and 2011.** Microbial physiology and genetics class T.A. and interim instructor.

**Teaching Assistant, University of Guelph, Guelph, Ontario.**  
**2005.** Introductory Microbiology Laboratory T.A. and Coordinator.  
**2006.** Systematic Bacteriology Laboratory T.A. and Coordinator.  
**2007.** Introductory Biology Laboratory and Grading T.A.

### MENTORING EXPERIENCE

#### **Graduate Students**

Aram Koshnaw, PhD Student, September 2025 – Present.  
 Deklan Rummel, PhD Student, July 2025 – Present.  
 Laleh Dinpanzhou, PhD Student, July 2025 - Present.  
 Vicki Agrella, Master’s Student, January 2025 – Present.  
 Sarah VanDiepenbos, PhD Student – March 2025 – Present.  
 Doug Guzior, PhD Graduate – May 2020-May 2024. Student received an MMG travel award and the Rudolph and Vera Gerhardt Outstanding Scholar award. Published 14 manuscripts, 2 first author.  
 Lo Sosinski, Biochemical Research Trainee Program – July 2020- June 2021. One year training pre-graduate school as BRTP student.

#### **Postdoctoral Scholars**

Kiran Shivaiah Nov 2023 - Present  
 Nina Rosset Jun 2023 – Present  
 Hansani Karunarathne Nov 2022 – June 2025  
 Yousi Fu, June 2022 - Present  
 Cely Gonzalez Jan 2022 - July 2025  
 Lydia-Ann Ghuneim May 2020 - Present  
 Christian Martin Hernandez Nov 2019 – present  
 Ruma Raghuvanshi Nov 2018 – Jan 2020, Currently Postdoc at INRAE Paris France

#### **Undergraduate Students**

Currently 4 members in my lab: Thomas Cline, Lacy Remioski, Rozlyn DeReal, Kat Liang  
 Past over 20 members

#### **From Underrepresented Groups**

Undergraduate: MSU BRUSH program mentor, a summer program to integrate historically underrepresented students in the US in MSU human research labs  
 Melanie Quinones, Summer 2025, Puerto Rico, US Territory  
 Darnilla Samuel, Summer 2023, Virgin Islands, US Territory  
 Andrew Simmons, Summer 2022  
 Amber Hickey, Summer 2021  
 Justin Williams, Summer 2020 remote

## WORKSHOPS AND MEETING ORGANIZATION

- Cystic Fibrosis Ecology and Eradication Conference.** Telluride, CO, June 24-29<sup>th</sup>, 2025. Principal organizer of conference for researchers on CF.
- Metabolomics Association of North America. University of Missouri.** Oct 24<sup>th</sup>, 2023. Microbiome Metabolomics Workshop. Workshop organizer (could not attend due to family funeral, but organized workshop).
- American Chemical Society. Division of Analytical Chemistry.** Mar 26-29<sup>th</sup>, 2023. Session chair: Metabolites and Molecules from the Microbiome.
- Metabolomics Association of North America.** Sep 13-15<sup>th</sup>, 2020. Workshop organization committee.
- Quinn, R.A. Michigan State University.** Oct 12<sup>th</sup>, 2019. Campus wide GNPS Workshop.
- Quinn, R.A. Medical School. University of Grenoble Alpes. Grenoble, France.** November 22<sup>nd</sup>, 2018. GNPS for Microbiomes Workshop.
- The CMI California Microbiome Meeting.** Oct 6-17<sup>th</sup>, 2017. University of California at San Diego. Moderator and organizer of a meeting of over 100 microbiome researchers in California.
- Quinn, R. A., Wang, M., Vasquez-Baeza, Kosciolk, T., Knight, R., Dorrestein, P. UCSD Center for Microbiome Innovation Qiime and GNPS workshop.** Aug 30<sup>th</sup>-Sep 1<sup>st</sup>. Microbiome and Metabolome Analysis using QIIME and GNPS.
- Quinn, R. A., Vasquez-Baeza, Y., Gonzalez, A., Knight, R., Dorrestein, P. ASM microbe 2017. BCEC, New Orleans, LA. June 15, 2017.** Advanced Microbiome and Metabolome Analysis using QIIME and GNPS.
- Quinn, R. A., Vasquez-Baeza, Y., Gonzalez, A., Knight, R., Dorrestein, P. ASM microbe 2017. BCEC, New Orleans, LA. June 15, 2017.** Basic Microbiome and Metabolome Analysis using QIIME and GNPS.
- The California Microbiome Initiative Meeting.** Aug 12<sup>th</sup>-14<sup>th</sup>, 2016. University of California at San Diego. Moderator and organizer of a meeting of microbiome researchers in California.
- Quinn, R. A., Vasquez-Baeza, Y., Gonzalez, A., Knight, R., Dorrestein, P. ASM microbe 2016. BCEC, New Orleans, LA. June 15, 2016.** Advanced Microbiome and Metabolome Analysis using QIIME and GNPS.
- Quinn, R. A., Vasquez-Baeza, Y., Gonzalez, A., Knight, R., Dorrestein, P. ASM microbe 2016. BCEC, Boston, MA. June 15, 2016.** Basic Microbiome and Metabolome Analysis using QIIME and GNPS.
- Wineing About CF. 2014-2016.** Moderator and organizer of a monthly cystic fibrosis research meeting at UCSD.

## INVITED TALKS

- Keystone Conference, Banff, AB, Canada. Microbiome and Metabolites: Discovery and Function in Health and Disease.** Jan 20<sup>th</sup>, 2026. Microbial bile acid conjugation as a new dialect of host-microbiome crosstalk.
- Emory University Cystic Fibrosis Center and Georgia Tech Microbiology Dept., Atlanta, GA.** Dec 5, 2025. Lungs, Germs and Steel: Fighting the Cystic Fibrosis Lung Microbiome.
- Duke University Marine Lab, Beumont, NC.** April 30<sup>th</sup>, 2025. Metabolomics Signatures of Coral Bleaching History and Future.
- University of California San Diego, La Jolla, CA.** April 22<sup>nd</sup>, 2025. Microbial bile acid conjugation as a new mechanism of host-microbiome crosstalk.
- University of South Florida, Tampa, FL.** Jan 31, 2024. Metabolomics Signatures of Coral Bleaching History and Future.
- Dartmouth University, DartCF, Hanover, NH.** May 7<sup>th</sup>, 2023. The Effect of Trikafta on the Cystic Fibrosis Lung Microbiome.
- Broken Arrow Conference, Cystic Fibrosis Canada.** Apr 26<sup>th</sup>, 2023. The Effect of Trikafta on the Cystic Fibrosis Lung Microbiome.
- Justus Liebig University, Geissen Germany.** Feb 9<sup>th</sup>, 2023. Metabolites from the Microbiome During Health and Disease.
- University of Manchester, Manchester, UK.** Feb 7<sup>th</sup>, 2023. Lungs, Germs and Steel: Fighting the Cystic Fibrosis Lung Microbiome
- University of the Virgin Islands, St. Thomas USVI.** Feb 1<sup>st</sup>, 2023. Metabolites from the Microbiome During Health and Disease

**Fred Hutchison Cancer Center, Remote over Zoom. Nov 16<sup>th</sup>, 2022.** Microbial bile acid conjugation as a new mechanism of host-microbiome crosstalk.

**Wellcome Sanger Institute, Cambridge, UK. Sept 29<sup>th</sup>, 2022.** Microbial bile acid conjugation as a new mechanism of host-microbiome crosstalk.

**University of Illinois, Department of Molecular and Integrative Physiology. Sept 7<sup>th</sup>, 2022.** Microbial bile acid conjugation as a new mechanism of host-microbiome crosstalk.

**Anaerobe 2022. Anaerobe Society of the Americas. July 29<sup>th</sup>, 2022.** Microbial bile acid conjugation as a new mechanism of host-microbiome crosstalk.

**University of Connecticut Department of Chemistry Seminar Series. April 14<sup>th</sup>, 2022.** Table Talk: Conversation between the microbiome and host through bile acid conjugation.

**University of Michigan Microbiome Seminar Series. Dec 15, 2021.** Table Talk: Conversation between the microbiome and host through bile acid conjugation.

**Temple University Medical Microbiology Seminar Series. Nov 1, 2021.** Lungs, Germs and Steel: Fighting the Cystic Fibrosis Lung Microbiome.

**Metabolomics Society of North America. Online. Oct 8<sup>th</sup>, 2021.** Microbial Bile Acid Conjugation. Early Career Award Lecture.

**European Cystic Fibrosis Society Annual Conference. Online. June 6-9<sup>th</sup>, 2021.** Complex outcomes of antimicrobial therapy against the CF lung microbiome.

**Telluride Cystic Fibrosis Ecology and Eradication Conference. Telluride Science Center, Telluride, CO. June 7<sup>th</sup>-12<sup>th</sup>, 2021.** Complex outcomes of antimicrobial therapy against the CF lung microbiome.

**University of Oklahoma. Departmental Seminar. Department of Microbiology and Plant Biology. Jan 28, 2021.** Metabolites from the Microbiome During Health and Disease.

**Pennsylvania State University. Microbiome Seminar Series Invited Speaker. State College, PA. Dec 6<sup>th</sup>, 2019.** Lungs, Germs and Steel: Fighting the Cystic Fibrosis Lung Microbiome.  
**Example Talk on youtube from Penn State Microbiome Center:**  
[https://www.youtube.com/watch?v=VoJjqUT\\_TPk](https://www.youtube.com/watch?v=VoJjqUT_TPk)

**Metabolomics Association of North America. Georgia Tech Conference Center. Atlanta, GA. Nov 15<sup>th</sup>-17<sup>th</sup>, 2019.** Global Impacts of the Microbiome Include Novel Conjugated Bile Acids that Stimulate FXR

**Telluride Cystic Fibrosis Ecology and Eradication Conference. Telluride Science Center, Telluride, CO. June 10<sup>th</sup>-14<sup>th</sup>, 2019.** Daily dynamics of the cystic fibrosis lung microbiome.

**International Society for Chemical Ecology. Atlanta, GA. June 3<sup>rd</sup>-4<sup>th</sup>, 2019.** Global Impacts of the Microbiome Include Novel Conjugated Bile Acids that Stimulate FXR

**Keystone Meeting. Microbiome: Chemical Mechanisms and Biological Consequences. Montreal, Canada. March 10<sup>th</sup>-14<sup>th</sup>, 2019.** Global Impacts of the Microbiome Include Novel Conjugated Bile Acids that Stimulate FXR.

**University of Grenoble Alpes. Seminar for Medical School. Grenoble, France. November 20<sup>th</sup>, 2018.** Lungs, Germs and Steel: Fighting the Cystic Fibrosis Microbiome.

**International Workshop on Microbiome in HIV Pathogenesis, Prevention and Treatment. National Institute of Allergy and Infectious Diseases. Rockville, MD. Oct 16, 2018.** Chemistry from the Microbiome During Health and Disease.

**Helen De Vos Children's Hospital Grand Rounds. October 31<sup>st</sup>, 2018. Helen De Vos Children's Hospital, Grand Rapids, MI.** Lungs, Germs and Steel: Fighting the Cystic Fibrosis Lung Microbiome.

**Department of Medicine. Michigan State University. October 10<sup>th</sup>, 2018. Secchia Center, Grand Rapids, MI.** Lungs, Germs and Steel: Fighting the Cystic Fibrosis Lung Microbiome.

**Department of Microbiology and Molecular Genetics Seminar Series. Michigan State University. East Lansing, MI. September 18<sup>th</sup>, 2018.** Lungs, Germs and Steel: Fighting the Cystic Fibrosis Lung Microbiome

**Michigan State University Department of Biochemistry and Molecular Biology. Dec 15<sup>th</sup>, 2017. East Lansing, MI.** Chemical ecology of the microbiome.

**University of California Riverside Biochemistry Department Seminar. Nov 7<sup>th</sup>, 2017. UC Riverside.** Lungs, Germs and Steel: Fighting the Cystic Fibrosis Lung Microbiome.

**Skaggs School of Pharmacy Seminar. UCSD. Oct 27<sup>th</sup>, 2017.** Lungs, Germs and Steel: Fighting the Cystic Fibrosis Lung Microbiome.

**Peptide Therapeutics Symposium. Salk Institute. Oct 27<sup>th</sup>, 2017.** Lungs, Germs and Steel: Fighting the Cystic Fibrosis Lung Microbiome.

**Telluride Cystic Fibrosis Ecology and Eradication Conference. Telluride Science Center, Telluride, CO. Aug 7<sup>th</sup>-11<sup>th</sup>, 2017.** Niche Partitioning in the Cystic Fibrosis Lung Microbiome.

**Natural Products Affinity Group. Scripps Institute of Oceanography, La Jolla, CA. June 9, 2017.** Better living through chemistry: How molecules from our microbiome impact our health and disease.

**ASM Microbe. New Orleans, LA. June 1-5, 2017.** Microbiome impacts at organismal scales.

**Kavli Institute for Brain and Mind. Sanford Burnham Institute. La Jolla, CA. May 4, 2017.** Microbiome impacts at organismal scales.

**North American Cystic Fibrosis Conference. Orlando, FL. Oct 26-30, 2016.**  
 Talk 1: Rapid Response: Translating multi-omics data on CF exacerbations in clinically relevant time frames.  
 Talk 2: Testing the fermentation and exacerbation hypothesis.

**ISME 2016. Montreal, Canada. Aug 21<sup>st</sup>-26<sup>th</sup>.** Modeling the Dynamics of the Cystic Fibrosis Lung Microbiome in a Microcosm of a Mucus-Plugged Bronchiole.

**California Microbiome Initiative Meeting. San Diego, CA. Aug 12-14<sup>th</sup>. University of California at San Diego.** Lungs, Germs and Steel: Fighting the Cystic Fibrosis Microbiome.

**Illumina Inc. San Diego Microbiome Meeting. San Diego, CA. July 18, 2016.** Lungs, Germs and Steel: Fighting the Cystic Fibrosis Microbiome.

**ASM microbe 2016. BCEC, Boston, MA. June 16, 2016.** pH and Antibiotic Pressure Govern the Structure and Function of the Cystic Fibrosis Lung Microbiome.

**Human Microbiome Congress. Hilton Bayfront, San Diego, CA. Feb 10-11, 2016.** Structure and Function of the Cystic Fibrosis Lung Microbiome.

**North American Cystic Fibrosis Conference. Phoenix, AZ. Oct 8-10, 2015.** Metabolomics of Sputum Supports a Polymicrobial and Ceramide-Mediated Hyperinflammation model of CF disease.

**Telluride Cystic Fibrosis Ecology and Eradication Conference. Telluride Science Center, Telluride, CO. Aug 5<sup>th</sup>, 2015.** Cystic Fibrosis Metabolomics.

**Cystic Fibrosis Research Inc. National CF Family Education Conference. San Francisco, CA, Aug 3<sup>rd</sup>, 2015. San Francisco, CA.** Omics Approaches to Cystic Fibrosis Exacerbations.

**Cytoscape Network Analysis Workshop. Sanford Consortium for Regenerative Medicine. University of California at San Diego. April 17, 2015.** Networking Approaches Link Microbial and Host Physiology in the Cystic Fibrosis Lung.

**Understanding Microbial Communities Function, Structure, and Dynamics. Isaac Newton Institute for Mathematical Science. Cambridge University, Cambridge, UK. November 13, 2014.** Microbial and Host Physiology in the Cystic Fibrosis Lung.  
 Video of presentation available at: <https://www.newton.ac.uk/seminar/20141113150016002>

**ISME 2014. Seoul, South Korea. August 24<sup>th</sup>-29<sup>th</sup>, 2014** 'Omics' Methods Reveal How Chemistry Governs the Biology of Cystic Fibrosis Lung Infections.

**Cystic Fibrosis Research Inc. National CF Family Education Conference. San Francisco, CA, Aug 1<sup>st</sup>, 2014.** Omics Analysis of Cystic Fibrosis Pulmonary Exacerbations.

**Canadian Institute for Advanced Research Meeting. June 25<sup>th</sup>-29<sup>th</sup>, 2014. Prague, Czech Republic.** Metabolomics Approaches to Reveal the Chemical Diversity of Biological Systems.

### *SOCIETAL MEMBERSHIPS*

Microbiology Society  
 American Society for Microbiology  
 International Society for Microbial Ecology  
 Metabolomics Society  
 American Society for Mass Spectrometry

### *CERTIFICATIONS AND SPECIAL TRAINING*

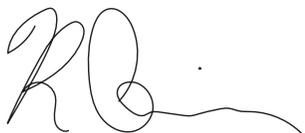
**Academic Communications Fellowship. 2019.** Completed four-day media training for academic science fellowship. Trained in communicating and speaking about science with media outlets social and national.

**Bioinformatics for Mass Spectrometry.** Experienced user of Global Natural Products Social Molecular Networking (GNPS, [gnps.ucsd.edu](http://gnps.ucsd.edu)) database. The first crowd-sourced mass spectrometry and metabolomics data repository and analysis pipeline.

**Modeling Microbial Communities.** Attended a workshop and think-tank on how to model the dynamics of microbial communities at the Isaac Newton Institute for Mathematics at Cambridge University. November 2014.

**Advanced Mass Spectrometry.** Trained on LC-MS/MS, GC-MS and MALDI-TOF mass spectrometry instruments, by members of Dr. Pieter Dorrestein's lab. January 2013.

**Registered and Certified Integrated Microbial Genomes User (IMG).** September 2011. Completed course on advanced assembly and analysis of microbial genomes and metagenomes using the Joint Genome Institute IMG system.

A handwritten signature in black ink, appearing to be 'RQ' followed by a long horizontal flourish.

Robert Quinn, PhD