

Jordan E. Bisanz

Department of Biochemistry and Molecular Biology
Pennsylvania State University
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Employment

Pennsylvania State University **State College PA, USA**
Assistant Professor of Biochemistry and Molecular Biology 2021-
Dorothy Foehr and J. Lloyd Huck Early Career Chair in Host-Microbiome Interactions

University of California San Francisco **San Francisco CA, USA**
Postdoctoral Scholar and Fellow 2015-2021
Principal Investigator: Peter Turnbaugh

Training and Education

Doctor of Philosophy **London ON, Canada**
Department of Microbiology and Immunology, University of Western Ontario 2010-2015
Graduate Advisor: Gregor Reid

Institut Pasteur de Lille **Lille, France**
Visiting Student 2015
Collaborators: Bruno Pot and Benoit Foligné

National Institute of Medical Research **Mwanza, Tanzania**
Visiting Student 2012
Collaborators: Joseph Mwanga and John Chagalucha

Bachelor of Medical Sciences **London ON, Canada**
Schulich School of Medicine and Dentistry, University of Western Ontario 2006-2010
Honors Specialization in Microbiology and Immunology with Distinction
Western Scholars Honors Society

Research Funding, Fellowships and Awards

Award for Early Career Applied and Biotechnological Research 2026
American Society for Microbiology

Clarivate Highly Cited Researchers 2025
Cross-Field award category based on previous 11 years. Represents top ~0.1% of researchers.

R35 GM151045 (PI: Bisanz) 2023-2028
National Institute of General Medical Science
Project title: Decoding Microbial Diversity in the Human Gut Microbiome.

R00 AI147165 (PI: Bisanz) 2021-2023
National Institute for Allergy and Infectious Disease
Project title: Diet-microbe interactions modulating host energy balance.

Young Investigator Grant in Probiotics Research (PI: Bisanz) 2023
Global Probiotics Council / Danone and Yakult
Project title: In with the good, out with the bad: engineering the microbiome to modulate dietary metal absorption.

R35 ES035027 (PI: Patterson, Co-I Bisanz) National Institute of Environmental Health Sciences Project title: Environmental Chemical Impact on the Host-Microbiome Interaction	2023-2031
R01 DK133334 (PI: Singh, Co-I Bisanz) National Institute of Diabetes and Digestive and Kidney Diseases Project title: Interplay of processed diet, gut microbiota, and interferon-linked mucosal immunity in the onset and prevalence of inflammatory bowel disease.	2023-2028
K99 AI147165-01 (PI: Bisanz) National Institute for Allergy and Infectious Disease Project title: Diet-microbe interactions modulating host energy balance. Application received impact score of 10.	2020-2022
NSERC Postdoctoral Fellowship Natural Sciences and Engineering Research Council of Canada 180 awarded internationally, ranked in top 15% of applications	2015-2017
Alexander Graham Bell Doctoral Canada Graduate Scholarship Natural Sciences and Engineering Research Council of Canada 261 awarded nationally, ranked in top 15% of applications	2012-2015
Ontario Graduate Scholarship Ontario Ministry of Training, Colleges and Universities, declined 2013	2011-2013
Students for Development Grant Canadian International Development Agency	2012

Publications

Total publications: 57

Total as a first author: 12

Total as a corresponding author: 10

Total manuscripts with PSU affiliation: 20

Citations: 30,210* H-index: 37* I-10 index: 50*

*Data collected from Google Scholar 13 Nov 2025

Underlined individuals represent direct trainees from PSU

Tian S, MS Kim, J Zhao, K Heber, F Hao, D Koslicki, AD Patterson and **JE Bisanz**. 2025. A synthetic microbiota designed through meta-analysis provides insight to community function in *Clostridioides difficile* resistance. **Cell Host & Microbe**. 33(3):373-387.

Heber K, S Tian, D Betancurt-Anzola, H Koo, and **JE Bisanz**. 2025. StrainR2 accurately deconvolutes strain-level abundances in synthetic microbial communities. **Bioinformatics**. 8(41):btaf440.

Koo H, K Heber, S Tian, F Hao, J Zhao, B Swencki-Underwood, AD Patterson, GE Townsend and **JE Bisanz**. A synthetic gut microbiota provides understanding of the maintenance and functional impact of phage. **mBio**. e0234125:10.1128/mbio.02341-25.

Kim MS and **JE Bisanz**. Design and application of synthetic human gut microbial communities. **Gut Microbes**. 17(1):2575923.

Li X, L Xu, B Demaree, C Noecker, **JE Bisanz**, DW Weisgerber, C Modavi, PJ Turnbaugh and A Abate. **2025**. Microbiome single cell atlases generated with a commercial instrument. **Advanced Science**. e2409338.

DiMattia ZS, J Zhao, F Hao, S Koshkin, **JE Bisanz**, AD Patterson, JA Fleming, PM Kris-Etherton, and KS Petersen. **2025**. Effect of varying quantities of lean beef as part of a mediterranean-style dietary pattern on gut microbiota and plasma, fecal, and urinary metabolites: a randomized crossover controlled feeding trial. **Journal of the American Heart Association**. 14:e041063.

Riley TM, T Wright, R Lamendella, **JE Bisanz**, JC See, K Kanani, P Kris-Etherton, K Petersen. **2025**. Nighttime pistachio consumption alters stool microbiota diversity and feature abundance compared to education to consume 1-2 carbohydrate exchanges (15-30g) over 12 weeks in adults with prediabetes: a secondary analysis from a randomized cross over trial. **Current Developments in Nutrition**. 9(7):107481.

Kyaw TS, M Sandy, K Trepka, JJN Goh, K Yu, V Dimassa, EN Bess, **JE Bisanz*** and PJ Turnbaugh*. **2024**. Human gut Actinobacteria boost drug absorption by secreting P-glycoprotein ATPase inhibitors. **iScience**. 27(6):110122. ***Corresponding Authors**

Anderson BD, DE Sepulveda, R Nachnani, A Cortez, A Beckett, **JE Bisanz***, JJ Kellogg*, WM Raup-Konsavage*. **2024**. High cannabigerol hemp extract moderates colitis and modulates the microbiome in an inflammatory bowel disease model. **Journal of Pharmacology and Experimental Therapeutics**. 390(3):331-341. ***Corresponding Authors**

McCurry MD, GD D'Agostino, JT Walsh, **JE Bisanz**, I Zalosnik, J Korzenik, X Dong, DJ Morris, JR Korzenik, AG Edlow, EP Balskus, PJ Turnbaugh, JR Huh, and AS Devlin. **2024**. Gut bacteria convert glucocorticoids into progestins in the presence of hydrogen gas. **Cell**. 187(12):2952-2968.

Zhao J, YW Sun, KM Chebn, C Aliaga, **JE Bisanz**, and K El-Bayoumy. **2024**. Black raspberry modulates cecal and oral microbiome at the early stage of a dibenzo[def,p]chrysene-induced murine oral cancer model. **Cancer Prevention Research**. 18(1):11-21.

Tian Y, B Rimal, **JE Bisanz**, W Gui, TM Wolfe, I Koo, IM Murray, SK Nettleford, S Yokoyama, F Dong, KS Prabhu, PJ Turnbaugh, ST Walk, GH Perdew, and AD Patterson. **2024**. Early-life exposure to a potent aryl hydrocarbon receptor ligand results in persistent changes to the microbiota and host glucose homeostasis. **Environmental Health Perspectives**. 132(8):087005.

Sepulveda DE, KE Vrana, JJ Kellogg, **JE Bisanz**, D Desai, NM Grazaine, WM Raup-Konsavage. **2024**. The Potential of Cannabichromene (CBC) as a Therapeutic Agent. **Journal Pharmacology and Experimental Therapeutics**. 391(2):206-213.

Mulisa G, R Pero-Gascon, V McCormack, **JE Bisanz**, FR Talukdar, T Abebe, M De Boevre and S De Saeger. **2024**. Multiple mycotoxin exposure assessment through human biomonitoring in an esophageal cancer case-control study in the Arsi-Bale districts of Oromia region of Ethiopia. **International Journal of Hygiene and Environmental Health**. 362:114466.

Rimal B, SL Collins, CE Tanes, ER Rocha, MA Granda, S Solanki, NJ Hoque, EC Gentry, I Koo, ER Reilly, F Hao, D Paudel, V Singh, T Yan, MS Kim, K Bittenger, JP Zackular, KW Krausz, D Desai, S Amin, JP Coleman, YM Shah, **JE Bisanz**, FJ Gonzalez, JP Vanden Heuvel, GD Wu, PC Dorrestein, EE Weinert, and AD Patterson. **2024**. Bile Acids are Hydrolase Catalyses Formation of Amine-Conjugated Bile Acids. **Nature**. 626(8000):859-863.

Carmody RC and **JE Bisanz**. 2023. Roles of the gut microbiome in weight management. **Nature Reviews Microbiology**. 21(8):535-550.

Kim MS, and **JE Bisanz**. 2023. Meta-organismal Metabolism in Cardiovascular Disease. **Cell Host & Microbe**. 31(1):1-2.

Anderson BD and **JE Bisanz**. 2023. Challenges and Opportunities of Strain Diversity in Gut Microbiome Research. **Frontiers in Microbiology**. 14:1117122.

Upadhyay V, R Suryawanshi, P Tasoff, M McCavitt-Malvido, G Kumar, V Murray, C Noecker, **JE Bisanz**, Y Hswen, C Ha, B Sreekumar, I. hen, S Lynch, M Ott, S Lee, and PJ Turnbaugh. 2023. Mild SARS-CoV-2 infection results in long-lasting microbiota instability. **mBio**. 14(4):300889-23.

Noecker C, J Sanchez, **JE Bisanz**, V Escalante, M Alexander, K Trepka, A Heinken, Y Liu, D Dodd, I Thiele, B DeFelice, and PJ Turnbaugh. 2023. Systems biology elucidates the distinctive metabolic niche filled by the human gut microbe *Eggerthella lenta*. **PLoS Biology**. 21(5):e3002125.

Tian S, and **JE Bisanz**. 2022. Making Gut Microbiomes from Scratch. **Cell Host & Microbe**. 30(11):1508-1509.

Collins SL, JG Stine, **JE Bisanz**, CD Okafor, and AD Patterson. 2022. Bile acids and the gut microbiome: metabolic interactions and impacts on disease. **Nature Reviews Microbiology**. 21(4):236-247.

Paik D, L Yao, Y Zhang, S Bae, GD D'Agostino, E Kim, EA Franzosa, J Avila-Pacheco, **JE Bisanz**, CK Rakowski, H Vlamakis, RJ Xavier, PJ Turnbaugh, RS Longman, MR Krout, CB Clish, C Huttenhower, JR Huh, and AS Sloan. 2022. Human gut bacteria produce T_H17-modulating bile acid metabolites. **Nature**. 603(7903):907-912.

Sbierski-Kind J, S Grenkowitz, S Schlickeiser, A Sandforth, M Friedrich, D Kunkel, R Glauben, S Brachs, K Mai, A Thürmer, A Radonić, O Drechsel, PJ Turnbaugh, **JE Bisanz**, HD Volk, and R Jumpertz von Schwartzberg. 2022. Effects of caloric restriction on the gut microbiome are linked with immune senescence. **Microbiome**. 10(1):57.

Jumpertz von Schwartzberg R*, **Bisanz JE***, S Lyalina, P Spanogiannopoulos, QY Ang, J Cai, S Dickman, M Friedrich, S.-Y. Liu, SL Collins, D Ingebrigsten, S Miller, JA Turnbaugh, AD Patterson, KS Pollard, K Mai, J Spranger, and PJ Turnbaugh. 2021. Caloric restriction disrupts the microbiota and colonization resistance. **Nature**. 595:272-277. **Equal contributions*.

Lam KN, P Spanogiannopoulos, P Soto-Perez, A Alexander, MJ Nalley, **JE Bisanz**, FB Yu, and PJ Turnbaugh. 2021. Phage-delivered CRISPR-Cas9 for strain-specific depletion and genomic deletions in the gut microbiota. **Cell Reports**. 37(5):109930.

Ang QY, DL Alba, V Upadhyay, **JE Bisanz**, J Cai, HL Lee, E Barajas, G Wei, AD Patterson, SK Koliwad, and PJ Turnbaugh. 2021. Difference in the gut microbiomes of distinct ethnicities within the same geographic area are linked to host metabolic health. **eLife**. e70349.

C Mirzayi, A Renson, Genomic Standards Consortium, Massive Analysis and Quality Control Society, F Zohra, S Elsafoury, L Geistlinger, LJ Kasselmann, K Eckenrode, J van de Wijert, A Loughman, FZ Marques, DA MacIntyre, M Arumugam, R Azhar, F Beghini, K Bergstrom, A Bhatt, **JE Bisanz**, J Braun, H Corrada Bravo, GA Buck, F Bushman, D Casero, G Clarke, M Carmen Collado, PD Cotter, JF Cryan, RT Demmer, S Devkota, E Elinav, JS Escobar, J Fettweis, RD Finn, AA Fodor, S Forslund, A Franke, C Furlanello, J Gilbert, E Grice, B

Haibe-Kains, S Handley, P Herd, S Holmes, JP Jacobs, L Karstens, R Knight, D Knights, O Koren, DS Kwon, M Langille, B Lindsay, D McGovern, AC McHardy, S McWeeney, NT Mueller, L Nezi, M Olm, N Palm, E Pasolli, J Raes, MR Redinbo, M Rühlemann, R Balfour Sartor, PD Schloss, L Schriml, E Segal, M Shardell, T Sharpton, E Smirnova, H Sokol, JL Sonnenburg, S Srinivasan, LB Thingholm, PJ Turnbaugh, V Upadhyay, RL Walls, P Wilmes, T Yamada, G Zeller, M Zhang, N Zhao, L Zhao, W Bao, A Culhane, V Devanarayan, J Dopazo, X Fan, M Fischer, W Jones, R Kusko, CE Mason, TR Mercer, SA Sansone, A Scherer, L Shi, S Thakkar, W Tong, R Wolfinger, C Hunter, N Segata, C Huttenhower, JB Dowd, HE Jones, and L Waldron. **2021**. Reporting guidelines for human microbiome research: the STORMS checklist. **Nature Medicine**. 27:1885-1892.

Bisanz JE, P Soto Perez, C Noecker, AA Aksenov, KN Lam, EN Bess, HJ Haiser, TS Kyaw, FB Yu, VM Rekdal, CWY Ha, S Devkota, EP Balskus, PC Dorrestein, E Allen-Vercoe, and PJ Turnbaugh. **2020**. A genomic toolkit for the mechanistic dissection of intractable human gut bacteria. **Cell Host & Microbe**. 27(6):1001-1013.

Bess EN, **JE Bisanz**, F Yarza, A Bustion, B Rich, X Li, S Kitamura, E Waligurski, QY Ang, D Alba, P Spanogiannopoulos, S Nayfach, S Koliwad, D Wolan, A Franke, and PJ Turnbaugh. **2020**. Genetic basis for the cooperative bioactivation of plant lignans by *Eggerthella lenta* and other human gut bacteria. **Nature Microbiology**. 5(1):56-66.

Man K, V Escalante, C Bowman, Y Tian, **JE Bisanz**, J Nikkanen, K Ganeshan, B Wang, AD Patterson, PJ Turnbaugh, and A Chawla. **2020**. A thermogenic fat-epithelium axis regulates intestinal tissue tolerance. **PNAS**. 117(50):32029-32037.

Greenstein RA, RR Barrales, N Sanchez, **JE Bisanz**, S Braun, and B Al-Sady. **2020**. Set1/COMPASS repels heterochromatin invasion at euchromatic sites by disrupting Suv39/Clr4 activity and nucleosome stability. **Genes and Development**. 34(1-2):99-117.

Rekdal VM, Bernardino PN, Luescher MU, Kiamehr S, Le C, **JE Bisanz**, PJ Turnbaugh, EN Bess, and EP Balskus. **2020**. A widely distributed metalloenzyme class enables gut microbial metabolism of host- and diet-derived catechols. **eLife**. 9:e50845.

Pröbstel AK, L Schirmer, X Zhou, K Kim, R Baumann, A Ramesh, AL Greenfield, R Dandekar, S Vistnes, RD Schubert, OL Rojas, S Singh, EB Tran, P Barba, **JE Bisanz**, PJ Turnbaugh, LR Shiow, J Graves, BAC Cree, SL Hauser, JL Gommerman, MR Wilson, and SE Baranzini. Gut microbiota-specific B cells traffic to the brain in active multiple sclerosis. **Science Immunology**. 5(53):eabc7191.

Bisanz JE, V Upadhyay, JA Turnbaugh, and PJ Turnbaugh. **2019**. Meta-analysis reveals reproducible gut microbiome alterations in response to a high-fat diet. **Cell Host & Microbe**. 26(2):265-272.

Soto Perez P*, **JE Bisanz***, JD Berry, KN Lam, J Bondy-Denomy, and PJ Turnbaugh. **2019**. CRISPR-Cas system of a prevalent human gut bacterium reveals hyper-targeting against phages in a human virome catalog. **Cell Host & Microbe**. 26(3):325-335. **Equal contributions*.

Carmody RN, **JE Bisanz**, CF Maurice, S Lyalina, BP Bowen, KB Louie, D Treen, K Chaideh, VM Rekdal, EN Bess, P Spanogiannopoulos, KC Bauer, TW Balon, KS Pollard, TR Northen, and PJ Turnbaugh. **2019**. Cooking shapes the structure and function of the gut microbiome. **Nature Microbiology**. 4(12):2052-2063.

Rekdal VM, EN Bess, **JE Bisanz**, PJ Turnbaugh, and EP Balskus. **2019**. Discovery and inhibition of an interspecies gut bacterial pathway for Levodopa metabolism. **Science**. 364(6445):eaau6323.

Chagwedera DN, QY Ang, **JE Bisanz**, K Ganeshan, J Cai, AD Patterson, PJ Turnbaugh, and A Chawla. **2019**. Nutrient sensing in CD11c cells alters the gut microbiome to regulate food intake and body mass. **Cell Metabolism**. 30(2):364-373.

E Bolyen, JR Rideout, MR Dillon, NA Bokulich, CC Abnet, GA Al-Ghalith, H Alexander, EJ Alm, M Arumugam, F Asnicar, Y Bai, **JE Bisanz**, K Bittinger, A Brejnrod, CJ Brislawn, CT Brown, BJ Callahan, AM Caraballo-Rodríguez, J Chase, EK Cope, R Da Silva, C Diener, PC Dorrestein, GM Douglas, DM Durall, C Duvallet, CF Edwards, M Ernst, M Estaki, J Fouquier, JM Gauglitz, SM Gibbons, DL Gibson, A Gonzalez, K Gorlick, J Guo, B Hillmann, S Holmes, H Holste, C Huttenhower, GA Huttley, S Janssen, AK Jarmusch, L Jiang, BD Kaehler, KB Kang, CR Keefe, P Keim, ST Kelley, D Knights, I Koester, T Kosciulek, J Kreps, MGI Langille, J Lee, R Ley, YX Liu, E Loftfield, C Lozupone, M Maher, C Martoz, BD Martin, D McDonald, LJ McIver, AV Melnik, JL Metcalf, SC Morgan, JT Morton, AT Naimey, JA Navas-Molina, LF Nothias, SB Orchanian, T Pearson, SL Peoples, D Petras, ML Preuss, E Pruesse, LB Rasmussen, A Rivers, MS Robeson, P Rosenthal, N Segata, M Shaffer, A Shiffer, R Sinha, SJ Song, JR Spear, AD Swofford, LR Thompson, PJ Torres, P Trinh, A Tripathi, PJ Turnbaugh, S Ul-Hasan, JJJ van der Hooft, F Vargas, Y Vásquez-Baeza, E Vogtmann, M von Hippel, W Walters, Y Wan, M Wang, J Warren, KC Weber, CHD Williamson, AD Willis, ZZ Xu, JR Zaneveld, Y Zhang, Q Zhy, R Knight, and JG Caporaso. **2019**. Reproducible, interactive, scalable and extensive microbiome data science using QIIME 2. **Nature Biotechnology**. 37(8):852-857.

Bisanz JE, P Spanogiannopoulos, LM Pieper, AE Bustion, and PJ Turnbaugh. **2018**. How to determine the role of the microbiome in drug disposition. **Drug Metabolism and Disposition**. 46(11):1588-1596.

Koppel N, **JE Bisanz**, ME Pandelia, PJ Turnbaugh, and EP Balskus. **2018**. Discovery and characterization of a prevalent human gut bacterial enzyme sufficient for the inactivation of a family of plant toxins. **eLife**. 7:e33953.

Al KF, **JE Bisanz**, GB Gloor, G Reid, and JP Burton. **2018**. Evaluation of sampling and storage procedures on preserving the community structure of stool microbiota: a simple at-home toilet-paper collection method. **Journal of Microbiological Methods**. 144:117-121.

Daisley BA, M Monachese, M Trinder, **JE Bisanz**, JA Chmiel, JP Burton, and G Reid. **2019**. Immobilization of cadmium and lead by *Lactobacillus rhamnosus* GR-1 mitigates apical-to-basolateral heavy metal translocation in a Caco-2 model of the intestinal epithelium. **Gut Microbes**. 10(3):321-333.

Sinha R, G Abu-Ali, E Vogtmann, AA Fodor, B Ren, A Amir, E Schwager, J Crabtree, S Ma, **The Microbiome Quality Control Project Consortium**, CC Abnet, R Knight, O White, and C Huttenhower. **2017**. Assessment of variation in microbial community amplicon sequencing the Microbiome Quality Control (MBQC) project consortium. **Nature Biotechnology**. 35(11):1077-1086.

Harvie RM, AW Chisholm, **JE Bisanz**, JP Burton, P Herbison, K Schultz, and M Schultz. **2017**. Long-term irritable bowel syndrome system control with reintroduction of selected FODMAPs. **World Journal of Gastroenterology**. 23(25):4632-4643.

Bisanz JE, P Suppiah, M Thomson, T Milne, N Yeoh, A Nolan, G Ettinger, G Reid, GB Gloor, JP Burton, M Cullinan, and S Stebbings. **2016**. The oral microbiome of patients with axial spondyloarthritis compared to healthy individuals. **PeerJ**. 4:e2095.

Bisanz JE, MK Enos, G PrayGod, S Seney, JM Macklaim, S Chilton, D Willner, R Knight, C Fusch, G Fusch, GB Gloor, JP Burton, and G Reid. **2015**. The microbiota at multiple body sites during pregnancy in a rural Tanzanian population and the effects of Moringa supplemented probiotic yogurt. **Applied and Environmental Microbiology**. 81(15):4965-4975.

Trinder M, **JE Bisanz**, JP Burton, and G Reid. **2015**. Probiotic lactobacilli: a potential prophylactic treatment for reducing pesticide absorption in humans and wildlife. **Beneficial Microbes**. 6(6):841-847.

McMillan A, S Rulisa, M Sumarah, JM Macklaim, J Renaud, **JE Bisanz**, GB Gloor, and G Reid. **2015**. A multi-platform metabolomics approach identifies highly specific biomarkers of bacterial diversity in the vagina of pregnant and non-pregnant women. **Scientific Reports**. 5:14174.

Bisanz JE, MK Enos, J Mwanga, J Chagalucha, JP Burton, GB Gloor, and G Reid. **2014**. Randomized open-label pilot study of the influence of probiotics and the gut microbiome on toxic metal levels in Tanzanian pregnant women and school children. **mBio**. 5(5):e01580-14.

Bisanz JE, JM Macklaim, GB Gloor, and G Reid. **2014**. Bacterial metatranscriptome analysis of a probiotic yogurt using an RNA-Seq approach. **International Dairy Journal**. 39(2):284-292.

Bisanz JE, S Seney, A McMillan, R Vongsa, D Koenig, GB Gloor, M Sumarah, B Ford, D Herman, JP Burton, and G Reid. **2014**. A systems biology approach investigating the effect of *Lactobacillus rhamnosus* GR-1 and *L. reuteri* RC-14 on the vaginal microbiome and host responses in a double blind, placebo-controlled clinical trial of postmenopausal women with intermediate Nugent scores. **PLoS ONE**. 9(8):e104511.

Reid JN, **JE Bisanz**, M Monachese, JP Burton, and G Reid. **2013**. The rationale for probiotics improving reproductive health and pregnancy outcomes. **American Journal of Reproductive Immunology**. 69(6):558-566.

Hummelen R*, JM Macklaim*, **JE Bisanz***, JA Hammond, A McMillan, R Vongsa, D Koenig, GB Gloor, and G Reid. **2011**. Vaginal microbiome and epithelial gene array in post-menopausal women with moderate to severe dryness. **PLoS ONE**. 6(11):e26602. ***Equal contributions**.

Bisanz JE, and G Reid. **2011**. Unraveling how probiotic yogurt works. **Science Translational Medicine**. 3(106):106ps41

Macphee RA, R Hummelen, **JE Bisanz**, WL Miller, and G Reid. **2010**. Probiotic strategies for the treatment and prevention of bacterial vaginosis. **Expert Opinion on Pharmacotherapy**. 11(18):2985-2995.

Patents

Bisanz JE, S Tian, E Weinert, B Underwood. A synthetic microbiota and related processes and apparatuses. US Provisional Patent Application 63/760,164.

Bisanz JE, G Reid, M Monachese, JET Van Hylckama Vlieg, T Smokvina, and JP Burton. Food grade bacteria for the removal of toxic compounds. EU Patent #EP2833898B1, US Patent # US10487305, Canada Patent #CA 2869566, Chinese Patent #CN 104755090B.

Bisanz JE, G Reid, M Monachese, JET Van Hylckama Vlieg, T Smokvina, and JP Burton. *Lactobacillus rhamnosus* CNCM I-4716 food grade bacteria. US Patent #US9540609B2, EU Patent #EP3031931B1.

Oral Presentations

American Chemical Society Fall Meeting
Ohio State University Department of Microbiology
University of Utah Department of Pathology Seminar

Washington DC, USA – 2025
Columbus OH, USA – 2025
Salt Lake UT, USA – 2024

Curriculum Vitae

Jordan E Bisanz

Trends Microbiology Metagenomic Approaches in Microbiome Research	Online Webinar – 2024
American Chemical Society World Microbiome Day	Online Webinar – 2024
NCCIH Workshop on Endocrine-Disrupting Chemicals	Bethesda MD, USA – 2024
Qiagen Human Microbiome Webinar Series	Online Webinar – 2024
AdventHealth Translational Research Institute	Orlando FL, USA – 2024
Microbiome Data Congress	Boston MA, USA – 2023
Leibniz Institute for Natural Product Research and Infection Biology	Jena, Germany – 2023
Claflin University Biology Department	Orangeburg, SC – 2023
U Penn Big Data in Biomedical and Population Health Sciences	Philadelphia PA, USA – 2022
American Association of Pharmaceutical Scientists PharmSci 2022	Boston MA, USA – 2022
Microbiome and Probiotic R&D Forum	Miami FL, USA – 2022
International Conference on the Bioscience of Lipids	Online Webinar – 2022
Penn State Nutritional Sciences Colloquium	State College PA, USA – 2022
Penn State Department of Food Science Seminar	State College PA, USA – 2022
Penn State Microbiome Center Seminar Series	State College PA, USA – 2021
ETH Zurich Institute of Food, Nutrition and Health Seminar	Zurich, Switzerland – 2021
UC Berkeley CCB/SPH Bioinformatics Seminar	Berkeley CA, USA – 2020
PSU Biochemistry and Molecular Biology Seminar	State College PA, USA – 2020
University of Illinois UC Microbial Systems Initiative Seminar	Urbana IL, USA – 2020
UC Irvine Molecular Biology and Biochemistry Seminar	Irvine CA, USA – 2020
University of Washington Microbiology Seminar	Seattle WA, USA – 2020
Chan Zuckerberg Microbiome Initiative Symposium	San Francisco CA, USA – 2020
Dartmouth Microbiology and Immunology Seminar	Lebanon NH, USA – 2019
UC Davis Innovation Institute for Food & Health Summit	Davis CA, USA – 2019
Infectious Disease Association of California Winter Symposium	Oakland CA, USA – 2019
UCSF Diabetes and Obesity Retreat	Santa Cruz CA, USA – 2018
Anaerobe Society of the Americas: Anaerobe 2018	Las Vegas NV, USA – 2018
UCSF Microbial Pathogenesis and Host Defense Seminar Series	San Francisco CA, USA – 2017
UCSF Research in Progress Seminars	San Francisco CA, USA – 2017
Charité Hospital Center for Cardiovascular Research Seminar	Berlin, Germany – 2016
Berchtesgaden Microbiome Science Days	Berchtesgaden, Germany – 2016
Beneficial Microbes Conference	The Hague, Netherlands – 2015
Institut Pasteur Seminar Series	Lille, France – 2015
International Union of Microbiological Societies	Montreal QC, Canada – 2014
International Scientific Association for Probiotics and Prebiotics	Aberdeen, Scotland – 2014
Exploring Human Host-Microbiome Interactions in Health and Disease	Cambridge, England – 2013
University of Reading: Whiteknights Guest Seminar	Reading, England – 2013
National Institute for Medical Research Guest Seminar	Mwanza, Tanzania – 2012
Canadian Society of Microbiologists Student Symposium Competition	St. John's NL, Canada – 2011

Trainees

Name	Role	Timeframe	Current Position	Awards
Susan Tian	Graduate Student	2021 – 2025	Postdoc @ UCSF	-Paul Berg Prize for Outstanding Student in Molecular Biology at PSU
Ben Anderson	Graduate Student	2021 – current	-	-Stephen B. Brumbach Distinguished Graduate Fellowship
Min Soo Kim	Graduate Student	2022 – current	-	-F31 AI183815 -T32 DK120509
Shane Connolly	Graduate Student	2023 – current	-	-Stephen B. Brumbach Distinguished Graduate Fellowship -T32 DK120509 -T32 GM156692
Jingcheng Zhao	Postdoctoral Fellow	2022 – current	-	-National Dairy Council Early Career Investigator Award
Daniela Betancurt-Anzola	Graduate Student	2022 – 2024	PhD Candidate (Couradeau lab PSU)	-ASM Future Leaders Mentoring Fellow -NMDC Data Ambassador
Girma Mulisa	Remote PhD Supervisor	2021-2025	Assistant Professor, Addis Ababa University	-
Heejung Koo	Undergrad Student	2021 – 2025	PhD Candidate (UPenn)	-ECoS Undergraduate Research Award -ABRCMS travel award
Kerim Heber	Undergrad Student	2023 – 2025	PhD Candidate (UPenn)	-
Aviauna Beckett	Undergrad Student	2023 – 2025	-	-
Dean Miller	Undergrad Student	2021 – 2023	PhD Candidate (Princeton)	-ECoS Undergraduate Research Award -John and Paige Lapinski Undergraduate Fellowship
Ahmed Al-Thenyan	Undergrad Student	2021 – 2022	Emergency Medical Technician (Alpha Fire Company)	-
Jaden Carper	Undergrad Technician	2021 – 2022	Biology Teacher (Shikellamy School District)	-

Teaching Experience

Instructor (BMB 502 Critical Scientific Analysis) 2024-2025

Co-taught course focusing on critical thinking in the analysis of scientific manuscripts, poster presentations, and seminars.

Instructor (BMB 521 Special Topics in Microbiology) 2024

Coordinated team-taught course focusing on recent developments in microbiology for graduate students.

Instructor (MICRB 410 Principles of Immunology) 2023-2025

Department of Biochemistry and Molecular Biology PSU

Taught course employing active learning methodologies to cover major topics relevant to immunology with special section on interpretation of experimental data and developments in systems immunology.

Guest Instructor (BMB 598 Special Topics in Microbiology) 2022

Department of Biochemistry and Molecular Biology PSU

Delivered 2 lectures on current topics in microbiome research and prepared student challenge problem.

Instructor (Microbial Bioinformatics Workshop Series) 2020

Benioff Center for Microbiome Medicine

Prepared and co-taught sessions on BASH, package managers, cluster computing, QIIME2, R, and the Tidyverse. Developed in response to need for training opportunities during COVID-19 shelter-in-place order.

Guest Instructor (BMS270/BMI219 The Human Microbiome) 2017-2021

Biomedical Science / Biological and Medical Informatics Programs (UC San Francisco)

Delivered lecture and tutorial for manipulating high-throughput DNA sequencing and exploratory data analysis of 16S rRNA amplicon sequencing data. Instructor evaluations: 4.5/5 (2018), 4.8/5 (2019).

Tutorial content: jbisanz.github.io/BMS270_BMI219

Lecturer/Teaching Assistant (Microbiology for Nursing 3820A) 2013-2014

Department of Microbiology and Immunology, Western University

Delivered 1-hour lectures on prevention, diagnosis, and treatment of *Neisseria*, *Chlamydia*, and *Spirochetes* for 3rd year undergraduate course of 302 students. Prepared, administered, and graded randomized case studies comprising 25% of final grade.

Teaching Assistant (Introduction to Biology 1002B) 2014

Department of Biology, Western University

Delivered 2-hour lectures and facilitated student discussion groups covering topics relating to scientific literacy and research.

Teaching Assistant (Genetics 2581A) 2013

Department of Biology, Western University

Delivered 1.5-hour tutorial lectures on basic concepts in prokaryotic and eukaryotic genetics.

Teaching Assistant (Biology of Prokaryotes Lab Course) 2011

Department of Microbiology and Immunology, Western University

Taught basic bacteriology lab skills including media preparation, culture, differential biochemical identification tests and API-20E identification.

Service

Associate Editor: Anaerobe 2021 – Present

Penn State Microbiome Center Executive Committee 2023 – Present

Faculty Advisor: Penn State Gnotobiotics Facility 2021 – Present

Faculty Director: One Health Microbiome Center Co-laboratory 2022 – Present

Ad hoc reviewer: Interspecies Microbial Interactions and Infections Study Section (IMII) 2025
National Institutes of Health

Ad hoc reviewer: Drug and Biological Disposition and Toxicity Study Section (DBDT) 2023 – 2024
National Institutes of Health

Ad hoc reviewer: Collaborative Program Grant for Multidisciplinary Teams (RM1) 2025
National Institute of General Medical Sciences

Ad hoc reviewer: Member Conflict- Applied Immunology and Disease Control 2025
National Institute of General Medical Sciences

Ad hoc reviewer: Directorate for Technology, Innovation and Partnership 2025
Natural Science Foundation

Ad hoc reviewer: Directorate for Biological Sciences 2025
Natural Science Foundation

Curriculum Vitae

Jordan E Bisanz

Toxicology Search Committee

2024 – 2025

Department of Veterinary and Biomedical Sciences/Institute for Energy and the Environment, PSU

Microbiology Search Committee

2024 – 2025

Department of Biochemistry and Molecular Biology, PSU

Department Head Search Committee

2022 – 2023

Department of Biochemistry and Molecular Biology, PSU

Graduate Recruitment Committee

2021 – 2023

Biochemistry, Microbiology, and Molecular Biology PhD Program, PSU

Climate and Diversity Committee

2021 – 2022

Department of Biochemistry and Molecular Biology, PSU

***Ad hoc* Referee**

2020 – Present

Flanders Research Foundation (FWO) Postdoctoral Fellowship Committee, Graduate Women in Science Fellowship Committee, Benioff Microbiome Center Grant Reviewer, Austrian Science Fund, Polish National Science Center, Wellcome Trust

Ad hoc Reviewer (185 assignments from 55 journals)

Journal	# Assignments	Years
Nature Microbiology	16	2021-2025
Gut Microbes	8	2023-2025
mBio	7	2020-2025
Cell Host & Microbe	6	2021-2025
mSystems	6	2021-2025
Cell	5	2023-2025
Cell Reports	4	2019-2025
Nature Medicine	3	2022-2025
Nature Metabolism	3	2022-2025
Science Translational Medicine	3	2020-2025
Environmental Health Perspectives	2	2023-2025
BMC Microbiology	1	2025-2025
Cell Metabolism	1	2025-2025
Nature Reviews Microbiology	1	2025-2025
eBioMedicine	1	2025-2025
eLife	5	2020-2024
Genome Biology	4	2022-2024
Nature Communications	3	2019-2024
Nutrition Reviews	2	2024-2024
PNAS	2	2019-2024
Journal of Clinical Investigation	1	2024-2024
Nature Biotechnology	1	2024-2024
mSpectrum	1	2024-2024
Genome Medicine	4	2021-2023
Microbial Genomics	4	2021-2023
Anaerobe	3	2023-2023
Cell Reports Medicine	3	2022-2023
ISME J	3	2018-2023
Microbiology Spectrum	3	2022-2023
Nature Immunology	3	2022-2023
Human Genomics	2	2023-2023
Genome Research	1	2023-2023
NPJ Biofilms and Microbiomes	1	2023-2023
American Journal of Clinical Nutrition	1	2022-2022
Bioinformatics	1	2022-2022
Computational and Structural Biotechnology	1	2022-2022
Journal of Agriculture and Food Chemistry	1	2022-2022
Nucleic Acid Research	1	2022-2022
iScience	1	2022-2022
Microbiome	27	2016-2021
FEMS Microbiology Ecology	1	2021-2021
Frontiers in Microbiology	1	2021-2021
Applied and Environmental Microbiology	15	2016-2020
British Journal of Nutrition	2	2020-2020
Communications Biology	2	2020-2020
Environment International	2	2020-2020
Nutrients	2	2017-2020
mSphere	1	2020-2020
Frontiers in Nutrition	1	2019-2019
Microorganisms	1	2019-2019
PLoS One	7	2014-2018
Nutrition Research	1	2017-2017
Beneficial Microbes	1	2016-2016
Environmental Science and Technology	1	2015-2015
International Journal of Food Microbiology	1	2015-2015

Outreach

Science, Microbes & Health Podcast 2023

International Scientific Association for Probiotics and Prebiotics

Interviewed to discuss the bacterial species concept and how it applies to microbiome research and probiotic applications. Available at: isappscience.org/episode-31-microbial-species/.

Expert Interviewee 2023

TvN (South Korea)

Interviewed to discuss the human microbiome in metabolic health as part of the weekly TV show “The Power of Superfoods” shown on the major cable network TvN.

Science Outreach Panelist 2023

State Theatre (State College PA, USA)

Part of an expert panel at a showing of the documentary “The Invisible Extinction” to answer audience questions about the human microbiome.

Guest Speaker 2022

American Society for Microbiology Student Chapter

Delivered talk to PSU undergraduates on the microbiome research.

Guest Speaker 2019

NutrigenomX/ Global Society for Genetics and Genome Biology (University of California Berkeley)

Delivered talk to UCB undergraduate students on the microbiota in health and its interactions with diet.

Science Outreach Panelist 2014

London Public Library (London ON, Canada)

Part of an expert panel at a showing of the documentary Microbirth to answer audience questions about the human microbiome and probiotics.

Students and Fellows Association Executive 2013-2015

International Scientific Association for Probiotics and Prebiotics

Co-organized conferences (Aberdeen 2014, Washington DC 2015) and led recruitment efforts for new members.

Relevant Additional Training

Evidence Based Teaching Academy 2025

Eberly College of Science

A 1-week professional development program aiding instructors to redesign and refine their courses using research-supported teaching practices. Combined workshops, peer discussion, and hands-on course planning.

Responsible Conduct of Research Course 2021

UCSF Office for Postdoctoral Scholars

Over 8 one-hour sessions, this course addresses important issues including societal implications of scientific misconduct, entrepreneurship, collaborative science, responsible authorship, animal welfare, implications of genomic research, mentorship, and racism in science.

Inclusive Research Mentorship Course 2020

UCSF Office of Career and Professional Development

A 12 hour course covering topics relating to hiring, training, and supervising team members from diverse backgrounds.

Scientific Leadership and Management Skills Course**2019**

Gladstone Institutes

Practical strategies and theories for beginning and leading research groups in an academic environment. 16-hours covering the following topics: motivating, managing conflict, strategic time and resource management, staffing, building lab culture, establishing a research program, vision and mission statements, and negotiation.

Relevant Work Experience**London Public Health Laboratory****2008-2009**

Seasonal Laboratory Assistant

Ontario Ministry of Health/ Ontario Public Health Agency

Supervisors: Abdul Chagla, and Christine Fry.