



Justin L. Sonnenburg

Professor of Microbiology and Immunology

Microbiology & Immunology

Bio

ACADEMIC APPOINTMENTS

- Professor, Microbiology & Immunology
- Member, Bio-X
- Member, Wu Tsai Human Performance Alliance
- Member, Maternal & Child Health Research Institute (MCHRI)

HONORS AND AWARDS

- NIH Director's New Innovator Award, NIH (2009)
- Burroughs Wellcome Fund Investigators in Pathogenesis of Infectious Disease Award, Burroughs Wellcome Fund (2011)
- NIH Director's Pioneer Award, NIH (2017)

PROFESSIONAL EDUCATION

- BS, UC Davis , Biochemistry (1996)
- PhD, UC San Diego , Biomedical Sciences (2003)

LINKS

- Sonnenburg Lab Website: <http://sonnenburglab.stanford.edu>

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

The goals of the Sonnenburg Lab research program are to (i) elucidate the basic mechanisms that underlie dynamics within the gut microbiota and (ii) devise and implement strategies to prevent and treat disease in humans via the gut microbiota. We investigate the principles that govern gut microbial community function and interaction with the host using experimental systems ranging from gnotobiotic mice to humans. We pursue molecular mechanisms of host-microbial interaction using an array of technologies including gnotobiotic and conventional mouse models, quantitative imaging, molecular genetics and synthetic biology, and a metabolomics pipeline focused on defining microbiota-dependent metabolites. The synergy of these diverse techniques provides insight into the dynamics of a microbial ecosystem in response to cues ranging from nutrition to pathogen-induced inflammation. Studies of microbiomes diverse human cohorts, ranging from indigenous populations in Africa, Asia, and South America to dietary intervention trials in cohorts of US residents, have provided great insight into microbiome dynamics and fuel a pipeline of reverse translational studies.

CLINICAL TRIALS

- Contrasting Ketogenic and Mediterranean Diets in Individuals With Type 2 Diabetes and Prediabetes: The Keto-Med Trial, Not Recruiting

- The RAMP Study - Rejuvenation of the Aging Microbiota With Prebiotics, Not Recruiting

Teaching

COURSES

2022-23

- Frontiers in Microbiology and Immunology: MI 250 (Spr)
- Gut Microbiota in Health and Disease: BIOE 221G, GENE 208, MI 221 (Aut)

2021-22

- Frontiers in Microbiology and Immunology: MI 250 (Aut, Win, Spr)
- Gut Microbiota in Health and Disease: BIOE 221G, GENE 208, MI 221 (Aut)

2020-21

- Frontiers in Microbiology and Immunology: MI 250 (Aut, Win, Spr)
- Gut Microbiota in Health and Disease: BIOE 221G, MI 221 (Aut)

2019-20

- Frontiers in Microbiology and Immunology: MI 250 (Aut, Win, Spr)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Kaisha Benjamin, Mary DeFeo, Ruth Schade, Gabby Tender, Bokai Zhu

Postdoctoral Faculty Sponsor

Emily Ebel, Jessica Fessler, Emma Guiberson, Leah Guthrie, Matthew Olm, Elektra Robinson, Handuo Shi, Tadashi Takeuchi

Doctoral Dissertation Advisor (AC)

Elisa Caffrey, Matthew Carter, Rebecca Gellman

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Microbiology and Immunology (Phd Program)

Publications

PUBLICATIONS

- **Robust variation in infant gut microbiome assembly across a spectrum of lifestyles.** *Science (New York, N.Y.)*
Olm, M. R., Dahan, D., Carter, M. M., Merrill, B. D., Yu, F. B., Jain, S., Meng, X., Tripathi, S., Wastyk, H., Neff, N., Holmes, S., Sonnenburg, E. D., Jha, et al
2022; 376 (6598): 1220-1223
- **Impact of a 7-day homogeneous diet on interpersonal variation in human gut microbiomes and metabolomes.** *Cell host & microbe*
Guthrie, L., Spencer, S. P., Perelman, D., Van Treuren, W., Han, S., Yu, F. B., Sonnenburg, E. D., Fischbach, M. A., Meyer, T. W., Sonnenburg, J. L.
2022
- **C. difficile exploits a host metabolite produced during toxin-mediated disease.** *Nature*
Pruss, K. M., Sonnenburg, J. L.
2021
- **Gut-microbiota-targeted diets modulate human immune status.** *Cell*
Wastyk, H. C., Fragiadakis, G. K., Perelman, D., Dahan, D., Merrill, B. D., Yu, F. B., Topf, M., Gonzalez, C. G., Van Treuren, W., Han, S., Robinson, J. L., Elias, J. E., Sonnenburg, et al
2021

- **A metabolomics pipeline for the mechanistic interrogation of the gut microbiome.** *Nature*
Han, S., Van Treuren, W., Fischer, C. R., Merrill, B. D., DeFelice, B. C., Sanchez, J. M., Higginbottom, S. K., Guthrie, L., Fall, L. A., Dodd, D., Fischbach, M. A., Sonnenburg, J. L.
2021; 595 (7867): 415-420
- **Vulnerability of the industrialized microbiota.** *Science (New York, N.Y.)*
Sonnenburg, J. L., Sonnenburg, E. D.
2019; 366 (6464)
- **Transient Osmotic Perturbation Causes Long-Term Alteration to the Gut Microbiota.** *Cell*
Tropini, C., Moss, E. L., Merrill, B. D., Ng, K. M., Higginbottom, S. K., Casavant, E. P., Gonzalez, C. G., Fremin, B., Bouley, D. M., Elias, J. E., Bhatt, A. S., Huang, K. C., Sonnenburg, et al
2018; 173 (7): 1742
- **An exclusive metabolic niche enables strain engraftment in the gut microbiota** *NATURE*
Shepherd, E., DeLoache, W. C., Pruss, K. M., Whitaker, W. R., Sonnenburg, J. L.
2018; 557 (7705): 434+
- **Gut microbiome transition across a lifestyle gradient in Himalaya.** *PLoS biology*
Jha, A. R., Davenport, E. R., Gautam, Y. n., Bhandari, D. n., Tandukar, S. n., Ng, K. M., Fragiadakis, G. K., Holmes, S. n., Gautam, G. P., Leach, J. n., Sherchand, J. B., Bustamante, C. D., Sonnenburg, et al
2018; 16 (11): e2005396
- **Tunable Expression Tools Enable Single-Cell Strain Distinction in the Gut Microbiome** *CELL*
Whitaker, W. R., Shepherd, E. S., Sonnenburg, J. L.
2017; 169 (3): 538-?
- **Seasonal cycling in the gut microbiome of the Hadza hunter-gatherers of Tanzania.** *Science (New York, N.Y.)*
Smits, S. A., Leach, J. n., Sonnenburg, E. D., Gonzalez, C. G., Lichtman, J. S., Reid, G. n., Knight, R. n., Manjurano, A. n., Chungalucha, J. n., Elias, J. E., Dominguez-Bello, M. G., Sonnenburg, J. L.
2017; 357 (6353): 802-6
- **A gut bacterial pathway metabolizes aromatic amino acids into nine circulating metabolites.** *Nature*
Dodd, D. n., Spitzer, M. H., Van Treuren, W. n., Merrill, B. D., Hryckowian, A. J., Higginbottom, S. K., Le, A. n., Cowan, T. M., Nolan, G. P., Fischbach, M. A., Sonnenburg, J. L.
2017; 551 (7682): 648-52
- **Diet-microbiota interactions as moderators of human metabolism** *NATURE*
Sonnenburg, J. L., Backhed, F.
2016; 535 (7610): 56-64
- **Diet-induced extinctions in the gut microbiota compound over generations.** *Nature*
Sonnenburg, E. D., Smits, S. A., Tikhonov, M., Higginbottom, S. K., Wingreen, N. S., Sonnenburg, J. L.
2016; 529 (7585): 212-215
- **Quantitative Imaging of Gut Microbiota Spatial Organization** *CELL HOST & MICROBE*
Earle, K. A., Billings, G., Sigal, M., Lichtman, J. S., Hansson, G. C., Elias, J. E., Amieva, M. R., Huang, K. C., Sonnenburg, J. L.
2015; 18 (4): 478-488
- **Starving our Microbial Self: The Deleterious Consequences of a Diet Deficient in Microbiota-Accessible Carbohydrates** *CELL METABOLISM*
Sonnenburg, E. D., Sonnenburg, J. L.
2014; 20 (5): 779-786
- **Microbiota-liberated host sugars facilitate post-antibiotic expansion of enteric pathogens** *NATURE*
Ng, K. M., Ferreyra, J. A., Higginbottom, S. K., Lynch, J. B., Kashyap, P. C., Gopinath, S., Naidu, N., Choudhury, B., Weimer, B. C., Monack, D. M., Sonnenburg, J. L.
2013; 502 (7469): 96-?
- **Specificity of Polysaccharide Use in Intestinal Bacteroides Species Determines Diet-Induced Microbiota Alterations** *CELL*
Sonnenburg, E. D., Zheng, H., Joglekar, P., Higginbottom, S. K., Firbank, S. J., Bolam, D. N., Sonnenburg, J. L.

2010; 141 (7): 1241-U256

- **Host-microbe co-metabolism via MCAD generates circulating metabolites including hippuric acid.** *Nature communications*
Pruss, K. M., Chen, H., Liu, Y., Van Treuren, W., Higginbottom, S. K., Jarman, J. B., Fischer, C. R., Mak, J., Wong, B., Cowan, T. M., Fischbach, M. A., Sonnenburg, J. L., Dodd, et al
2023; 14 (1): 512
- **Butyrate Differentiates Permissiveness to Clostridioides difficile Infection and Influences Growth of Diverse C. difficile Isolates.** *Infection and immunity*
Pensinger, D. A., Fisher, A. T., Dobrila, H. A., Van Treuren, W., Gardner, J. O., Higginbottom, S. K., Carter, M. M., Schumann, B., Bertozzi, C. R., Anikst, V., Martin, C., Robiloti, E. V., Chow, et al
2023: e0057022
- **A Limited Effect of Chronic Renal Insufficiency on the Colon Microbiome.** *Journal of the American Society of Nephrology : JASN*
Guthrie, L., Sonnenburg, J. L., Fischbach, M. A., Meyer, T. W.
2023
- **A Microbiome-targeting Fiber-enriched Nutritional Formula is Well Tolerated and Improves Quality of Life and Hemoglobin A1c in Type 2 Diabetes: A Double-Blind, Randomized, Placebo-Controlled Trial.** *Diabetes, obesity & metabolism*
Frias, J. P., Lee, M. L., Carter, M. M., Ebel, E. R., Lai, R., Rikse, L., Washington, M. E., Sonnenburg, J. L., Damman, C. J.
2023
- **Randomized controlled trial demonstrates response to a probiotic intervention for metabolic syndrome that may correspond to diet.** *Gut microbes*
Wastyk, H. C., Perelman, D., Topf, M., Fragiadakis, G. K., Robinson, J. L., Sonnenburg, J. L., Gardner, C. D., Sonnenburg, E. D.
2023; 15 (1): 2178794
- **Gut Microbiome Redox Sensors With Ultrasonic Wake-Up and Galvanic Coupling Wireless Links** *IEEE TRANSACTIONS ON BIOMEDICAL ENGINEERING*
Baltasvias, S., Van Treuren, W., Sawaby, A., Baker, S. W., Sonnenburg, J. L., Arbabian, A.
2023; 70 (1): 76-87
- **Design, construction, and invivo augmentation of a complex gut microbiome.** *Cell*
Cheng, A. G., Ho, P., Aranda-Diaz, A., Jain, S., Yu, F. B., Meng, X., Wang, M., Iakiviak, M., Nagashima, K., Zhao, A., Murugkar, P., Patil, A., Atabakhsh, et al
2022
- **The Tabula Sapiens: A multiple-organ, single-cell transcriptomic atlas of humans.** *Science (New York, N.Y.)*
Jones, R. C., Karkanas, J., Krasnow, M. A., Pisco, A. O., Quake, S. R., Salzman, J., Yosef, N., Bulthaupt, B., Brown, P., Harper, W., Hemenez, M., Ponnusamy, R., Salehi, et al
2022; 376 (6594): eabl4896
- **Global, distinctive, and personal changes in molecular and microbial profiles by specific fibers in humans.** *Cell host & microbe*
Lancaster, S. M., Lee-McMullen, B., Abbott, C. W., Quijada, J. V., Hornburg, D., Park, H., Perelman, D., Peterson, D. J., Tang, M., Robinson, A., Ahadi, S., Contrepois, K., Hung, et al
2022
- **Oxidative ornithine metabolism supports non-inflammatory C.difficile colonization.** *Nature metabolism*
Pruss, K. M., Enam, F., Battaglioli, E., DeFeo, M., Diaz, O. R., Higginbottom, S. K., Fischer, C. R., Hryckowian, A. J., Van Treuren, W., Dodd, D., Kashyap, P., Sonnenburg, J. L.
1800
- **Establishment and characterization of stable, diverse, fecal-derived in vitro microbial communities that model the intestinal microbiota.** *Cell host & microbe*
Aranda-Díaz, A., Ng, K. M., Thomsen, T., Real-Ramírez, I., Dahan, D., Dittmar, S., Gonzalez, C. G., Chavez, T., Vasquez, K. S., Nguyen, T. H., Yu, F. B., Higginbottom, S. K., Neff, et al
2022
- **Reporting guidelines for human microbiome research: the STORMS checklist.** *Nature medicine*
Mirzayi, C., Renson, A., Genomic Standards Consortium, Massive Analysis and Quality Control Society, Zohra, F., Elsafoury, S., Geistlinger, L., Kasselmann, L. J., Eckenrode, K., van de Wiggert, J., Loughman, A., Marques, F. Z., MacIntyre, D. A., Arumugam, et al
2021
- **Quantifying rapid bacterial evolution and transmission within the mouse intestine.** *Cell host & microbe*

- Vasquez, K. S., Willis, L., Cira, N. J., Ng, K. M., Pedro, M. F., Aranda-Diaz, A., Rajendram, M., Yu, F. B., Higginbottom, S. K., Neff, N., Sherlock, G., Xavier, K. B., Quake, et al
2021
- **Ancient human faeces and gut microbes of the past** *NATURE*
Olm, M. R., Sonnenburg, J. L.
2021
 - **Bacterially Derived Tryptamine Increases Mucus Release by Activating a Host Receptor in a Mouse Model of Inflammatory Bowel Disease.** *iScience*
Bhattarai, Y., Jie, S., Linden, D. R., Ghatak, S., Mars, R. A., Williams, B. B., Pu, M., Sonnenburg, J. L., Fischbach, M. A., Farrugia, G., Sha, L., Kashyap, P. C.
2020; 23 (12): 101798
 - **When Gut Microbiota Creep into Fat, the Fat Creeps Back.** *Cell*
Spencer, S. P., Sonnenburg, J. L.
2020; 183 (3): 589–91
 - **Mucin-derived O-glycans supplemented to diet mitigate diverse microbiota perturbations.** *The ISME journal*
Pruss, K. M., Marcobal, A., Southwick, A. M., Dahan, D., Smits, S. A., Ferreyra, J. A., Higginbottom, S. K., Sonnenburg, E. D., Kashyap, P. C., Choudhury, B., Bode, L., Sonnenburg, J. L.
2020
 - **Bifidobacterium alters the gut microbiota and modulates the functional metabolism of T regulatory cells in the context of immune checkpoint blockade.** *Proceedings of the National Academy of Sciences of the United States of America*
Sun, S., Luo, L., Liang, W., Yin, Q., Guo, J., Rush, A. M., Lv, Z., Liang, Q., Fischbach, M. A., Sonnenburg, J. L., Dodd, D., Davis, M. M., Wang, et al
2020
 - **High-Throughput Stool Metaproteomics: Method and Application to Human Specimens.** *mSystems*
Gonzalez, C. G., Wastyk, H. C., Topf, M., Gardner, C. D., Sonnenburg, J. L., Elias, J. E.
2020; 5 (3)
 - **Phase-variable capsular polysaccharides and lipoproteins modify bacteriophage susceptibility in Bacteroides thetaiotaomicron.** *Nature microbiology*
Porter, N. T., Hryckowian, A. J., Merrill, B. D., Fuentes, J. J., Gardner, J. O., Glowacki, R. W., Singh, S., Crawford, R. D., Snitkin, E. S., Sonnenburg, J. L., Martens, E. C.
2020
 - **The Clinical Drug Ebselen Attenuates Inflammation and Promotes Microbiome Recovery in Mice after Antibiotic Treatment for CDI.** *Cell reports medicine*
Garland, M., Hryckowian, A. J., Tholen, M., Bender, K. O., Van Treuren, W. W., Loscher, S., Sonnenburg, J. L., Bogyo, M.
2020; 1 (1)
 - **Long-term dietary intervention reveals resilience of the gut microbiota despite changes in diet and weight.** *The American journal of clinical nutrition*
Fragiadakis, G. K., Wastyk, H. C., Robinson, J. L., Sonnenburg, E. D., Sonnenburg, J. L., Gardner, C. D.
2020
 - **A Metabolic Pathway for Activation of Dietary Glucosinolates by a Human Gut Symbiont.** *Cell*
Liou, C. S., Sirk, S. J., Diaz, C. A., Klein, A. P., Fischer, C. R., Higginbottom, S. K., Erez, A., Donia, M. S., Sonnenburg, J. L., Sattely, E. S.
2020; 180 (4): 717
 - **Dysbiosis-Induced Secondary Bile Acid Deficiency Promotes Intestinal Inflammation.** *Cell host & microbe*
Sinha, S. R., Haileselassie, Y., Nguyen, L. P., Tropini, C., Wang, M., Becker, L. S., Sim, D., Jarr, K., Spear, E. T., Singh, G., Namkoong, H., Bittinger, K., Fischbach, et al
2020
 - **Klebsiella michiganensis transmission enhances resistance to Enterobacteriaceae gut invasion by nutrition competition.** *Nature microbiology*
Oliveira, R. A., Ng, K. M., Correia, M. B., Cabral, V., Shi, H., Sonnenburg, J. L., Huang, K. C., Xavier, K. B.
2020
 - **Bacteroides thetaiotaomicron-Infecting Bacteriophage Isolates Inform Sequence-Based Host Range Predictions.** *Cell host & microbe*
Hryckowian, A. J., Merrill, B. D., Porter, N. T., Van Treuren, W. n., Nelson, E. J., Garlena, R. A., Russell, D. A., Martens, E. C., Sonnenburg, J. L.
2020

- **Proximal colon-derived O-glycosylated mucus encapsulates and modulates the microbiota.** *Science (New York, N.Y.)*
Bergstrom, K. n., Shan, X. n., Casero, D. n., Batushansky, A. n., Lagishetty, V. n., Jacobs, J. P., Hoover, C. n., Kondo, Y. n., Shao, B. n., Gao, L. n., Zandberg, W. n., Noyovitz, B. n., McDaniel, et al
2020; 370 (6515): 467–72
- **Longitudinal Multi-omics Reveals Subset-Specific Mechanisms Underlying Irritable Bowel Syndrome.** *Cell*
Mars, R. A., Yang, Y. n., Ward, T. n., Houtti, M. n., Priya, S. n., Lekatz, H. R., Tang, X. n., Sun, Z. n., Kalari, K. R., Korem, T. n., Bhattarai, Y. n., Zheng, T. n., Bar, et al
2020
- **A randomized crossover trial on the effect of plant-based compared with animal-based meat on trimethylamine-N-oxide and cardiovascular disease risk factors in generally healthy adults: Study With Appetizing Plantfood-Meat Eating Alternative Trial (SWAP-MEAT).** *The American journal of clinical nutrition*
Crimarco, A. n., Springfield, S. n., Petlura, C. n., Streaty, T. n., Cunanan, K. n., Lee, J. n., Fielding-Singh, P. n., Carter, M. M., Topf, M. A., Wastyk, H. C., Sonnenburg, E. D., Sonnenburg, J. L., Gardner, et al
2020
- **A single-cell transcriptomic atlas characterizes ageing tissues in the mouse.** *Nature*
2020
- **Ageing hallmarks exhibit organ-specific temporal signatures.** *Nature*
Schaum, N. n., Lehallier, B. n., Hahn, O. n., Pálóvics, R. n., Hosseinzadeh, S. n., Lee, S. E., Sit, R. n., Lee, D. P., Losada, P. M., Zardeneta, M. E., Fehlmann, T. n., Webber, J. T., McGeever, et al
2020
- **Depletion of microbiome-derived molecules in the host using Clostridium genetics.** *Science (New York, N.Y.)*
Guo, C., Allen, B. M., Hiam, K. J., Dodd, D., Van Treuren, W., Higginbottom, S., Nagashima, K., Fischer, C. R., Sonnenburg, J. L., Spitzer, M. H., Fischbach, M. A.
2019; 366 (6471)
- **Intestinal IgA Regulates Expression of a Fructan Polysaccharide Utilization Locus in Colonizing Gut Commensal Bacteroides thetaiotaomicron.** *mBio*
Joglekar, P., Ding, H., Canales-Herrerias, P., Pasricha, P. J., Sonnenburg, J. L., Peterson, D. A.
2019; 10 (6)
- **Pursuing Human-Relevant Gut Microbiota-Immune Interactions.** *Immunity*
Spencer, S. P., Fragiadakis, G. K., Sonnenburg, J. L.
2019; 51 (2): 225–39
- **The ancestral and industrialized gut microbiota and implications for human health.** *Nature reviews. Microbiology*
Sonnenburg, E. D., Sonnenburg, J. L.
2019; 17 (6): 383–90
- **The ancestral and industrialized gut microbiota and implications for human health** *NATURE REVIEWS MICROBIOLOGY*
Sonnenburg, E. D., Sonnenburg, J. L.
2019; 17 (6): 383–90
- **Role for Diet in Normal Gut Barrier Function: Developing Guidance within the Framework of Food Labeling Regulations.** *American journal of physiology. Gastrointestinal and liver physiology*
Camilleri, M., Lyle, B. J., Madsen, K. L., Sonnenburg, J. L., Verbeke, K., Wu, G. D.
2019
- **Small intestinal microbial dysbiosis underlies symptoms associated with functional gastrointestinal disorders** *NATURE COMMUNICATIONS*
Saffouri, G. B., Shields-Cutler, R. R., Chen, J., Yang, Y., Lekatz, H. R., Hale, V. L., Cho, J. M., Battaglioli, E. J., Bhattarai, Y., Thompson, K. J., Kalari, K. K., Behera, G., Berry, et al
2019; 10
- **Western diet regulates immune status and the response to LPS-driven sepsis independent of diet-associated microbiome.** *Proceedings of the National Academy of Sciences of the United States of America*
Napier, B. A., Andres-Terre, M., Massis, L. M., Hryckowian, A. J., Higginbottom, S. K., Cumnock, K., Casey, K. M., Haileselassie, B., Lugo, K. A., Schneider, D. S., Sonnenburg, J. L., Monack, D. M.
2019; 116 (9): 3688–94

- **Western diet regulates immune status and the response to LPS-driven sepsis independent of diet-associated microbiome** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Napier, B. A., Andres-Terre, M., Massis, L. M., Hryckowian, A. J., Higginbottom, S. K., Cumnock, K., Casey, K. M., Haileselassie, B., Lugo, K. A., Schneider, D. S., Sonnenburg, J. L., Monack, D. M.
2019; 116 (9): 3688–94
- **Small intestinal microbial dysbiosis underlies symptoms associated with functional gastrointestinal disorders.** *Nature communications*
Saffouri, G. B., Shields-Cutler, R. R., Chen, J. n., Yang, Y. n., Lekatz, H. R., Hale, V. L., Cho, J. M., Battaglioli, E. J., Bhattarai, Y. n., Thompson, K. J., Kalari, K. K., Behera, G. n., Berry, et al
2019; 10 (1): 2012
- **In Vivo Wireless Sensors for Gut Microbiome Redox Monitoring.** *IEEE transactions on bio-medical engineering*
Baltsavias, S. n., Van Treuren, W. n., Weber, M. n., Charthad, J. n., Baker, S. n., Sonnenburg, J. L., Arbabian, A. n.
2019
- **Recovery of the Gut Microbiota after Antibiotics Depends on Host Diet, Community Context, and Environmental Reservoirs.** *Cell host & microbe*
Ng, K. M., Aranda-Díaz, A. n., Tropini, C. n., Frankel, M. R., Van Treuren, W. n., O’Laughlin, C. T., Merrill, B. D., Yu, F. B., Pruss, K. M., Oliveira, R. A., Higginbottom, S. K., Neff, N. F., Fischbach, et al
2019; 26 (5): 650–65.e4
- **Links between environment, diet, and the hunter-gatherer microbiome** *GUT MICROBES*
Fragiadakis, G. K., Smits, S. A., Sonnenburg, E. D., Van Treuren, W., Reid, G., Knight, R., Manjurano, A., Chandalucha, J., Dominguez-Bello, M., Leach, J., Sonnenburg, J. L.
2019; 10 (2): 216–27
- **Considerations for best practices in studies of fiber or other dietary components and the intestinal microbiome** *AMERICAN JOURNAL OF PHYSIOLOGY- ENDOCRINOLOGY AND METABOLISM*
Klurfeld, D. M., Davis, C. D., Karp, R. W., Allen-Vercoe, E., Chang, E. B., Chassaing, B., Fahey, G. C., Hamaker, B. R., Holscher, H. D., Lampe, J. W., Marette, A., Martens, E., O’Keefe, et al
2018; 315 (6): E1087–E1097
- **A Microbiota Assimilation.** *Cell metabolism*
Sonnenburg, J., Sonnenburg, E.
2018; 28 (5): 675–77
- **Clostridioides difficile uses amino acids associated with gut microbial dysbiosis in a subset of patients with diarrhea.** *Science translational medicine*
Battaglioli, E. J., Hale, V. L., Chen, J., Jeraldo, P., Ruiz-Mojica, C., Schmidt, B. A., Rekdal, V. M., Till, L. M., Huq, L., Smits, S. A., Moor, W. J., Jones-Hall, Y., Smyrk, et al
2018; 10 (464)
- **Links between environment, diet, and the hunter-gatherer microbiome.** *Gut microbes*
Fragiadakis, G. K., Smits, S. A., Sonnenburg, E. D., Van Treuren, W., Reid, G., Knight, R., Manjurano, A., Chandalucha, J., Dominguez-Bello, M. G., Leach, J., Sonnenburg, J. L.
2018: 1–12
- **A Gut Commensal-Produced Metabolite Mediates Colonization Resistance to Salmonella Infection.** *Cell host & microbe*
Jacobson, A., Lam, L., Rajendram, M., Tamburini, F., Honeycutt, J., Pham, T., Van Treuren, W., Pruss, K., Stabler, S. R., Lugo, K., Bouley, D. M., Vilches-Moure, J. G., Smith, et al
2018
- **Gut Microbiota-Produced Tryptamine Activates an Epithelial G-Protein-Coupled Receptor to Increase Colonic Secretion** *CELL HOST & MICROBE*
Bhattarai, Y., Williams, B. B., Battaglioli, E. J., Whitaker, W. R., Till, L., Grover, M., Linden, D. R., Akiba, Y., Kandimalla, K. K., Zachos, N. C., Kaunitz, J. D., Sonnenburg, J. L., Fischbach, et al
2018; 23 (6): 775–+
- **Genetic Variation of the SusC/SusD Homologs from a Polysaccharide Utilization Locus Underlies Divergent Fructan Specificities and Functional Adaptation in Bacteroides thetaiotaomicron Strains.** *mSphere*
Joglekar, P., Sonnenburg, E. D., Higginbottom, S. K., Earle, K. A., Morland, C., Shapiro-Ward, S., Bolam, D. N., Sonnenburg, J. L.
2018; 3 (3)
- **Microbiota-accessible carbohydrates suppress Clostridium difficile infection in a murine model.** *Nature microbiology*

- Hryckowian, A. J., Van Treuren, W. n., Smits, S. A., Davis, N. M., Gardner, J. O., Bouley, D. M., Sonnenburg, J. L.
2018
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