

Stanford



Justin L. Sonnenburg

Alex and Susie Algard Endowed Professor
Microbiology and Immunology

Bio

ACADEMIC APPOINTMENTS

- Professor, Microbiology and Immunology
- Member, Bio-X
- Member, Wu Tsai Human Performance Alliance
- Member, Maternal & Child Health Research Institute (MCHRI)
- Member, Stanford Medicine Children's Health Center for IBD and Celiac Disease

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)
- AGA Research Mentor Award, American Gastroenterological Association (2023)
- Fellow, European Academy of Microbiology (2026)

PROFESSIONAL EDUCATION

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

LINKS

- Sonnenburg Lab Website: <https://sonnenburglab.sites.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

- IGNITE Firefighters' Health, Not Recruiting
- The RAMP Study, Not Recruiting

Teaching

COURSES

2025-26

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

2024-25

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

2023-24

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

2022-23

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

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Jasmine Arunachalam, Angela Hickey, Miles Tyner

Postdoctoral Faculty Sponsor

Jessica Fessler, Yifan Gao, Samantha Hernandez, Siliang Li, Anita Reddy, Elektra Robinson, Tadashi Takeuchi, Xieyue Xiao

Doctoral Dissertation Co-Advisor (AC)

Kent Kotaka

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Microbiology and Immunology (Phd Program)

Publications

PUBLICATIONS

- **Controlled colonization of the human gut with a genetically engineered microbial therapeutic.** *Science (New York, N.Y.)*
Whitaker, W. R., Russ, Z. N., Stanley Shepherd, E., Popov, L. M., Louie, A., Lam, K., Zong, D. M., Gill, C. C., Gehrig, J. L., Rishi, H. S., Tan, J. A., Bunn, A., Godoy, et al
2025; 389 (6757): 303-308
- **Metagenomic immunoglobulin sequencing reveals IgA coating of microbial strains in the healthy human gut.** *Nature microbiology*
Olm, M. R., Spencer, S. P., Takeuchi, T., Silva, E. L., Sonnenburg, J. L.
2025
- **Ultra-deep sequencing of Hadza hunter-gatherers recovers vanishing gut microbes.** *Cell*
Carter, M. M., Olm, M. R., Merrill, B. D., Dahan, D., Tripathi, S., Spencer, S. P., Yu, F. B., Jain, S., Neff, N., Jha, A. R., Sonnenburg, E. D., Sonnenburg, J. L.

2023

- **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., Changalucha, 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
- **Multi-omics reveal vitamin D regulation of immune-gut microbiome interactions and tolerogenic pathways in inflammatory bowel disease.** *Cell reports. Medicine*
Gubatan, J., Sojwal, R. S., Ye, J., Boye, T. L., Hoang, J. N., Fardeen, T., Temby, M., Rubin, S. J., Spencer, S. P., Kotagiri, P., Rogalla, S., Rosen, M. J., Nielsen, et al
2026: 102703
- **A fasting-mimicking diet in patients with mild-to-moderate Crohn's disease: a randomized controlled trial.** *Nature medicine*
Kulkarni, C., Fardeen, T., Gubatan, J., Ye, J., Jarr, K., Dickson, E., Jang, H., Temby, M., Patel, A., Jiang, Y., Singh, G., Keyashian, K., Streett, et al
2026
- **Time-specific bidirectional links between the maternal microbiome, milk composition, and infant gut microbiota.** *Cell host & microbe*
Deng, L., Fehr, K., Toe, L. C., Allen, L. H., Bode, L., Hampel, D., Manus, M. B., Mertens, A., Robertson, B., Yonemitsu, C., Meulenaer, B. D., Lachat, C., Sonnenburg, et al
2025
- **Nutrient competition predicts gut microbiome restructuring under drug perturbations.** *Cell*
Shi, H., Newton, D. P., Nguyen, T. H., Estrela, S., Sanchez, J., Tu, M., Ho, P. Y., Zeng, Q., DeFelice, B. C., Sonnenburg, J. L., Huang, K. C.
2025
- **A genomic atlas of the human gut virome elucidates genetic factors shaping host interactions.** *bioRxiv : the preprint server for biology*
Camargo, A. P., Baltoumas, F. A., Ndela, E. O., Fiamenghi, M. B., Merrill, B. D., Carter, M. M., Pinto, Y., Chakraborty, M., Andreeva, A., Ghiotto, G., Shaw, J., Proal, A. D., Sonnenburg, et al
2025
- **Strain-resolved metagenomic analysis and qPCR validation suggest Clostridium cuniculi is the etiologic agent for infectious diarrhea in severely immunodeficient mice.** *Journal of veterinary diagnostic investigation : official publication of the American Association of Veterinary Laboratory Diagnosticians, Inc*
Barouch-Bentov, R., Merrill, B. D., Reineking, W., Moorhead, R., Herberg de Alonso, F., Fazel, M., Uzal, F. A., Felt, S. A., Sonnenburg, J. L., Casey, K. M., Nagamine, C. M.
2025: 10406387251378688
- **MiFoDB, a workflow for microbial food metagenomic characterization, enables high-resolution analysis of fermented food microbial dynamics.** *mSystems*
Caffrey, E. B., Olm, M. R., Kothe, C. I., Wastyk, H. C., Evans, J. D., Sonnenburg, J. L.
2025: e0014125
- **A human milk oligosaccharide alters the microbiome, circulating hormones, and metabolites in a randomized controlled trial of older adults.** *Cell reports. Medicine*
Carter, M. M., Demis, D., Perelman, D., St Onge, M., Petlura, C., Cunanan, K., Mathi, K., Maecker, H. T., Chow, J. M., Robinson, J. L., Sabag-Daigle, A., Sonnenburg, E. D., Buck, et al

2025: 102256

- **Unpacking food fermentation: Clinically relevant tools for fermented food identification and consumption.** *Advances in nutrition (Bethesda, Md.)*
Caffrey, E. B., Perelman, D., Ward, C. P., Sonnenburg, E. D., Gardner, C. D., Sonnenburg, J. L.
2025: 100412
- **Maternal balanced energy-protein supplementation reshapes the maternal gut microbiome and enhances carbohydrate metabolism in infants: a randomized controlled trial.** *Nature communications*
Deng, L., Taelman, S., Olm, M. R., Toe, L. C., Balini, E., Ouédraogo, L. O., Bastos-Moreira, Y., Argaw, A., Tesfamariam, K., Sonnenburg, E. D., Hanley-Cook, G. T., Ouédraogo, M., Ganaba, et al
2025; 16 (1): 2683
- **Genome-scale resources in the infant gut symbiont *Bifidobacterium breve* reveal genetic determinants of colonization and host-microbe interactions.** *Cell*
Shiver, A. L., Sun, J., Culver, R., Violette, A., Wynter, C., Nieckarz, M., Mattiello, S. P., Sekhon, P. K., Bottacini, F., Friess, L., Carlson, H. K., Wong, D. P., Higginbottom, et al
2025
- **Effects of fermented and fiber-rich foods on maternal & offspring microbiome study (FeFiFo-MOMS) - Study design and methods.** *Contemporary clinical trials*
Ward, C. P., Perelman, D., Durand, L. R., Robinson, J. L., Cunanan, K. M., Sudakaran, S., Sabetan, R., Madrigal-Moeller, M. J., Dant, C., Sonnenburg, E. D., Sonnenburg, J. L., Gardner, C. D.
2025: 107834
- **The Effects of an Intermittent Reduced Calorie Diet on Crohn's Disease**
Kulkarni, C., Fardeen, T., Gubatan, J., Jarr, K., Dickson, E., Jang, H., Temby, M., Patel, A., Singh, G., Ye, J., Keyashian, K., Streett, S., Ho, et al
OXFORD UNIV PRESS.2025: i1909-i1910
- **Describing Biological Vulnerability in Small, Vulnerable Newborns in Urban Burkina Faso (DenBalo): Gut Microbiota, Immune System, and Breastmilk Assembly.** *Nutrients*
Ouédraogo, L. O., Deng, L., Ouattara, C. A., Compaoré, A., Ouédraogo, M., Argaw, A., Lachat, C., Houpt, E. R., Saidi, Q., Haerynck, F., Sonnenburg, J., Azad, M. B., Tavernier, et al
2024; 16 (23)
- **Unveiling the epigenetic impact of vegan vs. omnivorous diets on aging: insights from the Twins Nutrition Study (TwINS).** *BMC medicine*
Dwaraka, V. B., Aronica, L., Carreras-Gallo, N., Robinson, J. L., Hennings, T., Carter, M. M., Corley, M. J., Lin, A., Turner, L., Smith, R., Mendez, T. L., Went, H., Ebel, et al
2024; 22 (1): 301
- **High-throughput identification of gut microbiome-dependent metabolites.** *Nature protocols*
Han, S., Guiberson, E. R., Li, Y., Sonnenburg, J. L.
2024
- **Our extended microbiome: The human-relevant metabolites and biology of fermented foods.** *Cell metabolism*
Caffrey, E. B., Sonnenburg, J. L., Devkota, S.
2024; 36 (4): 684-701
- ***Bacteroides fragilis* toxin expression enables lamina propria niche acquisition in the developing mouse gut.** *Nature microbiology*
Hill, C. A., Casterline, B. W., Valguarnera, E., Hecht, A. L., Shepherd, E. S., Sonnenburg, J. L., Bubeck Wardenburg, J.
2024
- **Randomly barcoded transposon mutant libraries for gut commensals II: Applying libraries for functional genetics.** *Cell reports*
Voogdt, C. G., Tripathi, S., Bassler, S. O., McKeithen-Mead, S. A., Guiberson, E. R., Koumoutsis, A., Bravo, A. M., Buie, C., Zimmermann, M., Sonnenburg, J. L., Typas, A., Deutschbauer, A. M., Shiver, et al
2023; 43 (1): 113519
- **Randomly barcoded transposon mutant libraries for gut commensals I: Strategies for efficient library construction.** *Cell reports*
Tripathi, S., Voogdt, C. G., Bassler, S. O., Anderson, M., Huang, P. H., Sakenova, N., Capraz, T., Jain, S., Koumoutsis, A., Bravo, A. M., Trotter, V., Zimmerman, M., Sonnenburg, et al
2023; 43 (1): 113517

- **Metabolic diversity in commensal protists regulates intestinal immunity and trans-kingdom competition.** *Cell*
Gerrick, E. R., Zlitni, S., West, P. T., Carter, M. M., Mechler, C. M., Olm, M. R., Caffrey, E. B., Li, J. A., Higginbottom, S. K., Severyn, C. J., Kracke, F., Spormann, A. M., Sonnenburg, et al
2023
- **Hadza *Prevotella* require diet-derived microbiota-accessible carbohydrates to persist in mice** *CELL REPORTS*
Gellman, R. H., Olm, M. R., Terrapon, N., Enam, F., Higginbottom, S. K., Sonnenburg, J. L., Sonnenburg, E. D.
2023; 42 (11)
- **Hadza *Prevotella* require diet-derived microbiota-accessible carbohydrates to persist in mice.** *Cell reports*
Gellman, R. H., Olm, M. R., Terrapon, N., Enam, F., Higginbottom, S. K., Sonnenburg, J. L., Sonnenburg, E. D.
2023; 42 (11)
- **Metagenomic Immunoglobulin Sequencing (MIG-Seq) Exposes Patterns of IgA Antibody Binding in the Healthy Human Gut Microbiome.** *bioRxiv : the preprint server for biology*
Olm, M. R., Spencer, S. P., Silva, E. L., Sonnenburg, J. L.
2023
- **Cardiometabolic Effects of Omnivorous vs Vegan Diets in Identical Twins: A Randomized Clinical Trial.** *JAMA network open*
Landry, M. J., Ward, C. P., Cunanan, K. M., Durand, L. R., Perelman, D., Robinson, J. L., Hennings, T., Koh, L., Dant, C., Zeitlin, A., Ebel, E. R., Sonnenburg, E. D., Sonnenburg, et al
2023; 6 (11): e2344457
- **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., Robilotti, 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*
Baltsavias, S., Van Treuren, W., Sawaby, A., Baker, S. W., Sonnenburg, J. L., Arbabian, A.
2023; 70 (1): 76-87
- **Design, construction, and in vivo 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., Contrepolis, 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*
Mirzayati, C., Renson, A., Genomic Standards Consortium, Massive Analysis and Quality Control Society, Zohra, F., Elsafoury, S., Geistlinger, L., Kasselman, L. J., Eckenrode, K., van de Wijgert, 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-Díaz, 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., Bogoyo, 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
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