

Stanford



Justin L. Sonnenburg

Associate Professor of Microbiology and Immunology
Microbiology & Immunology

Bio

ACADEMIC APPOINTMENTS

- Associate Professor, Microbiology & Immunology
- Member, Bio-X

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

We are interested in the basic principles that govern interactions within the intestinal microbiota and between the microbiota and the host. To pursue these aims, we colonize germ-free (gnotobiotic) mice with simplified, model microbial communities, apply systems approaches (e.g. functional genomics), and use genetic tools for the host and microbes to gain mechanistic insight into emergent properties of the host-microbial super-organism.

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

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)

2018-19

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

2017-18

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

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Sarah Ruddle, Ruth Schade, Kim Vasquez, Bokai Zhu

Postdoctoral Faculty Sponsor

Fatima Enam, Jessica Fessler, Leah Guthrie, Shuo Han, Matthew Olm, Handuo Shi, Sean Spencer, Will Van Treuren

Doctoral Dissertation Advisor (AC)

Matthew Carter, Rebecca Gellman, Bryan Merrill, Hannah Wastyk

Postdoctoral Research Mentor

Sean Spencer

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Microbiology and Immunology (Phd Program)

Publications

PUBLICATIONS

- **C. difficile exploits a host metabolite produced during toxin-mediated disease.** *Nature*
Pruss, K. M., Sonnenburg, J. L.
2021
- **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-?

- **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
- **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., Chagalucha, J. n., Elias, J. E., Dominguez-Bello, M. G., Sonnenburg, J. L.
2017; 357 (6353): 802–6
- **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., Firkbank, S. J., Bolam, D. N., Sonnenburg, J. L.
2010; 141 (7): 1241-U256
- **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
- **Ageing hallmarks exhibit organ-specific temporal signatures.** *Nature*
Schaum, N. n., Lehallier, B. n., Hahn, O. n., Pálócs, 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
- **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
- **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
- **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
- **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
- **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., Changalucha, J., Dominguez-Bello, M., Leach, J., Sonnenburg, J. L.
2019; 10 (2): 216–27
- **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
- **In Vivo Wireless Sensors for Gut Microbiome Redox Monitoring.** *IEEE transactions on bio-medical engineering*
Baltasvias, S. n., Van Treuren, W. n., Weber, M. n., Charthad, J. n., Baker, S. n., Sonnenburg, J. L., Arbabian, A. n.
2019
- **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
- **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
- **Single-cell transcriptomics of 20 mouse organs creates a Tabula Muris.** *Nature*
2018; 562 (7727): 367–72
- **Dynamic Light Scattering Microrheology Reveals Multiscale Viscoelasticity of Polymer Gels and Precious Biological Materials** *ACS CENTRAL SCIENCE*
Krajina, B. A., Tropini, C., Zhu, A., DiGiacomo, P., Sonnenburg, J. L., Heilshorn, S. C., Spakowitz, A. J.
2017; 3 (12): 1294–1303
- **The Gut Microbiome: Connecting Spatial Organization to Function** *CELL HOST & MICROBE*
Tropini, C., Earle, K. A., Huang, K. C., Sonnenburg, J. L.
2017; 21 (4): 433-442
- **Commensal Microbes and Hair Follicle Morphogenesis Coordinately Drive Treg Migration into Neonatal Skin** *CELL HOST & MICROBE*
Scharschmidt, T. C., Vasquez, K. S., Pauli, M. L., Leitner, E. G., Chu, K., Truong, H., Lowe, M. M., Rodriguez, R. S., Ali, N., Laszik, Z. G., Sonnenburg, J. L., Millar, S. E., Rosenblum, et al
2017; 21 (4): 467-?
- **The emerging metabolic view of Clostridium difficile pathogenesis.** *Current opinion in microbiology*
Hryckowian, A. J., Pruss, K. M., Sonnenburg, J. L.
2016; 35: 42-47
- **Modulation of a Circulating Uremic Solute via Rational Genetic Manipulation of the Gut Microbiota** *CELL HOST & MICROBE*
Devlin, A. S., Marcobal, A., Dodd, D., Nayfach, S., Plummer, N., Meyer, T., Pollard, K. S., Sonnenburg, J. L., Fischbach, M. A.
2016; 20 (6): 709-715
- **Correlated gene expression encoding serotonin (5-HT) receptor 4 and 5-HT transporter in proximal colonic segments of mice across different colonization states and sexes.** *Neurogastroenterology and motility*
Reigstad, C. S., Linden, D. R., Szurszewski, J. H., Sonnenburg, J. L., Farrugia, G., Kashyap, P. C.
2016; 28 (9): 1443-1448
- **Individualized Responses of Gut Microbiota to Dietary Intervention Modeled in Humanized Mice.** *mSystems*

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- Smits, S. A., Marcobal, A., Higginbottom, S., Sonnenburg, J. L., Kashyap, P. C.
2016; 1 (5)
- **Host-Microbiota Interactions in the Pathogenesis of Antibiotic-Associated Diseases** *CELL REPORTS*
Lichtman, J. S., Ferreyra, J. A., Ng, K. M., Smits, S. A., Sonnenburg, J. L., Elias, J. E.
2016; 14 (5): 1049-1061
 - **Nutrition: A personal forecast.** *Nature*
Sonnenburg, E. D., Sonnenburg, J. L.
2015; 528 (7583): 484-486
 - **A small-molecule antivirulence agent for treating Clostridium difficile infection.** *Science translational medicine*
Bender, K. O., Garland, M., Ferreyra, J. A., Hryckowian, A. J., Child, M. A., Puri, A. W., Solow-Cordero, D. E., Higginbottom, S. K., Segal, E., Banaei, N., Shen, A., Sonnenburg, J. L., Bogyo, et al
2015; 7 (306): 306ra148-?
 - **A small-molecule antivirulence agent for treating Clostridium difficile infection** *SCIENCE TRANSLATIONAL MEDICINE*
Bender, K. O., Garland, M., Ferreyra, J. A., Hryckowian, A. J., Child, M. A., Puri, A. W., Solow-Cordero, D. E., Higginbottom, S. K., Segal, E., Banaei, N., Shen, A., Sonnenburg, J. L., Bogyo, et al
2015; 7 (306)
 - **Monitoring host responses to the gut microbiota** *ISME JOURNAL*
Lichtman, J. S., Sonnenburg, J. L., Elias, J. E.
2015; 9 (9): 1908-1915
 - **Metabolome progression during early gut microbial colonization of gnotobiotic mice** *SCIENTIFIC REPORTS*
Marcobal, A., Yusufaly, T., Higginbottom, S., Snyder, M., Sonnenburg, J. L., Mias, G. I.
2015; 5
 - **Gut microbes promote colonic serotonin production through an effect of short-chain fatty acids on enterochromaffin cells.** *FASEB journal*
Reigstad, C. S., Salmonson, C. E., Rainey, J. F., Szurszewski, J. H., Linden, D. R., Sonnenburg, J. L., Farrugia, G., Kashyap, P. C.
2015; 29 (4): 1395-1403
 - **Microbiome engineering.** *Nature*
Sonnenburg, J. L.
2015; 518 (7540): S10-?
 - **Metabolome progression during early gut microbial colonization of gnotobiotic mice.** *Scientific reports*
Marcobal, A., Yusufaly, T., Higginbottom, S., Snyder, M., Sonnenburg, J. L., Mias, G. I.
2015; 5: 11589-?
 - **Your gut microbiome, deconstructed.** *Nature biotechnology*
Dodd, D. n., Tropini, C. n., Sonnenburg, J. L.
2015; 33 (12): 1238-40
 - **Gut Microbiota-Produced Succinate Promotes C-difficile Infection after Antibiotic Treatment or Motility Disturbance** *CELL HOST & MICROBE*
Ferreyra, J. A., Wu, K. J., Hryckowian, A. J., Bouley, D. M., Weimer, B. C., Sonnenburg, J. L.
2014; 16 (6): 770-777
 - **Editorial Overview: Insights into Molecular Mechanisms of Microbiota** *JOURNAL OF MOLECULAR BIOLOGY*
Martens, E. C., Sonnenburg, J. L., Reiman, D. A.
2014; 426 (23): 3827-29
 - **Reprogramming of gut microbiome energy metabolism by the FUT2 Crohn's disease risk polymorphism** *ISME JOURNAL*
Tong, M., McHardy, I., Ruegger, P., Goudarzi, M., Kashyap, P. C., Haritunians, T., Li, X., Graeber, T. G., Schwager, E., Huttenhower, C., Fornace, A. J., Sonnenburg, J. L., McGovern, et al
2014; 8 (11): 2193-2206
 - **The Enteric Two-Step: nutritional strategies of bacterial pathogens within the gut** *CELLULAR MICROBIOLOGY*
Ferreyra, J. A., Ng, K. M., Sonnenburg, J. L.
2014; 16 (7): 993-1003

- **Rapid evolution of binding specificities and expression patterns of inhibitory CD33-related Siglecs in primates** *FASEB JOURNAL*
Padler-Karavani, V., Hurtado-Ziola, N., Chang, Y., Sonnenburg, J. L., Ronaghy, A., Yu, H., Verhagen, A., Nizet, V., Chen, X., Varki, N., Varki, A., Angata, T.
2014; 28 (3): 1280-1293
- **Gut microbes take their vitamins.** *Cell host & microbe*
Sonnenburg, E. D., Sonnenburg, J. L.
2014; 15 (1): 5-6
- **The Enteric Two-Step: nutritional strategies of bacterial pathogens within the gut.** *Cellular microbiology*
Ferreira, J. A., Ng, K. M., Sonnenburg, J. L.
2014
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