

## Steven Higginbottom

Life Science Research Professional, Microbiology and Immunology

### Bio

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#### CURRENT ROLE AT STANFORD

Maintain and operate Gnotobiotic research facility.

### Publications

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#### PUBLICATIONS

- **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
- **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., Tropini, C., Frankel, M. R., Van Treuren, W., 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
- **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
- **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)
- **A gut bacterial pathway metabolizes aromatic amino acids into nine circulating metabolites.** *Nature*  
Dodd, D., Spitzer, M. H., Van Treuren, W., Merrill, B. D., Hryckowian, A. J., Higginbottom, S. K., Le, A., Cowan, T. M., Nolan, G. P., Fischbach, M. A., Sonnenburg, J. L.  
2017; 551 (7682): 648–52
- **Individualized Responses of Gut Microbiota to Dietary Intervention Modeled in Humanized Mice.** *mSystems*  
Smits, S. A., Marcobal, A., Higginbottom, S., Sonnenburg, J. L., Kashyap, P. C.  
2016; 1 (5)
- **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
- **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-?
- **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-?

- **Genetically dictated change in host mucus carbohydrate landscape exerts a diet-dependent effect on the gut microbiota** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Kashyap, P. C., Marcobal, A., Ursell, L. K., Smits, S. A., Sonnenburg, E. D., Costello, E. K., Higginbottom, S. K., Domino, S. E., Holmes, S. P., Relman, D. A., Knight, R., Gordon, J. I., Sonnenburg, et al  
2013; 110 (42): 17059-17064
- **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): 96-99
- **Complex Interactions Among Diet, Gastrointestinal Transit, and Gut Microbiota in Humanized Mice** *GASTROENTEROLOGY*  
Kashyap, P. C., Marcobal, A., Ursell, L. K., Larauche, M., Duboc, H., Earle, K. A., Sonnenburg, E. D., Ferreyra, J. A., Higginbottom, S. K., Million, M., Tache, Y., Pasricha, P. J., Knight, et al  
2013; 144 (5): 967-977
- **Molecular Analysis of Model Gut Microbiotas by Imaging Mass Spectrometry and Nanodesorption Electrospray Ionization Reveals Dietary Metabolite Transformations** *ANALYTICAL CHEMISTRY*  
Rath, C. M., Alexandrov, T., Higginbottom, S. K., Song, J., Milla, M. E., Fischbach, M. A., Sonnenburg, J. L., Dorrestein, P. C.  
2012; 84 (21): 9259-9267
- **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.  
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