



Sean Paul Spencer, MD, PhD

Instructor, Medicine - Gastroenterology & Hepatology

CLINICAL OFFICES

- **Stanford Digestive Health Clinic**

420 Broadway St

Pavilion D 2nd Fl

Redwood City, CA 94063

Tel (650) 736-6555 **Fax** (650) 498-6323

Bio

BIO

Sean Spencer, MD, PhD is a Gastroenterologist and Physician Scientist at Stanford University working with Justin Sonnenburg, PhD to uncover the role of dietary intake on the gut microbiome and mucosal immune system. Sean obtained his medical degree University of Pennsylvania, earning his PhD studying nutritional immunology with Yasmine Belkaid, PhD at the National Institutes of Health (NIH), after which he moved to Boston for residency training at Massachusetts General Hospital and completed his Gastroenterology training at Stanford University. Sean's career goal is to study mechanisms by which dietary intake influences our microbiome and immune system to better understand and treat gastrointestinal disease.

CLINICAL FOCUS

- Gastroenterology
- Neurogastroenterology & Motility
- Gastrointestinal Microbiota
- Diet

ACADEMIC APPOINTMENTS

- Instructor, Medicine - Gastroenterology & Hepatology

HONORS AND AWARDS

- A.P. Giannini Postdoctoral Fellow, AP Giannini Foundation (2021-2023)
- Training Grant in Academic Gastroenterology (T32), National Institute of Diabetes and Digestive and Kidney Diseases (2019-2021)
- Ruth L. Kirschstein NRSA Individual Predoctoral MD/PhD fellowship (F30), National Institute of Diabetes and Digestive and Kidney Disease (2011-2014)
- Medical Scientist Training Program (T32), National Institute of General Medical Sciences (2007-2009)

PROGRAM AFFILIATIONS

- SPARK at Stanford

PROFESSIONAL EDUCATION

- Board Certification: Gastroenterology, American Board of Gastroenterology (2022)
- MD/PhD, University of Pennsylvania , Immunology (2015)
- Residency: Massachusetts General Hospital Internal Medicine Residency (2017) MA
- Fellowship: Stanford University Gastroenterology Fellowship (2021) CA
- Board Certification: Internal Medicine, American Board of Internal Medicine (2018)
- Board Certification, American Board of Internal Medicine , Gastroenterology (2022)

LINKS

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

Teaching

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Gastroenterology & Hepatology (Fellowship Program)

Publications

PUBLICATIONS

- **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
- **Pursuing Human-Relevant Gut Microbiota-Immune Interactions.** *Immunity*
Spencer, S. P., Fragiadakis, G. K., Sonnenburg, J. L.
2019; 51 (2): 225–39
- **The long non-coding RNA Morrbid regulates Bim and short-lived myeloid cell lifespan.** *Nature*
Kotzin, J. J., Spencer, S. P., McCright, S. J., Kumar, D. B., Collet, M. A., Mowel, W. K., Elliott, E. N., Uyar, A., Makiya, M. A., Dunagin, M. C., Harman, C. C., Virtue, A. T., Zhu, et al
2016; 537 (7619): 239-243
- **Adaptation of innate lymphoid cells to a micronutrient deficiency promotes type 2 barrier immunity.** *Science (New York, N.Y.)*
Spencer, S. P., Wilhelm, C., Yang, Q., Hall, J. A., Bouladoux, N., Boyd, A., Nutman, T. B., Urban, J. F., Wang, J., Ramalingam, T. R., Bhandoola, A., Wynn, T. A., Belkaid, et al
2014; 343 (6169): 432-7
- **Dietary and commensal derived nutrients: shaping mucosal and systemic immunity.** *Current opinion in immunology*
Spencer, S. P., Belkaid, Y.
2012; 24 (4): 379-84
- **Ultra-deep Sequencing of Hadza Hunter-Gatherers Recovers Vanishing Gut Microbes.** *bioRxiv : the preprint server for biology*
Merrill, B. D., Carter, M. M., Olm, M. R., Dahan, D., Tripathi, S., Spencer, S. P., Yu, B., Jain, S., Neff, N., Jha, A. R., Sonnenburg, E. D., Sonnenburg, J. L.
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
- **Environmental enteric dysfunction induces regulatory T cells that inhibit local CD4+T cell responses and impair oral vaccine efficacy** *IMMUNITY*
Bhattacharjee, A., Burr, A. P., Overacre-Delgoffe, A. E., Tometich, J. T., Yang, D., Huckestein, B. R., Linehan, J. L., Spencer, S. P., Hall, J. A., Harrison, O. J., da Fonseca, D., Norton, E. B., Belkaid, et al
2021; 54 (8): 1745+

- **When Gut Microbiota Creep into Fat, the Fat Creeps Back.** *Cell*
Spencer, S. P., Sonnenburg, J. L.
2020; 183 (3): 589–91
- **Colons or semi-colons: punctuating the regional variation of intestinal microbial-immune interactions.** *Nature reviews. Gastroenterology & hepatology*
Culver, R. N., Spencer, S. P., Huang, K. C.
2020
- **High Prevalence of Concurrent Gastrointestinal Manifestations in Patients with SARS-CoV-2: Early Experience from California.** *Gastroenterology*
Cholankeril, G., Podboy, A., Aivaliotis, V. I., Tarlow, B., Pham, E. A., Spencer, S., Kim, D., Hsing, A., Ahmed, A.
2020
- **Association of Digestive Symptoms and Hospitalization in Patients With SARS-CoV-2 Infection.** *The American journal of gastroenterology*
Cholankeril, G. n., Podboy, A. n., Aivaliotis, V. I., Pham, E. A., Spencer, S. P., Kim, D. n., Ahmed, A. n.
2020; 115 (7): 1129–32
- **The long noncoding RNA Morrbid regulates CD8 T cells in response to viral infection** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Kotzin, J. J., Iseka, F., Wright, J., Basavappa, M. G., Clark, M. L., Ali, M., Abdel-Hakeem, M. S., Robertson, T. F., Mowel, W. K., Joannas, L., Neal, V. D., Spencer, S. P., Syrett, et al
2019; 116 (24): 11916–25