Stanford

Laren Becker

Assistant Professor of Medicine (Gastroenterology)

Medicine - Gastroenterology & Hepatology

CLINICAL OFFICE (PRIMARY)

- **Stanford Gastroenterology and Digestive Health Clinic**
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ACADEMIC CONTACT INFORMATION

- **Alternate Contact**
  Felicia Juse-Kelly - Administrative Associate
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Bio

BIO

I am a physician-scientist in the Division of Gastroenterology at Stanford University. My clinical and research interest has been in neurogastroenterology. Specifically, my research has been exploring the interplay between immune cells and the enteric nervous system, and evaluating how perturbations of this interaction as a result of aging disrupts gastrointestinal neuromuscular function. Ultimately, my hope is that insights from this research provide novel therapies for treating patients with motility disorders like constipation and irritable bowel syndrome.

CLINICAL FOCUS

- Gastroenterology
- Neurogastroenterology

ACADEMIC APPOINTMENTS

- Assistant Professor - University Medical Line, Medicine - Gastroenterology & Hepatology

ADMINISTRATIVE APPOINTMENTS

- Assistant Professor of Medicine (Gastroenterology and Hepatology), Stanford University, (2021- present)
- Instructor in Medicine, Stanford University, (2009-2021)
- Clinical and Research Fellow in Gastroenterology, Beth Israel Deaconess, Harvard Medical School, (2005-2009)

HONORS AND AWARDS

- GEMSSTAR Scholar, NIA/NIH (2013-2015)
- Neurogastroenterology & Motility Distinguished Abstract Plenary, DDW (2013)
- Fellowship to Faculty Transition Award, AGA (2012)
- Albert Einstein College of Medicine Medical Scientist Training Program, MSTP (1994)
- Golden Key National Honor Society, University of California, Berkeley (1994)
- Phi Beta Kappa, University of California, Berkeley (1994)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member, American Gastroenterologic Association (2005 - present)

PROFESSIONAL EDUCATION

- Board Certification: Gastroenterology, American Board of Internal Medicine (2020)
- Medical Education: Albert Einstein College of Medicine (2002) NY
- Fellowship: Beth Israel Deaconess Medical Center Dept of Gastroenterology (2009) MA
- Residency: Beth Israel Deaconess Medical Center Internal Medicine Residency (2005) MA

Teaching

STANFORD ADVISEES

Postdoctoral Faculty Sponsor

Mathangi Janakiraman, Kwangkon Kim

Doctoral Dissertation Reader (NonAC)

Jacqueline Bendrick, Jack Marciano, Adarsh Tantry

Postdoctoral Research Mentor

Mathangi Janakiraman, Kwangkon Kim

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Gastroenterology & Hepatology (Fellowship Program)

Publications

PUBLICATIONS

- **Age-dependent Microglial Disease Phenotype Results in Functional Decline in Gut Macrophages.** *Gastro hep advances*
  Bishop, E. S., Namkoong, H., Aurelian, L., McCarthy, M., Nallagatla, P., Zhou, W., Neshatian, L., Gurland, B., Habtezion, A., Becker, L.
  2023; 2 (2): 261-276

- **Advances and prospects for the Human BioMolecular Atlas Program (HuBMAP).** *Nature cell biology*
  Jain, S., Pei, L., Spraggins, J. M., Angelo, M., Carson, J. P., Gehlenborg, N., Ginty, F., Gonçalves, J. P., Hagood, J. S., Hickey, J. W., Kelleher, N. L., Laurent, L. C., Lin, et al
  2023

- **Differential Findings on Anorectal Manometry in Patients with Parkinson's Disease and Defecatory Dysfunction.** *Movement disorders clinical practice*
  Zhou, W., Triadafilopoulos, G., Gurland, B., Halawi, H., Becker, L., Garcia, P., Nguyen, L., Miglis, M., Muppidi, S., Sinn, D. I., Jaradeh, S., Neshatian, L.
  2023; 10 (7): 1074-1081

- **High Resolution Anorectal Manometry Findings in Men and Women With Parkinson's Disease, Using London Classification**
  Zhou, W., Sinn, D., Jaradeh, S., Muppidi, S., Miglis, M., Triadafilopoulos, G., Halawi, H., Becker, L., Garcia, P., Nguyen, L., Neshatian, L.
  LIPPINCOTT WILLIAMS & WILKINS.2022: S407-S408

- **Metalloendopeptidase ADAM-like Decysin 1 (ADAMDEC1) in Colonic Subepithelial PDGFRalpha+ Cells Is a New Marker for Inflammatory Bowel Disease.** *International journal of molecular sciences*
  Ha, S. E., Jorgensen, B. G., Wei, L., Jin, B., Kim, M., Poudrier, S. M., Singh, R., Bartlett, A., Zogg, H., Kim, S., Baek, G., Kurahashi, M., Lee, et al
  2022; 23 (9)

- **Sarcopenia Is a Risk Factor for Pelvic Organ Prolapse Independent of Age**
  Sheth, V., Becker, L., Liang, T., Gurland, B., Neshatian, L.

LIPPINCOTT WILLIAMS & WILKINS.2021: S243

- **Gastrointestinal symptoms and healthcare utilization have increased among patients with functional gastrointestinal and motility disorders during the COVID-19 pandemic.** *Neurogastroenterology and motility : the official journal of the European Gastrointestinal Motility Society*
  Gubatan, J., Zikos, T., Spear Bishop, E., Wu, J., Gottfried, A., Becker, L., Habtezion, A., Neshatian, L.
  2021: e14243

- **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

- **The esophageal mucosal barrier in health and disease: mucosal pathophysiology and protective mechanisms.** *Annals of the New York Academy of Sciences*
  Gyawali, C. P., Sonu, I. n., Becker, L. n., Sarosiek, J. n.
  2020

- **Gastric antral vascular ectasia in systemic sclerosis: Association with anti-RNA polymerase III and negative anti-nuclear antibodies.** *Seminars in arthritis and rheumatism*
  Serling-Boyd, N. n., Chung, M. P., Li, S. n., Becker, L. n., Fernandez-Becker, N. n., Clarke, J. n., Fiorentino, D. n., Chung, L. n.
  2020; 50 (5): 938–42

- **Mass cytometry reveals systemic and local immune signatures that distinguish inflammatory bowel diseases.** *Nature communications*
  Rubin, S. J., Bai, L., Haileselassie, Y., Garay, G., Yun, C., Becker, L., Streett, S. E., Sinha, S. R., Habtezion, A.
  2019; 10 (1): 2686

- **Age-Related Changes inGut Microbiota AlterPhenotype of Muscularis Macrophages and Disrupt Gastrointestinal Motility.** *Cellular and molecular gastroenterology and hepatology*
  Becker, L., Spear, E. T., Sinha, S. R., Haileselassie, Y., Habtezion, A.
  2019; 7 (1): 243

- **Advances in Enteric Neurobiology: The "Brain" in the Gut in Health and Disease.** *The Journal of neuroscience : the official journal of the Society for Neuroscience*
  Kulkarni, S., Ganz, J., Bayrer, J., Becker, L., Bogunovic, M., Rao, M.
  2018; 38 (44): 9346–54

- **Multi-Organ RNA-Sequencing of Patients with Systemic Sclerosis (SSc) Finds That Intrinsic Subsets Are Conserved across Organ Systems**
  Mehta, B. K., Franks, J., Wang, Y., Cai, G., Toledo, D. M., Wood, T. A., Archambault, K. A., Kosarek, N., Kolstad, K. D., Stark, M., Valenzuela, A., Fiorentino, D., Fernandez-Becker, et al
  WILEY.2018

- **Identification of Risk Factors for Gastric Antral Vascular Ectasia (GAVE) Among Systemic Sclerosis Patients**
  Serling-Boyd, N., Li, S., Fiorentino, D., Becker, L., Fernandez-Becker, N., Clarke, J., Chung, L.
  WILEY.2018

- **DNA methylation, through DNMT1, has an essential role in the development of gastrointestinal smooth muscle cells and disease** *CELL DEATH & DISEASE*
  Jorgensen, B. G., Berent, R. M., Ha, S., Horiguchi, K., Sasse, K. C., Becker, L. S., Ro, S.
  2018; 9: 474

- **Multi-Organ RNA-Sequencing of Patients with Systemic Sclerosis (SSc) Finds That Intrinsic Subsets Are Conserved across Organ Systems**
  Mehta, B. K., Franks, J., Cai, G., Toledo, D., Wood, T. A., Archambault, K. A., Kosarek, N., Kolstad, K., Stark, M., Valenzuela, A., Fiorentino, D., Fernandez-Becker, N., Becker, et al
  WILEY.2017

- **Adult enteric nervous system in health is maintained by a dynamic balance between neuronal apoptosis and neurogenesis** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Kulkarni, S., Micci, M., Leser, J., Shin, C., Tang, S., Fu, Y., Liu, L., Li, Q., Saha, M., Li, C., Enikolopov, G., Becker, L., Rakhilin, et al
  2017; 114 (18): E3709-E3718

- **Age-dependent shift in macrophage polarisation causes inflammation-mediated degeneration of enteric nervous system.** *Gut*
  Becker, L., Nguyen, L., Gill, J., Kulkarni, S., Pasricha, P. J., Habtezion, A.
  2017
- **Intestinal pseudo-obstruction in patients with systemic sclerosis: an analysis of the Nationwide Inpatient Sample.** *Rheumatology*
  Valenzuela, A., Li, S., Becker, L., Fernandez-Becker, N., Khanna, D., Nguyen, L., Chung, L.
  2016; 55 (4): 654-658
- **Serum Response Factor Is Essential for Prenatal Gastrointestinal Smooth Muscle Development and Maintenance of Differentiated Phenotype.** *Journal of neurogastroenterology and motility*
  Park, C., Lee, M. Y., Park, P. J., Ha, S. E., Berent, R. M., Fuchs, R., Miano, J. M., Becker, L. S., Sanders, K. M., Ro, S.
  2015; 21 (4): 589-602
- **Ex Vivo Neurogenesis within Enteric Ganglia Occurs in a PTEN Dependent Manner** *PLOS ONE*
  Becker, L., Peterson, J., Kulkarni, S., Pasricha, P. J.
  2013; 8 (3)
- **Divergent fate and origin of neurosphere-like bodies from different layers of the gut** *AMERICAN JOURNAL OF PHYSIOLOGY-GASTROINTESTINAL AND LIVER PHYSIOLOGY*
  Becker, L., Kulkarni, S., Tiwari, G., Micci, M., Pasricha, P. J.
  2012; 302 (9): G958-G965
- **Stem cell transplantation in neurodegenerative disorders of the gastrointestinal tract: future or fiction?** *GUT*
  Kulkarni, S., Becker, L., Pasricha, P. J.
  2012; 61 (4): 613-621
- **Gut-derived factors promote neurogenesis of CNS-neural stem cells and nudge their differentiation to an enteric-like neuronal phenotype** *AMERICAN JOURNAL OF PHYSIOLOGY-GASTROINTESTINAL AND LIVER PHYSIOLOGY*
  Kulkarni, S., Zou, B., Hanson, J., Micci, M., Tiwari, G., Becker, L., Kaiser, M., Xie, X. (., Pasricha, P. J.
  2011; 301 (4): G644-G655