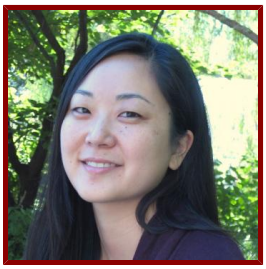
Stanford



Jennifer K. Bando

Assistant Professor of Microbiology and Immunology

CONTACT INFORMATION

- **Administrative Contact**

  Monica Cryan - Administrative Associate

  Email mlcryan@stanford.edu

  Tel (650)498-8035

Bio

ACADEMIC APPOINTMENTS

- Assistant Professor, Microbiology and Immunology
- Member, Maternal & Child Health Research Institute (MCHRI)

HONORS AND AWARDS

- Baxter Foundation Faculty Scholar, Donald E. and Delia B. Baxter Foundation (2022)
- Pathway to Independence Award (K99/R00), National Institute of Diabetes and Digestive and Kidney Diseases (2019-current)
- Cancer Research Institute-Irvington Postdoctoral Fellow, Cancer Research Institute (2016-2019)

PROFESSIONAL EDUCATION

- Postdoctoral Research Associate, Washington University in St. Louis , Department of Pathology and Immunology (2021)
- Ph.D., University of California - San Francisco , Biomedical Sciences (2014)
- B.S., University of California - Los Angeles , Marine Biology/Biochemistry (2005)

LINKS

- Bando Lab Website: https://www.bandolab.com/

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Mucosal immunology, innate lymphocytes

Teaching

COURSES

2025-26

- Antibody Anywhere All at Once: An Introduction to Techniques in Immunology: BIOS 412 (Spr)

2024-25

- Antibody Anywhere All at Once: An Introduction to Techniques in Immunology: BIOS 412 (Spr)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Gabe Barron, Tejas Dharmaraj, Maigane Diop, Desmond Edwards, Youlim Kim, Keene Lee, Kennedy Outlaw, Flora Tierney, Miles Tyner, Amanda Verzosa, Izumi de los Rios Kobara

Doctoral Dissertation Advisor (AC)

Jasmine Arunachalam, Alyssa Cutter, Lily Kalcec

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Immunology (Phd Program)
- Microbiology and Immunology (Phd Program)

Publications

PUBLICATIONS

- **TREM2 deficiency reprograms intestinal macrophages and microbiota to enhance anti-PD-1 tumor immunotherapy.** *Science immunology*
  Di Luccia, B., Molgora, M., Khantakova, D., Jaeger, N., Chang, H. W., Czepielewski, R. S., Helmink, B. A., Onufer, E. J., Fachi, J. L., Bhattarai, B., Trsan, T., Rodrigues, P. F., Hou, et al
  2024; 9 (95): eadi5374

- **The aryl hydrocarbon receptor instructs the immunomodulatory profile of a subset of Clec4a4+ eosinophils unique to the small intestine.** *Proceedings of the National Academy of Sciences of the United States of America*
  Wang, W., Kasamatsu, J., Joshita, S., Gilfillan, S., Di Luccia, B., Panda, S. K., Kim, D., Desai, P., Bando, J. K., Huang, S. C., Yomogida, K., Hoshino, H., Fukushima, et al
  2022; 119 (23): e2204557119

- **Whole-genome profiling of DNA methylation and hydroxymethylation identifies distinct regulatory programs among innate lymphocytes.** *Nature immunology*
  Peng, V., Xing, X., Bando, J. K., Trsan, T., Di Luccia, B., Collins, P. L., Li, D., Wang, W., Lee, H. J., Oltz, E. M., Wang, T., Colonna, M.
  2022

- **Spatial distribution of LTi-like cells in intestinal mucosa regulates type 3 innate immunity.** *Proceedings of the National Academy of Sciences of the United States of America*
  Secca, C., Bando, J. K., Fachi, J. L., Gilfillan, S., Peng, V., Di Luccia, B., Cella, M., McDonald, K. G., Newberry, R. D., Colonna, M.
  2021; 118 (23)

- **Heterogeneity of meningeal B cells reveals a lymphopoietic niche at the CNS borders.** *Science (New York, N.Y.)*
  Brioschi, S., Wang, W., Peng, V., Wang, M., Shchukina, I., Greenberg, Z. J., Bando, J. K., Jaeger, N., Czepielewski, R. S., Swain, A., Mogilenko, D. A., Beatty, W. L., Bayguinov, et al
  2021

- **Indole-3-Carbinol-Dependent Aryl Hydrocarbon Receptor Signaling Attenuates the Inflammatory Response in Experimental Necrotizing Enterocolitis.** *ImmunoHorizons*
  Nolan, L. S., Mihi, B., Agrawal, P., Gong, Q., Rimer, J. M., Bidani, S. S., Gale, S. E., Goree, M., Hu, E., Lanik, W. E., Huang, E., Bando, J. K., Liu, et al
  2021; 5 (4): 193-209

- **Group 2 Innate Lymphoid Cells Induce Antibody Production in Gastric Tissue.** *Trends in immunology*
  Bando, J. K., Colonna, M.
  2020; 41 (8): 643-645

- **STING Gain-of-Function Disrupts Lymph Node Organogenesis and Innate Lymphoid Cell Development in Mice.** *Cell reports*

Bennion, B. G., Croft, C. A., Ai, T. L., Qian, W., Menos, A. M., Miner, C. A., Frémond, M. L., Doisne, J. M., Andhey, P. S., Platt, D. J., Bando, J. K., Wang, E. R., Luksch, et al
2020; 31 (11): 107771

- **Insulin-Like Growth Factors Are Key Regulators of T Helper 17 Regulatory T Cell Balance in Autoimmunity.** *Immunity*
  DiToro, D., Harbour, S. N., Bando, J. K., Benavides, G., Witte, S., Laufer, V. A., Moseley, C., Singer, J. R., Frey, B., Turner, H., Bruning, J., Darley-Usmar, V., Gao, et al
  2020; 52 (4): 650-667.e10
- **ILC2s are the predominant source of intestinal ILC-derived IL-10.** *The Journal of experimental medicine*
  Bando, J. K., Gilfillan, S., Di Luccia, B., Fachi, J. L., Sécca, C., Cella, M., Colonna, M.
  2020; 217 (2)
- **Circadian rhythm-dependent and circadian rhythm-independent impacts of the molecular clock on type 3 innate lymphoid cells.** *Science immunology*
  Wang, Q., Robinette, M. L., Billon, C., Collins, P. L., Bando, J. K., Fachi, J. L., Sécca, C., Porter, S. I., Saini, A., Gilfillan, S., Solt, L. A., Musiek, E. S., Oltz, et al
  2019; 4 (40)
- **Subsets of ILC3-ILC1-like cells generate a diversity spectrum of innate lymphoid cells in human mucosal tissues.** *Nature immunology*
  Cella, M., Gamini, R., Sécca, C., Collins, P. L., Zhao, S., Peng, V., Robinette, M. L., Schettini, J., Zaitsev, K., Gordon, W., Bando, J. K., Yomogida, K., Cortez, et al
  2019; 20 (8): 980-991
- **The Tumor Necrosis Factor Superfamily Member RANKL Suppresses Effector Cytokine Production in Group 3 Innate Lymphoid Cells.** *Immunity*
  Bando, J. K., Gilfillan, S., Song, C., McDonald, K. G., Huang, S. C., Newberry, R. D., Kobayashi, Y., Allan, D. S., Carlyle, J. R., Cella, M., Colonna, M.
  2018; 48 (6): 1208-1219.e4
- **Natural Killer Cells Control Tumor Growth by Sensing a Growth Factor.** *Cell*
  Barrow, A. D., Edeling, M. A., Trifonov, V., Luo, J., Goyal, P., Bohl, B., Bando, J. K., Kim, A. H., Walker, J., Andahazy, M., Bugatti, M., Melocchi, L., Vermi, et al
  2018; 172 (3): 534-548.e19
- **SMAD4 impedes the conversion of NK cells into ILC1-like cells by curtailing non-canonical TGF-β signaling.** *Nature immunology*
  Cortez, V. S., Ulland, T. K., Cervantes-Barragan, L., Bando, J. K., Robinette, M. L., Wang, Q., White, A. J., Gilfillan, S., Cella, M., Colonna, M.
  2017; 18 (9): 995-1003
- **IL-15 sustains IL-7R-independent ILC2 and ILC3 development.** *Nature communications*
  Robinette, M. L., Bando, J. K., Song, W., Ulland, T. K., Gilfillan, S., Colonna, M.
  2017; 8: 14601
- **Innate lymphoid cell function in the context of adaptive immunity.** *Nature immunology*
  Bando, J. K., Colonna, M.
  2016; 17 (7): 783-9
- **Transforming Growth Factor-β Signaling Guides the Differentiation of Innate Lymphoid Cells in Salivary Glands.** *Immunity*
  Cortez, V. S., Cervantes-Barragan, L., Robinette, M. L., Bando, J. K., Wang, Y., Geiger, T. L., Gilfillan, S., Fuchs, A., Vivier, E., Sun, J. C., Cella, M., Colonna, M.
  2016; 44 (5): 1127-39
- **Identification and distribution of developing innate lymphoid cells in the fetal mouse intestine.** *Nature immunology*
  Bando, J. K., Liang, H. E., Locksley, R. M.
  2015; 16 (2): 153-60
- **Leukotriene B4 amplifies eosinophil accumulation in response to nematodes.** *The Journal of experimental medicine*
  Patnode, M. L., Bando, J. K., Krummel, M. F., Locksley, R. M., Rosen, S. D.
  2014; 211 (7): 1281-8
- **Type 2 innate lymphoid cells constitutively express arginase-I in the naive and inflamed lung** *JOURNAL OF LEUKOCYTE BIOLOGY*
  Bando, J. K., Nussbaum, J. C., Liang, H., Locksley, R. M.

2013; 94 (5): 877–84

- **Subsets of Nonclonal Neighboring CD4(+) T Cells Specifically Regulate the Frequency of Individual Antigen-Reactive T Cells** *IMMUNITY*
  Singh, N. J., Bando, J. K., Schwartz, R. H.
  2012; 37 (4): 735–46
- **Divergent expression patterns of IL-4 and IL-13 define unique functions in allergic immunity** *NATURE IMMUNOLOGY*
  Liang, H., Reinhardt, R., Bando, J. K., Sullivan, B. M., Ho, I., Locksley, R. M.
  2012; 13 (1): 58–U83
- **Genetic analysis of basophil function in vivo** *NATURE IMMUNOLOGY*
  Sullivan, B. M., Liang, H., Bando, J. K., Wu, D., Cheng, L. E., McKerrow, J. K., Allen, C. D. C., Locksley, R. M.
  2011; 12 (6): 527–U243
- **Eosinophils Sustain Adipose Alternatively Activated Macrophages Associated with Glucose Homeostasis** *SCIENCE*
  Wu, D., Molofsky, A. B., Liang, H., Ricardo-Gonzalez, R. R., Jouihan, H. A., Bando, J. K., Chawla, A., Locksley, R. M.
  2011; 332 (6026): 243-247
- **Sex Differences in Ethanol-Induced Hypothermia in Ethanol-Naive and Ethanol-Dependent/Withdrawn Rats** *ALCOHOLISM-CLINICAL AND EXPERIMENTAL RESEARCH*
  Taylor, A. N., Tio, D. L., Bando, J. K., Truong, A. H., Prolo, P.
  2009; 33 (1): 60-69
- **Lasting neuroendocrine-immune effects of traumatic brain injury in rats** *JOURNAL OF NEUROTRAUMA*
  Taylor, A. N., Rahman, S. U., Tio, D. L., Sanders, M. J., Bando, J. K., Truong, A. H., Prolo, P.
  2006; 23 (12): 1802-1813
- **Differential effects of alcohol consumption and withdrawal on circadian temperature and activity rhythms in Sprague-Dawley, Lewis, and Fischer male and female rats** *ALCOHOLISM-CLINICAL AND EXPERIMENTAL RESEARCH*
  Taylor, A. N., Tio, D. L., Bando, J. K., Romeo, H. E., Prolo, P.
  2006; 30 (3): 438–47