

Sarah Elizabeth Barnes

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Education

Postdoctoral Research Associate <i>Advisor: Hazel Sive, PhD</i> <i>Northeastern University, Boston, MA</i>	2021 - 2022
Doctor of Philosophy, Immunology <i>Advisor: Edgar G. Engleman, MD</i> <i>Stanford University, Stanford, CA</i>	2021
Bachelor of Science, Biological Sciences Specialization in Immunology <i>Advisor: Maria-Luisa Alegre, MD, PhD</i> <i>University of Chicago, Chicago, IL</i>	2014

Teaching Experience

POSITIONS

Lecturer <i>Human Physiology Program, Health Sciences Department</i> <i>Sargent College of Health and Rehabilitation Sciences</i> <i>Boston University, Boston, MA</i>	2024 - Present
Full-Time Visiting Lecturer <i>Department of Biological Sciences</i> <i>Wellesley College, Wellesley, MA</i>	2022 - 2024
Part-Time Lecturer <i>Department of Biology, College of Science</i> <i>Northeastern University, Boston, MA</i>	2022

COURSES

Physiology Across the Lifespan	2024
The Physiologist's Toolbox	2024
<i>Boston University, Boston, MA</i>	
Introductory Organismal Biology Lecture	2023 - 2024
Human Physiology Lecture	2023 - 2024
Human Physiology Lab	2022 - 2024
Explorations in Cell & Molecular Biology Lab	2022 - 2024
Introductory Organismal Biology Lab	2022 - 2024
<i>Wellesley College, Wellesley, MA</i>	
Mucosal Immunology	2022
<i>Northeastern University, Boston, MA</i>	

Summer Institutes of Medicine Research (SIMR) Program – Guest Lecturer	2017 - 2019
Neuroimmunity – Instructor of Record	2018
Molecular & Cellular Immunology – Teaching Assistant	2016
Advanced Immunology II – Teaching Assistant	2016
<i>Stanford University, Stanford, CA</i>	

MENTORING

Thesis Committee Member <i>Isabel Flessas, Wellesley College, Wellesley, MA</i>	2023 - Present
Supervisor <i>Sive Laboratory, Northeastern University, Boston, MA</i> ◊ Supervised three undergraduate students in zebrafish maintenance	2021 - 2022
Lab Mentor <i>Engleman Laboratory, Stanford University School of Medicine, Stanford, CA</i> ◊ Advised three high school students in the lab setting	2017 - 2019
Teaching Assistant <i>Summer Institutes of Medicine Research (SIMR) Program, Stanford University, Stanford, CA</i> ◊ Assisted in program admissions, mentored a cohort of 5-10 students each summer, held both group and one-on-one advising meetings, assisted with abstract and poster design, managed faculty-student relationships and conflicts, provided pre-collegiate mentoring	2017 - 2019

PROFESSIONAL DEVELOPMENT

Future Faculty Program <i>Center for Advanced Teaching and Learning Through Research, Northeastern University</i> ◊ Received mentorship on teaching portfolio and participated in programming involving discussions and reflections on the following: diversity and inclusive teaching; course and syllabus design; assignments, assessment, & active learning; teaching statements	2021 - 2022
Preparing Future Professors Program <i>Vice Provost for Graduate Education, Stanford University</i> ◊ Received personal mentorship from a San José State University faculty member and attended a weekly practicum involving discussions on the following: various types of teaching-focused institutions, roles and responsibilities of teaching faculty at different institutions, pedagogical approaches, and creating an equitable learning environment	2021

Academic Service Experience

POSITIONS

BioPeer <i>Wellness Matters Initiative, Office of Graduate Education (OGE)</i> <i>Stanford University School of Medicine, Stanford, CA</i> ◊ Provided confidential peer counseling; organized wellness events for the Stanford Biosciences community; served as OGE liaison for wellness coordinators of various organizations including Stanford Biosciences Student Association, BeWell and Health Improvement programs for faculty, and the Stanford Biosciences Mental Health Team	2016 - 2021
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Liaison to the Vice Provost for Teaching and Learning <i>Immunology Program, Stanford University School of Medicine, Stanford, CA</i>	2017 - 2019
Seminar Series Director <i>Immunology Program, Stanford University School of Medicine, Stanford, CA</i>	2017 - 2018
Executive Committee Representative <i>Immunology Program, Stanford University School of Medicine, Stanford, CA</i>	2016 - 2018

PROFESSIONAL DEVELOPMENT

PHDL 7600: Leading Self & Others <i>Northeastern University, Boston, MA</i> ◇ Course for predoctoral & postdoctoral researchers covering leadership, project management, communication, collaboration, and career development	2022
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Research Experience

POSITIONS

Postdoctoral Research Associate Investigated metabolic gene interactions in 16p11.2 deletion syndrome <i>Advisor: Hazel Sive, PhD</i> <i>Northeastern University, Boston, MA</i>	2021 - 2022
PhD Graduate Researcher Investigated mechanisms by which peripheral inflammation induces neuronal hyperexcitability <i>Advisor: Edgar G. Engleman, MD</i> <i>Stanford University School of Medicine, Stanford, CA</i>	2014 - 2021
Undergraduate Research Assistant Investigated the role of NF- κ B signaling in T cells during tumor rejection <i>Advisor: Maria-Luisa Alegre, MD, PhD</i> <i>University of Chicago, Chicago, IL</i>	2011 - 2014

PUBLICATIONS

Brandon Choo, **Sarah E. Barnes**, Hazel Sive. Metabolic Mechanisms Underlying 16p11.2 Deletion Syndrome: A Hypothesis. *Bioessays* in review

Sarah E. Barnes, Kristy A. Zera, Geoffrey T. Ivison, Marion S. Buckwalter, Edgar G. Engleman. Brain profiling in murine colitis and human epilepsy reveals neutrophils and TNF α as mediators of neuronal hyperexcitability. *J Neuroinflammation*, **18**(1): 199; (2021). DOI: 10.1186/s12974-021-02262-4

Sarah E. Barnes, May H. Han. CD317 puts the brakes on dendritic cell trafficking to the CNS. *PNAS*, **118**(18): e2104740118; (2021). DOI: 10.1073/pnas.2104740118

César Evaristo, Stefani Spranger, **Sarah E. Barnes**, Michelle L. Miller, Luciana L. Molinero, Frederick Locke, Thomas F. Gajewski, Maria-Luisa Alegre. Cutting Edge: Engineering Active IKK β in T Cells Promotes Tumor Rejection. *Journal of Immunology*, **196**(7): 2933-2938 (2016). DOI: 10.4049/jimmunol.1501144

Melissa Hui Yen Chng, Michael N. Alonso, **Sarah E. Barnes**, Khoa D. Nguyen, Edgar G. Engleman. Adaptive Immunity and Antigen-Specific Activation in Obesity-Associated Insulin Resistance. *Mediators of Inflammation*, **2015**: 593075 (2015). DOI: 10.1155/2015/593075

Sarah E. Barnes, Ying Wang, Luqiu Chen, Luciana L. Molinero, Thomas F. Gajewski, César Evaristo, Maria-Luisa Alegre. T Cell-NF- κ B Activation is Required for Tumor Control *in vivo*. *Journal for Immunotherapy of Cancer*, **3**(1): 1-11 (2015). DOI: 10.1186/s40425-014-0045-x

Professional Affiliations

Biology Through Art
Network Biologist

Society for the Advancement of Biology Education Research
Member

Awards & Honors

Predoctoral Training Grant NIH T32-AI007290 <i>Immunology Program, Stanford University School of Medicine, Stanford, CA</i>	2014 - 2019
Best Poster by a Graduate Student <i>Immunology Program Retreat, Stanford University School of Medicine, Stanford, CA</i>	2018
Best Poster by a Graduate Student <i>Department of Pathology Retreat, Stanford University School of Medicine, Stanford, CA</i>	2018
Honorable Mention <i>Graduate Research Fellowship Program, National Science Foundation</i>	2015
Honors in the College <i>The College, University of Chicago, Chicago, IL</i>	2014
Departmental Honors in Biological Sciences <i>Biological Sciences Collegiate Division, University of Chicago, Chicago, IL</i>	2014
Best Honors Thesis <i>Biological Sciences Collegiate Division, University of Chicago, Chicago, IL</i>	2014
Research Honors Fellowship <i>Biological Sciences Collegiate Division, University of Chicago, Chicago, IL</i>	2013
Dean's List <i>The College, University of Chicago, Chicago, IL</i>	2013