

Sita Ramaswamy, PhD

✉ sitar@bu.edu ☎ (321)-946-6385

Professional Objectives

As a researcher with 5 years of experience and a PhD in Microbiology, specializing in virology and immunology, I am interested in facilitating medical affairs communication in an interdisciplinary team of researchers and clinicians.

Education

Boston University, Boston, MA

August 2020 – May 2025

PhD in Virology, Immunology, and Microbiology

- Dissertation: Elucidating Mechanisms of HIV-1 Intron-Containing RNA-Induced Inflammatory Response

University of Miami, Miami, FL

August 2016 – May 2020

BS in Biochemistry & Molecular Biology, Criminology

- Minor in Classics
- Relevant Coursework: Biology, Organic Chemistry, Genetics, Immunology

Research Experience & Occupations

Graduate Researcher in the Lab of Rahm Gummuru, PhD

Boston, MA

Boston University - Department of Virology, Immunology, and Microbiology

April 2021 – present

- Elucidated a novel role for Interferon Regulatory Factor 5 (IRF5) in mediating inflammation in the context of HIV-1 infection and aging
- Presented work at 4+ scientific conferences nation-wide to diverse expert groups including basic science researchers and clinicians, tailoring research communication to each audience
- Mentored 5+ new lab members and high school student interns in conducting in-vitro assays as well as relevant scientific literature related to lab projects
- Experience with: Microsoft Office Suite, Adobe Illustrator, GraphPad, BioRender, EndNote, NSolver

Undergraduate Researcher in the Lab of Dr. Toborek, PhD

Miami, FL

University of Miami Department of Biochemistry & Molecular Biology

Oct. 2017 – March 2020

- Conducted a broad-based study of gene regulation at the level of histone modifications related to HIV infection in Blood Brain Barrier (BBB) cells
- Presented work at several conferences as well as in an edition of 'Scientifica', a university publication about topics in STEM

Peer Research Consultant

Miami, FL

University of Miami Otto G. Richter Library

April 2017 – March 2020

- Assisted students and patrons in navigating library databases in order to compile primary sources for research presentations and assignments

Undergraduate Researcher in the Lab of Dr. Dhar, PhD

Miami, FL

University of Miami Department of Biochemistry & Molecular Biology

April 2017 – March 2020

- Optimized the generation and quality of nanoparticles to be used for drug delivery in future glioblastoma experiments

Research Intern

Orlando, FL

Naval Air Warfare Center Training Systems Division

June 2016 – August 2016

- Programmed approximately 70 tests for various training applications using Automated Test and Re-Test Test Manager

Publications

- **Ramaswamy, S.**, Akiyama, H., Berrigan, J., Quinones, A., Olson, A., Chen, Y., Liang, M., Asundi, A., Sagar, M., Gummuluru, S. (2024) Macrophage-intrinsic MDA5-IRF5 axis drives HIV-1 icRNA-induced inflammatory responses. *Journal of Clinical Investigation*. (in revision)
- Torices, S., Moreno-Rodriguez, T., **Ramaswamy, S.**, Naranjo, O., Teglas, T., Osborne, O., Park, M., Sun, E., Toborek, M. (2024). Mitochondrial antiviral pathways control anti-HIV responses and ischemic stroke outcomes via the Retinoic Acid-Inducible Gene-1 Signaling and innate immunity mechanisms. (in submission)
- Boytz, R., Slabicki, M., **Ramaswamy, S.**, Patten, J. J., Zou, C., Meng, C., Hurst, B. L., Wang, J., Nowak, R. P., Yang, P. L., Sattler, M., Stone, R. M., Griffin, J. D., Gray, N. S., Gummuluru, S., Davey, R. A., Weisberg, E. (2023). Anti-SARS-CoV-2 activity of targeted kinase inhibitors: Repurposing clinically available drugs for COVID-19 therapy. *Journal of Medical Virology*.
- Jalloh, S., Olejnik, J., Berrigan, J., Nisa, A., Suder, E. L., Akiyama, H., Lei, M., **Ramaswamy, S.**, Tyagi, S., Bushkin, Y., Muhlberger, E., Gummuluru, S. (2022). CD169-mediated restrictive SARS-CoV-2 infection of macrophages induces pro-inflammatory responses. *PLoS Pathogens*

Awards & Scholarships

- 2016 National Merit Finalist
- 2016 Florida Incentive Scholar
- 2016 Bright Futures Scholar
- 2016 UM President's Scholarship Recipient
- 2016 Foote Fellow
- 2016 IMSD Scholarship Recipient
- 2018 Dean's Ambassador for the College of Arts and Sciences
- 2019 Poster Prize at the MIAM 2019 Winter Symposium for HIV Research