

Allyson Sterling

Curriculum Vitae, May 2022

Department of Biology
Regis University
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Denver, CO 80221
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Education

PhD, University of California, San Francisco (UCSF) 2016

Biomedical Sciences

Project: Regulatory T cell dynamics in mouse autoimmune diabetes

Advisor: Qizhi Tang, PhD

Bachelor of Science, University of Texas, Austin 2010

Microbiology

Teaching and Professional Experience

Assistant professor 2019-present

Regis University

- *Graduate courses:* Immunology, Microbiology & Immunology laboratory (team/co-taught with Gena Nichols), Biomedical Externship and Ethics, Human Physiology laboratory, Biomedical Seminar II (team/co-taught with Jay Campisi)
- *Undergraduate courses:* Immunology, Organismic Biology laboratory, Molecular and Cellular Biology laboratory, First Year Writing, Cellular and Molecular Biology Research Lab

Program Manager, Researchers 2017-2018

Office of Career and Professional Development

University of California, San Francisco

Research mentor: Laurence Clement

- Research project: Assessing the teaching philosophies of participants in a pedagogy course taught by our office

Adjunct Faculty 2017

University of California, Berkeley Extension

- *Post-baccalaureate course:* Immunology

Adjunct Faculty 2017

Foothill College

- *Undergraduate course:* Human Genetics

Postdoctoral Research 2016-2017

Dissertation Research 2011-2016

University of California, San Francisco

Principal Investigator: Qizhi Tang

- Research project: Regulatory T cell dynamics at the site of chronic inflammation in mouse autoimmune diabetes

Adjunct Faculty 2016
Sonoma State University
• *Undergraduate courses:* Virology, Virology lab

Adjunct Faculty 2012-2016
University of San Francisco (USF)
• *Undergraduate courses:* Comparative Animal Physiology (taught 2nd half of course), Introduction to Biology I lab, Introduction to Biology II lab, Human Anatomy lab, Microbiology lab

Graduate Teaching Assistant 2011
University of California, San Francisco
• *Graduate course for Pharmacy students:* Immunology

Undergraduate Researcher 2009-2010
University of Texas, Austin
Principal Investigator: Scott Stevens
• Research project: Protein:protein interactions in the spliceosome with Prp2p, a protein involved in pre-mRNA splicing in yeast

Undergraduate Researcher 2009
University of Texas Southwestern
Principal Investigator: Christoph Wuelfing
• Research project: Creation of a GFP-tagged plasmid to investigate Lck spatiotemporal patterning after TCR signaling during T-B cell interaction

Undergraduate Researcher 2007-2010
University of Texas, Austin
Principal Investigator: Scott Stevens
Research Mentor: Albert Mackrell
• Research project: Affinity Tagging the Chicken Protein WDR57 for Proteomic Analysis

Grants and Awards

Travel award for the National Association of Advisors for the Health Professors (NAAHP) conference, up to \$1500
Denver, CO June 15-19, 2022

Faculty Development Committee (FDC), \$3,000 February 2022
Summer research grant, PI: Allyson Spence, Bethany Lucas, Regis University

University Research and Scholarship Council (URSC), \$5,000 October 2021
Faculty Research Grant, PI: Allyson Spence, Bethany Lucas, Regis University

Student Research Grant from URSC, \$490 Faculty advisor for student grant proposal, Regis University	October 2021
FDC, \$300 Small Grant, Regis University	May 2021
FDC, \$50 Small Grant, Regis University	November 2020
Travel award for the NAAHP conference, \$1350 New Orleans, LA - Unable to attend; attended the virtual conference	June 24-28, 2020
Student Research Grant from URSC \$500 Faculty advisor for student grant proposal, Regis University	January 2020
Student Research Grant from URSC \$500 Faculty advisor for student grant proposal, Regis University	October 2019
FDC, \$1151 Travel award for the SABER National conference, Minneapolis, MN	July 26-28, 2019
Travel award for the Western Association of Advisors for the Health Professions (WAAHP) conference, \$285 Salt Lake City, UT	April 25-27, 2019
National Science Foundation Graduate Research Fellowship (NSF-GRFP) UCSF	2012-2015
Travel award for American Association of Immunologists (AAI) annual meeting UCSF Graduate division	2015
Travel award for the Federation of Clinical Immunology Societies (FOCiS) annual meeting, Chicago, IL	2014
Nominated for the Trainee Satellite Symposium FOCiS annual meeting, Chicago, IL	2014
Summer Research Fellowship University of Texas Southwestern Medical School	2009
Summer Research Fellowship University of Texas at Austin	2007 and 2008

Publications

*denotes Regis University student

**denotes mentee/student

- **Spence A**, Beasley K*, Gravenkemper H*, Hoefler A*, Ngo A*, Ortiz D*, Campisi J. Social Media Use While Listening to New Material Negatively Affects Short-Term Memory in College Students. *Physiology and Behavior* 2020, 227 (113172).
- **Spence A**, Purtha W, Tam J**, Dong S, Kim Y**, Hsin CJ, Sterling T, Nakayama M, Robinson B, Bluestone JA, Anderson M, Tang Q. Revealing the specificity of regulatory T cells in murine autoimmune diabetes. *Proceedings of the National Academy of Sciences* 2018, 115 (24): 5265–70
 - Featured in the Accelerating Cancer Immunotherapy Research (ACIR) weekly newsletter
- Klementowicz JE, Mahne A, **Spence A**, Nguyen V, Satpathy A, Murphy K, Tang Q. Cutting Edge: Origins, Recruitment, and Regulation of CD11c+ Cells in Inflamed Islets of Autoimmune Diabetes Mice. *Journal of Immunology* 2017, 199 (1): 27–32
- **Spence A**, Tang Q. Restoring regulatory T cells for treatment of type 1 diabetes. *Current Diabetes Reports* 2016, 16:110
- **Spence A**, Klementowicz JE, Bluestone JA, Tang Q. Targeting Treg signaling for the treatment of autoimmune diseases. *Current Opinion in Immunology* 2015, 37:11-20

Presentations

Invited presentations

- Regulatory T cell specificity in mouse autoimmune diabetes. Regis University School of Pharmacy seminar series, Denver, CO March 2020
- Regulatory T cells and autoimmune diabetes. Sonoma State University Colloquium seminar series, Rohnert Park, CA October 2016

Poster presentations

⁺denotes primary presenter(s)

- Beisel S*, Bui K*, Cadiz K*, Lundgren R*, Vo S*, Wright T*, Weir M*, Lucas B, **Spence A**⁺. Creating a system to discover interactions within specific immune cell types responsible for either preventing autoimmunity or destroying pathogens. Regis University URSC Symposium, Denver, CO April 2022
 - Voted Best Poster by symposium attendees
- **Spence A**⁺, Clement L. Assessing the Teaching Philosophies of Future Faculty. SABER West Conference, UC Irvine, CA January 2018
- Clement L⁺, Leung K, **Spence A**, Lewis J, Saul N. Redefining mentoring in biomedical research: considering faculty's supervisory role. SABER West Conference, UC Irvine, CA January 2018
- **Spence A**⁺, Purtha W, Sterling T, Kim Y**, Tam J**, Hsin CJ, Nakayama M, Robinson B, Anderson M, Tang Q. Revealing the specificity of regulatory T cells

of the islets in autoimmune diabetes. UCSF/UCB Immunology Retreat, Asilomar, CA September 2016

- **Spence A⁺**, Kim Y^{**}, Tang Q. Homeostasis and function of antigen reactive Tregs at the site of chronic inflammation. American Association of Immunologists (AAI) Annual Meeting, New Orleans, LA May 2015
- **Spence A⁺**, Kim Y^{**}, Tang Q. Maintenance of functional Tregs in chronically inflamed tissue. FOCiS meeting, Trainee Satellite Symposium, Chicago, IL June 2014
- **Spence A⁺**, Chou A^{**}, Tang Q. Regulatory T cell commitment and destabilization in the inflamed islets of NOD mice. UCSF/UCB Immunology Retreat, Asilomar, CA September 2013
- **Spence A⁺**, Chou A^{**}, Chuang A^{**}, Tang Q. Regulatory T cell commitment and destabilization in the inflamed islets of NOD mice. Keystone, Whistler, BC April 2013

Selected oral presentations

- Revealing the specificity of regulatory T cells of the islets in autoimmune diabetes. UCSF/UCB Immunology Retreat, Asilomar, CA September 2016
- Revealing the specificity of regulatory T cells of the islets in autoimmune diabetes. UCSF Diabetes and Obesity retreat, Santa Cruz, CA September 2016
- Regulatory T cell commitment and destabilization in the inflamed islets of pre-diabetic NOD mice. Student Research Talk, UCSF, San Francisco, CA December 2013
- Regulatory T cell commitment and destabilization in the inflamed islets of pre-diabetic NOD mice. Keystone Meeting, Whistler, BC April 2013
- T cell Receptor Sequencing to examine repertoire of polyclonal T populations involved in autoimmune disease progression. UCSF Diabetes research group retreat, November 2012
- Regulatory T cell subsets in inflamed islets of pre-diabetic NOD mice. UCSF/UCB Immunology Retreat, Asilomar, CA September 2012

Selected student presentations

- Cabrera, N⁺⁺, Spence A. Identifying the relationship between a T Cell Receptor (TCR) amino acid sequence and its ability to bind to insulin. Biology Research Symposium, Regis University, Denver, CO April 2022. Poster presentation
- Bui K⁺⁺, Cadiz K⁺⁺, Lucas B, Spence A. Investigating the protein(s) Nur77 binds to in cells of the immune system. Regis University, Denver, CO April 2022. Oral presentation
 - Celebration of Undergraduate Scholarship and Biology Research Symposium
- Beisel S^{**}, Wright T^{**}, Lucas B, Spence A. Protein: Protein Interactions with Nur77 in Immune Cells. Regis University, Denver, CO April 2022. Poster presentation
 - Celebration of Undergraduate Scholarship and Biology Research Symposium

- Lundgren R^{**}, Vo S^{**}, Lucas B, Spence A. Nur77 and the discovery of its potential relationship to Cox-2. Regis University, Denver, CO April 2022. Poster presentation
 - Celebration of Undergraduate Scholarship and Biology Research Symposium
- Carrasco D^{**}, Abrahamson B*, Canuteson N*, Spence A. Using mutations to examine the relationship between sequence and function in immune cell target recognition. Regis University, Denver, CO April 2022. Poster presentation
 - Celebration of Undergraduate Scholarship and Biology Research Symposium
- Weir M^{**}. Regulating the Immune Response: The Role of Nur77 in T cells. Undergraduate Senior Thesis presentation, Regis University, Denver, CO April 2022. Oral presentation
- Panchumarthi V^{***}. A colorful picture of the impact TGFβ signaling has on tissues in mice prone to diabetes. Creative Activity and Research Day, University of San Francisco, CA April 2016. Oral presentation
- Williams K^{***}, Spence A, Tang Q. “*You are your own worst enemy*”: using transgenic mice to understand Type 1 Diabetes. UCSF SEP Poster Session, San Francisco, CA 2013. Oral and poster presentation

Regis University Service

Regis College

Core and Curriculum Committee – Science/Math representative 2020-present

Regis College

Pre-Med/Health Advisor 2019-present

Regis College

Alpha Epsilon Delta (AED)
Colorado Gamma chapter advisor 2019-present

Regis College, Department of Biology

Admissions committee
Master of Science in Biomedical Sciences Program 2019-present

Regis College, Department of Biology

Scholarship weekend: Science lab experiences 2019-2021

Regis College

Panelist, Undergraduate Research Certificate (URC) course 2021

Service to Scientific and Professional Community

Journal reviewer:

- Journal of Biology & Microbiology Education (JMBE) 2018-present

Abstract reviewer:

- NAAHP National conference 2022
- SABER West conference 2022, 2021, 2020, 2019, 2018
- SABER National conference 2022, 2020, 2019, 2018
- SABER National conference graduate student/postdoctoral travel awards, 2019

Textbook reviewer:

- Reviewed a chapter of the 10th edition *Janeway's Immunobiology* (2022)

Committee member:

- SABER Website committee 2019-present

Panelist:

- Graduate Pathways to STEM, PhD Career Panel, Stanford University, Palo Alto, CA, 2018
- PhD Pathways conference, University Administration Panel, Stanford University, Palo Alto, CA, 2018
- UCSF Teaching Assistant Training, UCSF, CA, 2014
- Recruitment panelist, Q&A, UCSF, CA, 2014

Professional Society Memberships

National Association of Advisors for the Health Professions (NAAHP) 2019-present
Society for the Advancement of Biology Education Research (SABER) 2019-present
American Society for Microbiology (ASM) 2017-2018
American Association for the Advancement of Science (AAAS) 2014-2019
Graduate Career Consortium 2017-2018
American Association of Immunologists (AAI) 2015-2016
Federation of Clinical Immunology Societies (FOCiS) 2013-2015