

SARAH ARCOS

I am passionate about using computational methods to explore high-throughput biological datasets in a reproducible and rigorous way. Currently looking for a post-doc where I can develop my computational and statistical toolboxes to study RNA virus infection.

EDUCATION

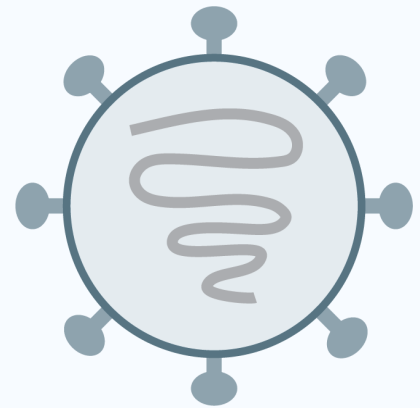
- Current
|
2015
- **PhD. Candidate, Biochemistry**
Vanderbilt University 📍 Nashville, TN
 - Studying RNA-protein interactions and RNA virus replication
- 2015
|
2011
- **B.S., Neurobiology, Cum laude**
Georgetown University 📍 Washington, DC
 - Studied developmental biology of the central nervous system

RESEARCH EXPERIENCE

- Current
|
2015
- **Graduate Researcher**
Ascano Laboratory 📍 Vanderbilt University
 - RNA virus replication, innate immune evasion
 - Protein-RNA interactions
 - Post-transcriptional gene regulation in the innate immune system
- 2015
|
2012
- **HHMI Undergraduate Research Assistant**
Silva Laboratory 📍 Georgetown University
 - Investigated the role and regulation of SOX14 during central nervous system development
 - Used the model organism *Xenopus laevis*

INDUSTRY EXPERIENCE

- 2018
|
2018
- **Infectious Disease/Microbiology Intern**
Advisors: Dr. Bret Sellman, Dr. Taylor Cohen 📍 MedImmune/Astra Zeneca
 - Antibody design and development
 - mtDNA haplogroup-dependent neutrophil responses to *Staphylococcus aureus* alpha-toxin
 - Neutrophil extracellular trap release



CONTACT



sarah.e.arcos@vanderbilt.edu



[sarah_arcos](https://twitter.com/sarah_arcos)

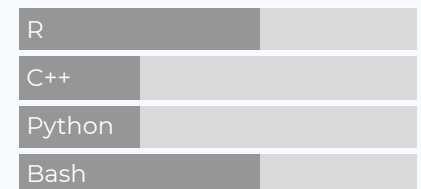


github.com/saraharcos



saraharcos.github.io

LANGUAGE SKILLS



Made with the R package [page-down](#).

The source code is available on github.com/nstrayer/cv.

Last updated on 2020-06-05.



TEACHING EXPERIENCE

Current
|
2019



R Fridays Founder

Vanderbilt Biochemistry Department

📍 Vanderbilt University

- Leader of a peer group dedicated to discussion and problem solving related to biological data analysis in R
- The R Fridays blog is updated with interesting discussion topics from previous meetings



SERVICE POSITIONS

2018
|
2017



Vice President, Biochemistry Student's Association

📍 Vanderbilt University

- Coordinated the 2018 Biochemistry Department Annual Symposium



SELECTED PRESS (ABOUT)

2020



New method captures early viral-host protein interactions¹

VUMC Reporter

- Story of the VIR-CLASP method developed with Dr. Byungil Kim and Dr. Manny Ascano



SELECTED PRESS (BY)

2019



Dr. David Mitchell²

RNA Society

- Authored a spotlight on fellow RNA Society member Dr. David Mitchell



PUBLICATIONS

2020



Discovery of Widespread Host Protein Interactions with the Pre-replicated Genome of CHIKV using VIR-CLASP

Molecular Cell

- Byungil Kim*, Sarah Arcos*, Katherine Rothamel, Jeffrey Jian, Kristie L Rose, W Hayes McDonald, Yuqi Bian, Seth Reasoner, Nicholas J Barrows, Shelton Bradrick, Mariano A Garcia-Blanco, and Manuel Ascano. *Co-first authors

2020



Viral cross-linking and solid-phase purification enables discovery of ribonucleoprotein complexes on incoming RNA virus genomes³

bioRxiv (and under review)

- Byungil Kim*, Sarah Arcos*, Katherine Rothamel, and Manuel Ascano. *Co-first authors

I believe that scientific reproducibility depends upon improved communication between data producers and data analyzers, and I am passionate about increasing data analysis accessibility for wet lab biologists.

- 2020 ● **ELAVL1 determines the efficacy of an IRF3 innate immune response**
Manuscript in preparation
• Katie Rothamel, Sarah Arcos, Byungil Kim, Neelanjan Mukherjee, and Manual Ascano



SELECTED TALKS

- 2019 ● **Discovery of widespread host protein interactions with pre-replicated RNA virus genomes using VIR-CLASP**
EMBL Protein Synthesis and Translational Control Workshop
📍 Heidelberg, Germany
- 2019 ● **N6-Methyladenosine-dependent regulation of the pre-replicated Chikungunya viral genome**
Vanderbilt Biochemistry Department Annual Symposium
📍 Nashville, TN
- 2018 ● **N6-Methyladenosine-dependent regulation of RNA during Chikungunya virus infection**
RNA Society Annual Meeting
📍 Berkeley, CA
- 2014 ● **The role and regulation of SOX14 in the development of the central nervous system in *Xenopus laevis***
Georgetown- Howard Hughes Medical Institute Summer Research Symposium
📍 Washington, DC



GRANTS AND AWARDS

- 2020 ● **Vanderbilt Russell G. Hamilton Graduate Leadership Institute Travel Grant**
Vanderbilt University
• Used to attend rstudio::conf 2020 in San Francisco, CA
- 2019 ● **EMBL Advanced Training Center Corporate Partnership Travel Fellowship**
EMBL Heidelberg
• Used to attend the 2019 EMBL Protein Synthesis and Translational Control Workshop
- 2018
|
2016 ● **National Institute of Allergy and Infectious Diseases Pre-doctoral Training Grant**
Vanderbilt University
• T32AI11254, PI: Dr. Eric Skaar
- 2018 ● **RNA Society Travel Grant**
RNA Society
• Used to attend the 2018 RNA Society Annual Meeting in Berkeley, CA

- 2018 ● **Frank Chytil Travel Award**
Vanderbilt University
• Used to attend the 2018 RNA Society Annual Meeting in Berkeley, CA
- 2018 ● **Best Poster Award, Vanderbilt Biochemistry Department Annual Symposium**
Vanderbilt University
• Poster title: N6-Methyladenosine-dependent regulation of RNA during Chikungunya virus infection and innate immune activation



PROFESSIONAL MEMBERSHIPS

- Current
|
2018 ● **RNA Society**
- Current
|
2016 ● **Biochemistry Students Association**
Vanderbilt University
- Current
|
2016 ● **Vanderbilt Institute of Chemical Biology**
Vanderbilt University
- Current
|
2016 ● **Chemical Biology Association of Students**
Vanderbilt University



LINKS

- 1: <https://news.vumc.org/2020/05/07/new-method-captures-early-viral-host-protein-interactions/>
- 2: <https://www.rnasociety.org/dr--david-mitchell>
- 3: <https://www.biorxiv.org/content/10.1101/2020.04.08.032441v1>