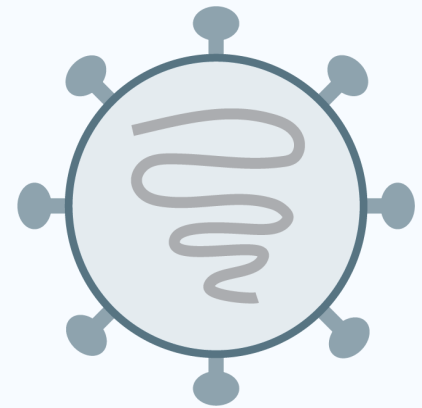




# SARAH ARCOS




I am passionate about using computational methods to explore high-throughput biological datasets in a reproducible and rigorous way. I am a post-doctoral fellow in Dr. Adam Luring's lab at the University of Michigan, where I use molecular biology, computational, and statistical toolboxes to study RNA virus evolution.







## EDUCATION

- 2020 | 2015** **PhD., 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

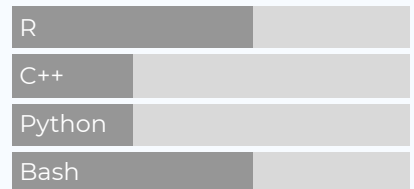
## RESEARCH EXPERIENCE

- Current | 2021** **Postdoctoral Fellow**  
Luring Laboratory  University of Michigan
  - RNA virus evolution
  - Influenza A polymerase speed and fidelity
  - Epistatic interactions within the Influenza A polymerase complex
- 2020 | 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*

## CONTACT

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 [sarah\\_arcos](https://twitter.com/sarah_arcos)  
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 [saraharcos.github.io](https://saraharcos.github.io)

## LANGUAGE SKILLS



Made with the R package  
[pagedown](#).

The source code is available on  
[github.com/nstrayer/cv](https://github.com/nstrayer/cv).

Last updated on 2021-10-25.



## 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



## 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 interactions<sup>1</sup>

VUMC Reporter

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



## SELECTED PRESS (BY)

2019



### Dr. David Mitchell<sup>2</sup>

RNA Society

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

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.



## PUBLICATIONS

- 2021 • **ELAVL1 primarily couples mRNA stability with the 3' UTRs of interferon stimulated genes<sup>3</sup>**  
Cell Reports  
• Katie Rothamel, Sarah Arcos, Byungil Kim, Clara Reasoner, Neelanjan Mukherjee, and Manuel Ascano
- 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 genomes<sup>4</sup>**  
Nature Protocols  
• Byungil Kim\*, Sarah Arcos\*, Katherine Rothamel, and Manuel Ascano. \*Co-first authors



## 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

Current  
|  
2021

- **Molecular Mechanisms of Microbial Pathogenesis Post-doctoral Training Grant**

University of Michigan

• T32AI007528, PI: Dr. Vern Carruthers

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**

2020  
|  
2016

- **Biochemistry Students Association**

Vanderbilt University

2020  
|  
2016

- **Vanderbilt Institute of Chemical Biology**

Vanderbilt University

2020  
|  
2016

● **Chemical Biology Association of Students**  
Vanderbilt University



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/10.1101/2020.08.24.263418v1>
4. <https://www.biorxiv.org/content/10.1101/2020.04.08.032441v1>