NOAH J. SPENCER

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EDUCATION

2021– **Ph.D. Student, Evolutionary Biology**
Arizona State University

2021 **B.S. Biology** (Genomics emphasis), *summa cum laude*
West Virginia University

RESEARCH INTERESTS: Endosymbiosis, evolutionary biology, cell biology, prokaryotic and organellar genome evolution, mutation, intracellular transport

RESEARCH EXPERIENCE

2021– **Center for Mechanisms of Evolution, Arizona State University**
Advisor: Dr. John McCutcheon

Characterized the effects of genome fragmentation on transcription in an ancient cicada endosymbiont.

2017–2021 **Department of Biology, West Virginia University**
Advisor: Dr. Rita Rio

Demonstrated the quorum sensing-mediated establishment and vertical transmission of *Sodalis praecaptivus* in tsetse flies.

Analyzed genomic and transcriptomic data to further characterize conserved, non-conjugative plasmids in an ancient tsetse endosymbiont across several host species.

PEER-REVIEWED RESEARCH PUBLICATIONS

2021 M. Medina Munoz, C. Brenner, D. Richmond, **N. Spencer**, R.V.M. Rio. The holobiont transcriptome of teneral tsetse fly species of varying vector competence. *BMC Genomics*. 22(1), 400.

2020 M. Medina Munoz, **N. Spencer**, S. Enomoto, C. Dale, R. V. M. Rio, Quorum sensing sets the stage for the establishment and vertical transmission of Sodalis praecaptivus in tsetse flies. *PLOS Genet*. 16, e1008992.

GRANTS, FELLOWSHIPS, & AWARDS

2022–2023 ASU Graduate College University Grant ($10K)

2021–2026 National Science Foundation Graduate Research Fellowship ($138K)

2021 WVU Outstanding Senior

2020 WVU Eberly Scholar

2019 WVU Honors EXCEL Grant ($1K)

2019 WVU SURE Enrichment Grant ($500)

CONTRIBUTED PRESENTATIONS

Oral Presentations

2022 Increases in Genome Complexity Exacerbate Transcript Dosage Imbalance in a Cicada Endosymbiont. 8th Conference on Beneficial Microbes. Madison, WI.

Poster Presentations

2022 No Transcriptional Compensation for Extreme Gene Dosage Imbalance In Fragmented Endosymbionts of Cicadas. 2022 Annual Symposium for Mechanisms of Cellular Evolution.

2021 Genome Sequencing Provides Insight into Coevolution Between an Insect Vector and Its Microbial Partner. WVU Online Spring Undergraduate Research Symposium. *

2020 Plasmid DNA Sequence Analysis Elucidates Evolution of Species-Specific Tsetse Fly Symbiotic Bacteria. WVU Online Spring Undergraduate Research Symposium.

2019 Characterizing Plasmid Functional Roles Within Tsetse Fly-Associated Symbiotic Bacteria. WVU Summer Undergraduate Research Symposium. Morgantown, WV. **

* Runner-up, Best Poster in Biological Sciences Category
** Winner, Best Poster in Biological Sciences Category

TEACHING EXPERIENCE

2022– *Volunteer with Prison Biology Education Program, ASU*

Helped develop student and instructor resources for an Introductory Biology course taught at Eyman Prison Complex in Florence, AZ.

2018–2021 *Tutor at MindFit Academic Enhancement, WVU*

Provided over 350 hours of sustained, one-on-one academic coaching to students with learning-related difficulties.

2019 *Cell and Molecular Biology Teaching Assistant, WVU*

Provided feedback on over 350 written assignments, held weekly office hours to provide one-on-one support, and participated in weekly meetings on course design and teaching philosophy.

INVITED PANELS & TALKS

2023 *Grad Student Panel, ASU School of Life Sciences Graduate Recruitment*

2022 *Grad Student Panel, Biodesign Institute Summer Internship Program for Community College Students*

WVU ASPIRE Academy Alumni Panel

2021 *WVU Honors EXCEL Seminar: "The Secret of My Success: Learning from Recent Honors EXCEL Graduates"*

WVU Summer Undergraduate Research Symposium panel, "Get the Most from Your Mentor"

2020 *WVU Summer Undergraduate Research Symposium panel, "Get the Most from Your Mentor"*

WVU undergraduate research webinar for incoming freshmen; WVU Honors EXCEL Academy

PROFESSIONAL SOCIETY AFFILIATIONS

Society for Molecular Biology & Evolution

American Society for Microbiology