

# STERLING LEE WRIGHT

GRADUATE STUDENT | DEPARTMENT OF ANTHROPOLOGY | PENN STATE UNIVERSITY

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## EDUCATION

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- PhD** Penn State University, Anthropology Anticipated May 2024  
Dissertation: "Open Wide and Dig in: Unveiling the Evolutionary and Ecological relationships in Ancient Landscapes through the microbiome"  
Committee: Laura Weyrich (chair), George Perry, Mary Shenk, Emily Davenport, Jake Nabel
- MA** Oklahoma University, Anthropology May 2019  
Thesis: "Biomolecular Preservation in Dental Calculus Across the Teotihuacan Ritual Landscape"  
Advisor: Courtney Hofman
- BA** University of Texas at Austin, Classical Archaeology May 2016  
Graduated with special honors
- BS** University of Texas at Austin, Psychology May 2016

## POSITIONS HELD

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- 2019-present Graduate Research Associate, Penn State University, University Park, PA  
2022 R&D Data Scientist and Bioinformatics Intern, IDEXX Laboratories, Remote  
2017-2019 Graduate Research Associate, Oklahoma University, Norman, OK

## FUNDING TRACK RECORD - \$35,479.50

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2022 Huck Life Sciences Symposium Poster Award	\$150
2022 Penn State Microbiome Center DAWG Award	\$5,000
2022 American Institute for Southeast European Studies Fellowship	\$3,000
2022 PSU Anthropology Department Student Travel Award	\$400
2021 PSU Anthropology Department Student Travel Award	\$400
2021 Hill Fellowship Training Award	\$648.00
2021 National Geographic Early Career Grant (EC-85596R-21)	\$5,000
2021 RGSO PSU Anthropology Department	\$400
2020 2 <sup>nd</sup> Place PSU Microbiome Center Video Contest	\$1,000
2020 Liberal Arts Teaching and Research Scholarship	\$1,000
2020 Summer Institute in Statistical Genetics Scholarship	\$600
2020 Pennsylvania Space Grant Consortium	\$5,000

2020 Hill Fellowship Training Award	\$1,220
2020 University Park Allocations Committee Grant	\$319
2020 PSU Microbiome Center Travel Grant	\$300
2019 PSU Anthropology Department Student Travel Award	\$400
2019 Opler and Opler Scholarship	\$500
2019 Opler Memorial Scholarship	\$650
2018 Robberson Student Travel Grant	\$1,180
2018 Robberson Research Grant	\$850
2018 Opler Memorial Scholarship	\$450
2018 Robberson Research Grant	\$500
2018 Graduate Senate Student Research Grant	\$687.50
2018 Graduate Senate Student Travel Grant	\$637.50
2017 Graduate Senate Student Research Grant	187.50
2015 Balkan Heritage Foundation Scholarship	\$1,000
2015 Masters McCarthy Scholarship	\$1,000
2014 Velma Box Scholarship	\$1,000
2012 Top-ten percent scholarship	\$2,000

## PUBLICATIONS

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### *Peer-Reviewed Articles*

\* indicates corresponding author

1. Gancz A, **Wright, S. L.**, et al.  
2021 “The Millions of Microbial Reasons You Need to Brush Your Teeth.” *Frontiers for Young Minds*. <http://doi.org/10.3389/frym.2021.605224>.
2. Farrer, A. G., **Wright S.L.**, Emily Skelly, et al.  
2021 “Effectiveness of Decontamination Protocols When Analyzing Ancient DNA Preserved in Dental Calculus.” *Scientific Reports* 11(1). Nature Publishing Group: 7456. <http://doi.org/10.1038/s41598-021-86100-w>
3. **Wright, S. L.\***, Keith Dobney, and Laura S. Weyrich  
2021 “Advancing and Refining Archaeological Dental Calculus Research Using Multiomic Frameworks.” *STAR: Science & Technology of Archaeological Research* 7(1). Routledge: 13–30. <https://doi.org/10.1080/20548923.2021.1882122>
4. **Wright, S.\***, “The Long and Complicated Relationship between Humans and *Yersinia pestis*,” *Sapient: The Undergraduate Journal of Biological Anthropology*, vol. 5, 2017, pp. 4-9.

## PRESENTATIONS AND INVITED LECTURES

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1. **Paper**, “*The Ancient Oral Microbiome in the Caucasus*,” 87<sup>th</sup> Annual Meeting for the Society for American Archaeology, Chicago, IL, 2022.
2. **Paper**, “*Removing the Unwanted: Comparing Decontamination Protocols for Ancient Dental Calculus Research*,” SciX 2021 Conference, Providence, RI, 2021.

3. **Invited lecturer**, “*Listening to the dead in new ways: Investigating the biomolecular preservation at Histria,*” American Institute of Southeast European Studies (AISEES), 2021.
4. **Paper**, “*The integrity of biomolecules across the oral matrix at Histria, Romania,*” 86<sup>th</sup> Annual Meeting for the Society for American Archaeology, 2021.
5. **Paper**, “*The integrity of biomolecules across the oral matrix at Histria, Romania,*” 85<sup>th</sup> Annual Meeting for the Society for American Archaeology, 2020. \*cancelled due to COVID19 pandemic
6. **Paper**, “*Biomolecular Preservation in Dental Calculus from the Teotihuacan Ritual Landscape,*” 84<sup>th</sup> Annual Meeting for the Society for American Archaeology, 2019.
7. **Paper**, “*Exploring the biological heritage of enslaved people at James Madison’s Montpelier through ancient DNA analysis,*” 83<sup>rd</sup> Annual Meeting for the Society for American Archaeology, 2018.
8. **Paper**, “*The Long and Complicated Relationship between Humans and Infectious Diseases,*” 118<sup>th</sup> Annual Meeting for the Archaeological Institute of America, 2017.
9. **Invited lecturer**, “*Socialist Archaeology? Is it Worth Saving?,*” University of Texas Antiquities Action Conference: Global Initiatives Towards Cultural Heritage Preservation: Who Owns the Past, 2016.
10. **Paper**, “*The Long and Complicated Relationship between Humans and Infectious Diseases,*” Eta Sigma Phi’s Undergraduate Research Symposium for the Classics Department at the University of Texas at Austin, 2016.
11. **Paper**, “*The Long and Complicated Relationship between Humans and Infectious Diseases,*” University of Texas at Austin’s Research Week, 2016.
12. **Paper**, “*Six Degrees of Cyrus: Applying Network Analysis to Herodotus,*” Texas Digital Humanities Consortium, 2014.

## POSTERS

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1. “*The Ancient Oral Microbiome in the Caucasus,*” 6<sup>th</sup> Annual Huck Life Sciences Symposium, University Park, PA, 2022.
2. “*Effectiveness of decontamination protocols when analyzing ancient DNA preserved in dental calculus,*” Ancient Biomolecules of Plants, Animals, and Microbes (virtual), 2021.
3. “*Biomolecular Preservation in Dental Calculus from the Teotihuacan Ritual Landscape,*” 8<sup>th</sup> International Symposium on Biomolecular Archaeology, 2018.  
([https://www.shh.mpg.de/1070374/isba2018\\_programm.pdf](https://www.shh.mpg.de/1070374/isba2018_programm.pdf))
4. “*Demystifying Teotihuacan Through the Microbiome,*” 1<sup>st</sup> Oklahoma Archaeology Conference, 2018.

## WORKSHOPS AND SEMINARS

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1. Conference Co-Coordinator for SPAAM3 (Standards, Precautions, and Advances in Ancient Metagenomics). Organized lectures with ancient DNA metagenomic experts to challenge the existing challenges in the field.
2. Team Leader for Data Analysis Working Group (DAWG). Designed and presented tutorials using the R programming language for microbiome and ancient DNA analysis.

3. Student organizer for Penn State Microbiome Center Kick Start Workshop. Co-led a methods bootcamp workshop discussing the basic experimental workflow for microbiome studies.

## SERVICE

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1. Conference Coordinator for SPAAM3 (Standards, Precautions, and Advances in Ancient Metagenomics)
2. Volunteer for the 87<sup>th</sup> Annual Meeting for the SAA
3. Mentor for Student Affairs Interest Group (SAIG) for the AIA

## REPORTS

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4. **Wright, S.,** R. Singleton, K. Hughes, K. Rayfield, T. Honap, N. Dagtas, C. Monroe, S. Wu, L. Huang, and C. Hofman. “Sequencing dental calculus and dentin from Histria: Genetic Analysis of Dental Calculus and Teeth from Roman Burial Contexts 2<sup>nd</sup>-6<sup>th</sup> centuries CE” (2020).
5. Monroe, C., C. Hofman, R. Austin, and **S. Wright.** “Sequencing Mitochondrial Genomes from Montpelier, James Madison’s Plantation Home: Genetic Analysis of Teeth from Non-Burial 18<sup>th</sup>-19<sup>th</sup> century Archaeological Sites” (2018).

## WEB CONTENT

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- “Open Wide: The Oral Microbiome,” YouTube video for the Penn State Microbiome Center Video Contest (2020).  
<https://www.youtube.com/watch?v=HC5pv73SzWw&t=1s>

## TEACHING EXPERIENCE

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2022	Human Genetics (ANTH/BIOL 460)	Penn State University	TA
2022	Intro Bio Anthropology (ANTH 21)	Penn State University	Instructor
2021	Cultural Diversity (ANTH 45N)	Penn State University	Instructor
2017	Biology	Shoemaker High School	Instructor

## MENTORING

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Graduate students:

<b>2021-present</b>	Christine Ta (Penn State University, Department of Anthropology)
<b>2020-present</b>	Grace Bowland (Penn State University, Department of Anthropology)

Undergraduates

<b>2021-present</b>	Elizabeth Dyess (EWU, Department of Anthropology)
<b>2021-present</b>	Meghan Malloy (Penn State University, Department of Anthropology)
<b>2021</b>	Samantha Muller (Penn State University, microArch Research Group)
<b>2018-2019</b>	Karissa S. Hughes (University of Oklahoma)

## WORK-RELATED EXPERIENCES

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### Professional Development

The Graduate Online Teaching Certificate	Penn State University	2020
Next-Generation Sequencing intern	UT at Austin	2016
Cultural Resource Management Technician	Williams Self Associates	2016
McCombs Business Certificate	UT at Austin	2014

### Archaeological Field Work

Archaeogeneticist, Histria Mapping Archaeology Project, Romania, 2022  
 Archaeogeneticist, Lisbon, Portugal, September 2021  
 Archaeogeneticist, Tbilisi, Georgia, August 2021  
 Archaeogeneticist, Beidaud, Romania, August 2021  
 Archaeogeneticist, Histria Mapping Archaeology Project, Histria, Romania, 2021  
 Archaeogeneticist, Histria Mapping Archaeology Project, Histria, Romania, 2018  
 Archaeogeneticist, Plaza of the Columns Complex, Teotihuacan, Mexico August 2018  
 Field and osteo lab participant, Archaeotek, Odorheiu, Romania Jun-Jul 2016  
 Field worker, IFR/Balkan Heritage Foundation, Stobi, Macedonia Jun 2015

### PROFESSIONAL AFFILIATIONS

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- Social Chair, Anthropology Graduate Student Association at Penn State, 2020-2021
- Vice President, Anthropology Graduate Student Association at Oklahoma University, 2019-2020
- Member, Penn State Microbiome Center, 2019-Present
- Member, American Institute of Southeastern European Studies, 2019-Present
- Member, Society for American Archaeology, 2017-Present
- Member, Archaeological Institution of Archaeology, 2012-Present

### OUTREACH

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- Volunteer, **Community Education Extended Learning (CEEL) Program**, State College, PA 09/19-03/20. This program is led by anthropology students in the Penn State Anthropology Department. It is designed to increase the understanding of basic concepts of anthropology for K-5 students. The program provides monthly meetings.
- Volunteer, **Harrisburg Career Day**, Harrisburg, PA 03/20. At this event, I designed and led a session for low-income high school students in the Harrisburg area to educate them on the importance of the microbiome. I spearheaded two hands-on activities to engage the students about the importance of microbes to human health.
- Guest lecturer, **Skype a Scientist**, Online, 12/20-present. I meet with K-12 audiences on a continual basis to discuss various topics, ranging from basic concepts about the microbiome and ancient DNA research to my personal experiences on how I became a scientist.
- Volunteer mentor, **Communities After-School Program (CASP)**, Norman, OK 08/17-05/19
- Session Chair, **Oklahoma University Undergraduate Research Day**, Norman, OK 04/19. Natural Science Division Award Judge.

## **LANGUAGES**

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**Romanian:** Novice reader

## **RELEVANT SKILLS**

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Computational: I am proficient in Python, R, and Linux/Unix. Extensive experience with database management, construction, and querying. Competent with the application of several bioinformatic programs and pipelines for the analysis of microbiome, genome, and proteome (LCMS) datasets, such as MALT, MEGAN, Jupyter Notebooks, Azure, GoogleCollab, and QIIME2.

Molecular Biology: I have worked in two ancient DNA and modern laboratories. My molecular laboratory skills include DNA extraction and purification, Illumina metabarcoding and metagenomic library preparation, gel electrophoresis, and quantitative PCR. I have been trained to work in a modern BSL-2 molecular laboratory and a ISO-6 dedicated clean room designed for ancient DNA research.