

## Cody Appa

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## Research Interests

Micro/molecular biology, infectious/parasitic bacteria, genetics and genetic engineering.  
Current research on developmental cycle of *Chlamydia trachomatis*

## Education

BS in Biology - University of Idaho, Moscow, ID 2019

Graduate student in Molecular/Microbiology and Biochemistry (MMBB) - University of Idaho, Moscow, ID 2021-present

## Research Experience

### Graduate Student (MMBB): 2021-present

- Research in the Grieshaber Lab on *Chlamydia trachomatis* cell cycle transitions
- Teaching experience: Cell and Molecular Biology, Biochemistry, Biology and Society
- Current projects include: flag-tagged overexpression assays, mutagenesis studies, digital droplet PCR for QPCR as well as IRep assays, IFU reinfection assays, Fluorescent In-Situ Hybridization (FISH), live-cell and confocal microscopy, as well as CRISPR dCas12 knockdown cloning.
- Competent in python using matplotlib and pandas packages for data visualization as well as using R ggplot2 package.

### Research Technician: 2019-2021

- Researched under Scott and Nicole Grieshaber with Travis Chiarelli.
- Created promoter reporter vector constructs for multiple genes of interest.
- Performed many techniques such as: PCR, western analysis, IFU-reinfection assay, antibody staining, live-cell imaging, confocal microscopy, as well as various lab work such as mini/midipreps and creating media/buffers.

### Undergraduate Research: 2017-2019

- Researched under Scott and Nicole Grieshaber on *Chlamydia trachomatis*.
- Performed studies on flag tagged protein overexpression IFU assays.

## Presentations

- **INBRE Statewide Research conference** Fall 2024  
Understanding the Role of Euo the Developmental Cycle of *Chlamydia trachomatis*
- **Chlamydia Basic Research Society International** Spring 2023  
Poster presentation on Euo inhibition of EB formation.
- **American Society of Microbiology Northwest Branch Conference** Fall 2022  
Poster presentation on Chlamydial protein Euo
- **American Society of Microbiology Northwest Branch Conference** Fall 2022  
Lightning talk on dual promoter reporter system

## Honors

- Editor's Pick publication in MSphere Summer 2024  
<https://journals.asm.org/doi/10.1128/msphere.00437-24>
- Jane Raulston Award for Best Graduate Student Poster Presentation Spring 2023  
(Chlamydial Basic Research Society International Conference 2023)  
<http://www.chlamydiabasicresearchsociety.org/jane-raulston-award.html>
- Dean's List, University of Idaho, Moscow, ID Fall 2016

## Publications

- Appa CR**, Grieshaber NA, Yang H, Omsland A, McCormick S, Chiarelli TJ, Grieshaber SS. The chlamydial transcriptional regulator Euo is a key switch in cell form developmental progression but is not involved in the committed step to the formation of the infectious form.  
<https://journals.asm.org/doi/10.1128/msphere.00437-24> Summer 2024
- Nicole A. Grieshaber, **Cody Appa**, Megan Ward, Alorah Grossman, Sean McCormik, Brendan S. Grieshaber, Travis Chiarelli, Hong Yang, Anders Omsland, Scott S. Grieshaber. The T3SS structural and effector genes of Chlamydia trachomatis are expressed in distinct phenotypic cell forms  
<https://www.biorxiv.org/content/10.1101/2024.04.25.591156v1.full> Summer 2024
- Chiarelli TJ, Grieshaber NA, **Appa C**, Grieshaber SS. 2023.Computational Modeling of the Chlamydial Developmental Cycle Reveals a Potential Role for Asymmetric Division.  
<https://doi.org/10.1128/msystems.00053-23> Spring 2023
- Nicole A. Grishaber, Justin Runac, Sierra Turner, Marissa Dean, **Cody Appa**, Anders Omsland, Scott Grieshaber. The sRNA Regulated Protein DdbA Is Involved in Development and Maintenance of the Chlamydia trachomatis EB Cell Form.  
<https://doi.org/10.3389/fcimb.2021.692224> Summer 2021
- Nicole A. Grieshaber, Travis J. Chiarelli, **Cody R. Appa**, Grace Neiswanger, Kristina Peretti, Scott S. Grieshaber. Translational Gene Expression Control in Chlamydia trachomatis  
<https://doi.org/10.1371/journal.pone.0257259> Summer 2021

## References

- Scott Grieshaber**, Primary Investigator. Professor of Microbiology. University of Idaho.  
[sgreishaber@uidaho.edu](mailto:sgreishaber@uidaho.edu)
- Nicole Grieshaber**, Associate Professor of Microbiology, University of Idaho.  
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