

# NOAH SIEGEL

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## EDUCATION

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**University of California, Davis, Davis CA**

**Sept 18 - Nov 23**

*PhD, Immunology; Minor: Bioinformatics*

*November, 2023*

*Advisor: Lisa Miller (PI)*

*GPA: 3.7*

**California State University, East Bay CA**

**Aug 15 - May 18**

*BS, Biology; Minor: Chemistry*

*June, 2018*

*GPA: 3.7*

## SECURITY CLEARANCE

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**Secret**

## TECHNICAL STRENGTHS

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**Computer Languages:** R, Bash, Python

**Software & Tools:** Snakemake, RShiny, AWS, Slurm, Docker, Git, LaTeX, Microsoft applications

**Operating systems:** Windows, Linux

**Lab bench:** DNA/RNA extraction, PCR, NGS Library prep

## EXPERIENCE

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**Anaptyso**

**Apr 24 - Present**

- Built pipelines to analyze genetic and proteomic data
- Provided bioinformatics support to project leads
- Maintained AWS instances for hosting internal and publicly available data analyses

**General Dynamics Information Technology**

**Dec 23 - Jan 24**

- Contributed to large scale data analysis projects
- Assessed pathogen virulence factors from human samples
- Built whole genome sequencing pipelines

**UC Davis**

**Apr 19 - Dec 23**

- Led epidemiological studies in rhesus monkeys
- Developed NGS workflows for transcriptomic analysis
- Conducted microbiome analysis in the rhesus monkey model
- Characterized the metabolic profile of the infant rhesus monkey gut microbiome using metabolomics

**Tilden Prep**

**Jun 18 - Sept 18**

- Taught introductory Physics to High school students and led them through lab practicals

## PEER REVIEWED PUBLICATIONS

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1. NA Siegel, KA Thongphanh, LA Miller. *Helicobacter pylori* infection in infant rhesus macaque monkeys is associated with an altered lung and oral microbiome. *Scientific Reports* 2024

## MANUSCRIPTS IN REVIEW/PENDING SUBMISSION

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1. NA Siegel, KA Thongphanh, LA Miller. Effects of Environmental Change on Airway Sensitization: Recent Insights and Future Perspectives. *J Asthma and Allergy* 2025
2. NA Siegel, T Westmont, M Rolston, S Dandekar, H Deshmukh, LA Miller Early-life antibiotic treatment results in persistent microbiome alterations in association with sex. *mSphere* 2025
3. NA Siegel, DT Dugger, V Kohli, H Ji, MD Pena-Ponce, J Ngo, and LA Miller Transcriptome Analysis of Postnatal Airway Epithelium Reveals a Gene Signature of Differentiation and Host Defense that is Distinct from Adult Airway Epithelium (journal TBD)

## HONORS AND AWARDS

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P51 Diversity Fellowship

## RELEVANT COURSES

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### Core Courses

Advanced Immunology  
Mucosal Immunology  
Host-microbe Interactions

### Other Courses

Bioinformatics  
Biostatistics  
Genomics  
Single Cell RNA-Seq Analysis  
Metagenomics and Metatranscriptomics

## PRESENTATIONS AT SCIENTIFIC MEETINGS

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1. Noah A. Siegel, Matt Ralston, Taylor Westmont, Alexa Rindy, Hitesh Deshmukh, Lisa A. Miller. *Effect of Neonatal Antibiotic Treatment on the Respiratory Microbiome: Altered Development and Sexual Dimorphism*. Presented at the 2022 American Thoracic Society international conference in San Francisco
2. Noah A. Siegel, Matt Ralston, Taylor Westmont, Alexa Rindy, Hitesh Deshmukh, Lisa A. Miller. *Effect of Neonatal Antibiotic Treatment on the Respiratory Microbiome: Altered Development and Sexual Dimorphism*. Presented at the 2022 Bay Area Microbial Pathogenesis Symposium
3. Noah A. Siegel, Matt Ralston, Taylor Westmont, Alexa Rindy, Hitesh Deshmukh, Lisa A. Miller. *Early Life Antibiotic Treatment Results in Both Transient and Persistent Changes to the Microbiome*. Presented at the 2021 American Thoracic Society international conference (virtual).
4. Noah A. Siegel, Matt Ralston, Taylor Westmont, Alexa Rindy, Hitesh Deshmukh, Lisa A. Miller. *Early Life Microbiome Perturbation Results in Persistent Composition and Functional Changes in Association with Sex*. Presented at the 2021 National Institute of Environmental Health Sciences Microbiome workshop (virtual).
5. Noah A. Siegel, Taylor Westmont, Hong Ji, Lisa A. Miller. *Muc5b Expression in Infant Airway Epithelium is Developmentally Regulated*. Presented at the 2020 University of California, Davis Lung Day conference (virtual).
6. Noah A. Siegel, Taylor Westmont, Daniel Dugger, Hong Ji, Vikram Kohli, and Lisa A. Miller. *Developmental Regulation of the MUC5B Mucin Sheds Light on Infant Susceptibility to Infection and reduced Host-defense During Early Life*. Presented at the 2020 American Thoracic Society international conference (virtual).

## **UNIVERSITY SERVICE**

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| 1. Positivity And Wellness for Students (PAWS) Committee | Oct 21 - Aug 23 |
| 2. Graduate Group in Immunology Executive Committee      | Jun 20 - Jun 21 |
| 3. Graduate Group in Immunology Admissions Committee     | Jun 19 - Jun 21 |

## **ADDITIONAL ACTIVITIES**

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1. Mentor-mentee coordinator, ESTEME
2. Volunteering experience at Holy Rosary Catholic School