

# CECILE MEIER-SCHERLING

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## SUMMARY AND INTERESTS

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**Interests:** Machine and deep learning approaches that overcome limited genomic data challenges while studying drug resistance diseases.

## EDUCATION

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**Brown University, Center for Computational Molecular Biology** 2022 - Exp. 2027  
Ph.D. Student in Computational Biology GPA: 4.0/4.0  
Co-advisors: Lorin Crawford, Ph.D. and Jeffrey Bailey, MD Ph.D.

**Boston University, College of Engineering** 2018 - 2022  
B.S. in Biomedical Engineering, concentration in Machine Learning GPA: 3.61/4.0 (Top 15%)

## RESEARCH EXPERIENCE

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**Center for Computational Molecular Biology, Brown University** Sep 2022 - Present  
*Graduate Research Assistant* Providence, RI

- Developed Bayesian modeling framework to compare the strength of selection for *Plasmodium falciparum* artemisinin drug resistance-associated mutations between Uganda and South-East Asia
- Creating spatiotemporal model to analyze virulence and drug resistance genes in malaria

**Dana-Farber Cancer Institute, Harvard Medical School** May 2021 - Mar 2023  
*Research Student in the Department of Data Science* Boston, MA

- Researched in Franziska Michor, Ph.D. laboratory under the supervision of Simona Cristea, Ph.D.
- Developed pan-cancer evolutionary model to estimate tumor evolutionary modes from single-cell RNA sequencing data

**Evotec** Jun 2020 - Jul 2020  
*Student Intern in the High-Content Imaging Department* Hamburg, Germany

- Developed pipeline to analyze different imaging techniques for microscopy data analyses

**Beth Israel Deaconess Medical Center, Harvard Medical School** Jun 2019 - July 2019  
*Research Intern at Berenson-Allen Center for Non-Invasive Brain Stimulation* Boston, MA

- Investigated effects and safety of magnetic non-invasive brain stimulation on attention in adults

## TEACHING EXPERIENCE

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**Brown University** Jan 2024 - May 2024  
Graduate Teaching Assistant for Statistical Analysis of Biological Data (BIOL 0495)

**Boston University, College of Engineering** Jan 2020 - May 2021  
Undergraduate Teaching Fellow for Probability, Statistics, and Data Science (3 semesters)

## MANUSCRIPTS IN PREPARATION

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C Meier-Scherling, O Watson, V Asua, I Ghinai, T Katairo, S Garg, M Conrad, P Rosenthal, L Okell, J Bailey. Selection of artemisinin partial resistance Kelch13 mutations in Uganda in 2016-22 was at a rate comparable to that seen previously in South-East Asia. *[Under Review]*

## CONFERENCES AND INVITED TALKS

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**Title:** Initial selection of artemisinin partial resistance in East Africa is comparable to previous rapid emergence in South East Asia

- **2023 ASTMH:** Young Investigator Award Competition
- **2023 Wellcome Sanger Institute, Molecular Surveillance Team:** Invited Virtual Talk

## POSTER PRESENTATIONS

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**Title:** Comparison of strength of selection for *P. falciparum* artemisinin resistance-associated mutations between southeast Asia and Uganda

- **2023 ASTMH**
- **2023 ISMB/ECCB** - Best Poster Award
- **2023 Brown Public Health Research Day**

**Title:** evoModes: A modeling framework for estimating tumor evolutionary modes from single-cell RNA sequencing data.

- **2022 Cold Spring Harbor Biological Data Science Conference**

## AWARDS

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<b>Best Poster Award</b> , TransMed COSI at ISMB/ECCB 2023	Aug 2023
<b>Second Place for Societal Impact Award for Senior Thesis</b> , Boston University	May 2022
<b>Semi-Finalist in Rice 360 Global Health Technology Design Competition</b>	Mar 2022
<b>Dean's List</b> , Boston University College of Engineering	May 2020, May 2021, Dec 2021
<b>Patriot League Honor Roll</b> , Patriot League	May 2019 - 2021
<b>Bloom Family Leadership Academy</b> , Boston University Athletic Department	Sep 2019

## SKILLS

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**Programming Languages:** RStudio, Python (Num-py, Pytorch, TensorFlow, Keras), high-performance computing (slurm, snakemake), MATLAB, STATA, C++, Microsoft Office, LaTeX  
**Languages:** German (native), English (native), French (B2), Latin (Latinum)

## SELECTED LEADERSHIP EXPERIENCES

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<b><i>Council on the German American Conference at Harvard e.V.</i></b> Board member	Jan 2024 - Present
<b>Ph.D. Admissions Committee</b> Interviewer for Brown University's Computational Biology graduate program	Dec 2023 - Present
<b>Co-Founder of <i>Junge Union New England</i></b> Youth organization of the German political party, Christian Democratic Union (CDU)	Sep 2023 - Present
<b>Global Shaper</b> , Providence Hub Volunteer	Sep 2023 - Present
<b>German American Conference</b> , Harvard Kennedy School Advisor, conference co-chair, and organizing member	Sep 2019 - Jan 2024
<b>Berlin Exchange Medicine Journal</b> Co-Lead Organizer for Peer-Review Fellowship	Nov 2021 – Sep 2022
<b>Women's Rowing Team</b> , Boston University Varsity Athlete Division 1 and Member of the Bloom Family Leadership Academy	Sep 2018 - Sep 2021