KATIE M. SAUND

katiemsaund@gmail.com • 313.418.3016 • linkedin.com/in/katiesaund • katiesaund.com • github.com/katiesaund/

I AM A PHD

RESEARCH & EDUCATION

PhD candidate in Microbiology & Immunology University of Michigan, Ann Arbor, MI 2015 – 2020 *expected*
Advisor: Evan Snitkin, Ph.D.

- **Thesis project:** Apply statistical & bioinformatic approaches to identify genetic variants associated with pathogenic *in vitro* phenotypes and severe patient outcomes during *Clostridium difficile* infection.
- **Awards**: ASM Richard & Mary Finkelstein Travel Award (2019), UM Rackham Conference Travel Grant (2019), UM Rackham Professional Development Award (2019), NIH Predoctoral Training Grant in Genetics (2016 – 2018), & UM Benard Maas Fellowship (2015).
- **Software**: hogwash. Open source R package. Three genome-wide association study methods to identify genetic loci correlated with bacterial phenotypes. http://github.com/katiesaund/hogwash
- **Papers:**
  - Mau, Eckley, Bergin, Saund, Villano, Vendrov, Snitkin, Young, Yung. mSphere. 2019.
  - Bassis, Bullock, Sack, Saund, Pirani, Snitkin, Alaniz, Quint, Young, Bell. Submitted & preprint posted. 2019.
  - *In preparation:*
    - Saund*, Lapp*, Thiede*, Snitkin. PreWAS: data preprocessing of multiallelic variants, overlapping genes, and ancestral states for more informative bacterial GWAS. *Equal contribution.
    - Saund, Rao, Young, Snitkin. Genetic determinants of trehalose utilization are not associated with severe *Clostridium difficile* infection.
    - Saund & Snitkin. Hogwash: Three genome-wide association study methods to identify genetic loci correlated with bacterial phenotypes.
- **External posters & talks:**
  - Saund & Snitkin. Talk & poster: American Society for Microbiology Microbe. San Francisco, CA. 2019
  - Saund & Snitkin. Flash talk: Systems Biology & Antibacterial Resistance Program. La Jolla, CA. 2018.
  - Saund & Snitkin. Poster: Lake Arrowhead Microbial Genomics. Lake Arrowhead, CA. 2018.
  - Saund & Snitkin. Poster: Intl. Conf. on the Mol. Bio. & Pathogenesis of the Clostridia. Ann Arbor, MI. 2017.

Research Assistant & Research Scientist I Seattle Children's Research Institute, Seattle, WA 2012 – 2015
Advisor: Courtney Crane, Ph.D. | Promoted 2014

- **Project:** Characterization of the role of lactate dehydrogenase in the pediatric glioma microenvironment.
- **Paper:** Haberthur, Brennan, Hoglund, Balcaitis, Chinn, Davis, Kreuser, Winter, Leary, Deutsch, Ellenbogen, Crane. Cancer Biology & Therapy. 2016.
- **Poster:** Moyes, Brennan, Crane. 8th Annual Canadian Cancer Immunotherapy Consortium Symposium. Vancouver, Canada. 2015.

California Institute of Technology (Caltech) B.S. Biology, Pasadena, CA 2008 – 2012

- **Leadership:** Co-President for Class of 2012. Coordinated commencement activities and obtained $6,000 grant to subsidize senior class trip.
- **Awards**: Doris Everhart Service Award (2012), Frank Teruggi Memorial Award (2011), Paul Studenski Memorial Fund Prize (2010), & Don Shepard Award (2009).
- **Research**: SantaLucia Lab (Wayne State; 2009) & Manary Lab (Washington University; 2010, 2011)

SKILLS

Computational R, package development, high performance cluster (HPC) computing, bash, version control (git), data visualization

Laboratory Bacterial & mammalian cell culture, co-immunoprecipitation of protein complexes, CRISPR/Cas9 genome editing, lentiviral production and transduction, microbial techniques, plasmid construction, & qPCR

INVESTING, MENTORSHIP, & SERVICE

Student Advisor at Wolverine Venture Fund University of Michigan 2018 – Present

- Performed due diligence on Series A/B healthcare & technology investment opportunities.

Venture Capital Investment Competition University of Michigan 2018 – 2019

- Member of winning four-person team in UM Ross School of Business competition & competitor at Central Regional Competition at University of Texas at Austin McCombs School of Business.

Undergraduate Honors Thesis Research Mentor University of Michigan 2018-Present

- Weekly supervision of thesis research for undergraduate microbiology student.

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Professional Development Diversity, Equity, & Inclusion (DEI) Certificate Program University of Michigan 2019-2020

- Training in intercultural communication, microaggressions, bystander intervention, & unconscious bias.