KATIE M. SAUND

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EDUCATION

2015-Present	Microbiology & Immunology Doctoral Program • University of Michigan • Ann Arbor, MI
2008- 2012	B.S., Biology • California Institute of Technology • Pasadena, CA
Winter 2014	Advanced Immunology Course • University of Washington • Seattle, WA
July 2013	Advanced Course in Immunology • American Association of Immunologists • Boston, MA
Fall 2011	Term abroad • University College London • London, UK

RESEARCH

2015-Present — Microbiology & Immunology Doctoral Candidate • University of Michigan • Ann Arbor, MI
Advisor: Evan Snitkin, Ph.D.
Project: Bacterial genomics
- Tailored several genome-wide association study approaches to *Clostridium difficile*
- Goal: identify & validate genetic variants associated with *in vitro* phenotypes and patient infection outcomes

2014 – 2015 — Research Scientist I • Seattle Childrens Research Institute • Seattle, WA
Advisor: Courtney Crane, Ph.D.
Project: Characterization of the role of LDH5 in the pediatric glioma microenvironment.
- Resulted in a publication in *Cancer Biology & Therapy*.

2012 – 2014 — Research Assistant • Seattle Childrens Research Institute • Seattle, WA
Advisor: Courtney Crane, Ph.D.
- Characterized NKG2D ligand expression of tumor microenvironment in primary glioma samples and cell lines.
- Investigated intracellular trafficking of LDH5 in glioma cell lines upon induction of hypoxia.
- Optimized a co-immunoprecipitation method to identify candidates for an LDH5 receptor.

Summer 2010, 2011 — Research Assistant • Project Peanut Butter • Blantyre, Malawi
Advisor: Mark Manary, M.D. at Washington University in St. Louis
Project: Treatment of pediatric malnutrition.
- Collected anthropometric data from patients for use in studies investigating the effects of antibiotic intervention, environmental enteropathy, and food delivery mechanism in the treatment of and recovery from pediatric malnutrition.

Summer 2009 — Research Fellow • Wayne State University • Detroit, MI
Funding: Summer Undergraduate Research Fellowship, Caltech
Advisor: John SantaLucia, Jr., Ph.D.
Project: Improvement of a 16S rRNA alignment algorithm.
- Implemented a novel algorithm into a CLUSTAW-RNA123 hybrid that improved phylogenetic tree accuracy.

WOLVERINE VENTURE FUND

2018- Present — Student Advisor • University of Michigan • Ann Arbor, MI
Advisor: Erik Gordon, J.D.
Sourcing deals and performing due diligence on Series A and Series B healthcare and technology investment opportunities; working in close collaboration with local VCs and startup CEOs.

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PUBLICATIONS

T. Mau, S. Eckley, I. Bergin, K. Saund, J. Villano, K. Vendrov, E. Snitkin, V. Young, & R. Yung. Outbreak of murine infection with C. difficile associated with the administration of a methyl-donor diet. *Submitted*.

Haberthur K., Brennan K., Hoglund V., Balcaitis S., Chinn H., Davis A., Kreuser S., Winter C., Leary S.E.S., Deutsch, G.H., Ellenbogen, R.G., and Crane, C.A. (2016). NKG2D ligand expression in pediatric brain tumors. Cancer Biology & Therapy, 1712, 1253-1265.

POSTERS & TALKS

Saund, K. & Snitkin, E. "Bacterial genome-wide association study to identify genetic variants linked to complex in vitro phenotypes."

- Systems Biology and Antibacterial Resistance Program. La Jolla, CA, September 2018. *Flash talk & poster*.
- Lake Arrowhead Microbial Genomics. Lake Arrowhead, CA, September 2018. *Poster*.

Saund, K. & Snitkin, E. "Identification of genetic variation associated with clinical success in *C. difficile*." 10th International Conference on the Molecular Biology and Pathogenesis of the Clostridia. Ann Arbor, MI, August 2017. *Poster*.

Moyes, K.W., Brennan, K.M., & Crane, C.A. "Receptor for Lactate Dehydrogenase V is a Novel Therapeutic Target for Glioblastoma." 8th Annual Canadian Cancer Immunotherapy Consortium Symposium, Vancouver, Canada, May 2015. *Poster*.

AWARDS & FELLOWSHIPS

2016-2018	NIH Predoctoral Training Grant, Michigan Predoctoral Training in Genetics, T32GM007544
2015	University of Michigan, Benard Maas Fellowship
2012	Caltech, Doris Everhart Service Award
2011	Caltech, Frank Teruggi Memorial Award
2010	Caltech, Paul Studenski Memorial Fund Prize
2009	Caltech, Don Shepard Award
2008	US Department of Education, Robert C. Byrd Merit Scholar
2008	National Merit Scholar

SKILLS

Computer

Programs Adobe Illustrator, GraphPad PRISM, Tree Star FlowJo

Languages R, Python

Other High-performance cluster (HPC) computing

Laboratory

Anaerobic bacterial culture
Co-immunoprecipitation of protein complexes
CRISPR/Cas9 genome editing
Lentiviral production and transduction
Mammalian cell culture
Molecular biology
mRNA isolation and qPCR

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SERVICE

2018-2019 PhD Recruiting Coordinator • University of Michigan • Ann Arbor, MI
- Organize PhD student recruiting weekends for Microbiology and Immunology department

2017-2018 Student Invited Speaker Coordinator • University of Michigan • Ann Arbor, MI
- Invite and host a professor to give seminar for Microbiology and Immunology department

2012 Co-President • Caltech • Class of 2012
- Coordinated commencement and obtained $6,000 grant to subsidize senior class trip.

2010-2012 Board of Control Representative
- Made recommendations to the Deans regarding academic Honor Code violations.

2009-2012 Volunteer • Elizabeth House • Pasadena, CA
- Maintained donation database at this shelter for homeless and pregnant women.

Summer 2010 Preceptor • Huntington Hospital • Pasadena, CA
- Shadowed internists, surgeons, pathologists, pediatricians, and radiologists.

TEACHING EXPERIENCE

2018 Graduate Student Instructor • University of Michigan • Ann Arbor, MI
- Course: Introductory Laboratory in Medical Microbiology
- Taught basics of bacterial isolation, cultivation, and identification.
- Class size: 16.

TECHNICAL EDITING

2015 Freelance editing of online questions for college biology textbooks.