

KATIE M. SAUND

katiephd@umich.edu • 313.418.3016 • linkedin.com/in/katiesaund

EDUCATION

2015-Present Microbiology & Immunology Doctoral Program • University of Michigan • Ann Arbor, MI
2008- 2012 B.S., Biology • California Institute of Technology • Pasadena, CA

Education at other institutions

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 Children's 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 Children's 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.

POSTERS

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.

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.

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PUBLICATION

Haberthur K., Brennan K., Hoglund V., Balcitis 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*, 17(12), 1253-1265.

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

Software Adobe Illustrator, GraphPad PRISM, RStudio, Tree Star FlowJo

Languages R, Python

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

SERVICE

2012	Co-President • Caltech • Class of 2012 <ul style="list-style-type: none">Coordinated commencement and obtained \$6,000 grant to subsidize senior class trip.
2010-2012	Board of Control Representative <ul style="list-style-type: none">Made recommendations to the Deans regarding academic Honor Code violations made by peers.
2009-2012	Volunteer • Elizabeth House • Pasadena, CA <ul style="list-style-type: none">Maintained donation database at this shelter for homeless and pregnant women.
Summer 2010	Preceptor • Huntington Hospital • Pasadena, CA <ul style="list-style-type: none">Shadowed internists, surgeons, pathologists, pediatricians, and radiologists.

TEACHING EXPERIENCE

2018	Graduate Student Instructor • University of Michigan • Ann Arbor, MI <ul style="list-style-type: none">Course: Introductory Laboratory in Medical MicrobiologyTaught basics of bacterial isolation, cultivation, and identification.
2013-2014	Science and Math tutor • Solomon High School • Edmonds, WA
2013	AP Biology tutor • WyzAnt Tutoring • Redmond, WA

TECHNICAL EDITING

2015	Freelance editing of online questions for college biology textbooks.
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