

Tristan Goodbody

POST-DOCTORAL FELLOW

University of British Columbia, Vancouver

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Education

University of British Columbia

Vancouver, BC

PHD REMOTE SENSING OF FORESTS

2019

- Assessing the role of digital aerial photogrammetry for characterizing forest structure and enhancing forest inventories

University of British Columbia

Vancouver, BC

BSC NATURAL RESOURCES CONSERVATION WITH HONORS

2015

- Science and Management Major

Research

Graduate Student Researcher

Stanford University

JAGANNATHAN LAB - DEPARTMENT OF MEDICINE

October 2020 - Present

- Investigate cellular correlates for acquired immunity against placental malaria in pregnant mothers from Uganda.
 - Culture VAR2CSA expressing *Plasmodium falciparum*.
 - Fluorescent activated cell-sorting and bulk RNA sequencing.
 - Flow cytometry and analysis of large datasets.

Graduate Student Researcher

Stanford University

SCHNEIDER LAB - DEPARTMENT OF MICROBIOLOGY & IMMUNOLOGY

July 2018 - September 2020

- Identify new genetic loci associated with resistance to malaria infection in a *Plasmodium chabaudi* diversity outbred model.
 - Genetic loci mapping with multiparent populations with qtl2 package.
 - Handle Mice using *Plasmodium chabaudi* infection model.

Undergraduate Researcher

University of Nevada, Reno

HURTADO GROUP - DEPARTMENT OF MATHEMATICS & STATISTICS

October 2016 - August 2018

- Generalized the linear chain trick using properties of erlang distributions to translate stochastic integrodifferential equations into simpler ordinary differential equations for modelers.

Undergraduate Researcher

University of Nevada, Reno

AUCOIN LAB - DEPARTMENT OF MICROBIOLOGY & IMMUNOLOGY

February 2014 - May 2017

- Verified *Burkholderia pseudomallei* capsular polysaccharide as a viable biomarker in a murine model. Cultured Leptospirosis interrogans. Subclass switched antibodies decrease limit of detection of a lateral flow immunoassay.
 - Culturing Hybridoma cell lines in bioreactors for antibodies.
 - Measuring clearance kinetics of capsular polysaccharide.
 - Optimized Ig subclass for lateral flow immunoassay using ELISAs.

Teaching

Graduate Writing Tutor

Stanford University

HUME CENTER FOR WRITING AND SPEAKING

June 2020 - Present

- Tutor undergraduates and graduate students virtually one-on-one at all stages of the writing process ranging from scholarship applications to written class assignments.
 - Winter 2021 Testimonials - I most appreciated his enthusiasm and encouraging attitude, since it made me less nervous about sharing my writing and getting feedback on it!
 - Fall 2020 Testimonials - Adam made the session really comfortable and low stress which helped me get through the material and feel comfortable asking questions!

Teaching Assistant

Remote Learning

MICROBIAL PATHOGENESIS

April 2020 - June 2020

- Held weekly office hours, guest lectured, developed and graded research proposals

Leadership

Data Analyst

KARUNA INITIATIVE

- Lead community reports for summer pilot
 - Summarize timeseries data of 60 students wellbeing.
 - Identify trends in community responses to advise graduate student policy.

Tormabum, Sierra Leone

June 2019 - September 2019

Social Entrepreneurship Team Member

WARC

- Establishing a low-cost drying machine in rural Sierra Leone for subsistence farmers.
 - Prototyping, testing and manufacturing a half-ton scale maize-drying machine.
 - Partnering with WARC (West African Rice Company) and FINIC Industries to build and implement maize dryer.

Tormabum, Sierra Leone

July 2019 - September 2019

Design Consultant

NOORA HEALTH

- Designed a newborn health education kit to encourage kangaroo care in mothers of low birthweight babies in India.
 - Prototyping education material using Adobe Illustrator.
 - User-testing with new mothers in hospitals and home visits.

Bangalore, India

February 2019 - June 2019

Relevant Courses

STANFORD UNIVERSITY

- BIOS 221: Modern Statistics for Modern Biology
- CME 193: Introduction to Scientific Python

UNIVERSITY OF NEVADA, RENO

- MATH 420: Mathematical Modeling
- MATH 461: Probability Theory
- MATH 462: Introduction to Stochastic Processes
- STAT 467: Statistical Theory

Technical Skills

Coding Languages	Software	Markup Languages
R, Python, Mathematica, MATLAB	GIT, SLURM, High-Performance Computing	CSS, HTML, \LaTeX , RMarkdown, Bootstrap

Honors

Cellular Molecular Biology Trainee

NIH TRAINING PROGRAM FOR STANFORD BIOSCIENCE PHD STUDENTS

Stanford, CA

2019

Honors Undergraduate Research Award

GRANTED TO HONORS STUDENTS WITH EXCEPTIONAL THESES

University of Nevada, Reno

2016

- Honors Thesis: In vivo distribution of B. pseudomallei capsular polysaccharide

Poster Award for SACNAS Diversity Conference

AWARDED BY SACNAS TO LESS THAN 5% OF POSTER PRESENTERS AT ANNUAL CONFERENCE

Long Beach, CA

2016

- Poster: Probability distributions of system average interruption frequency index

Barry M. Goldwater Scholarship Honorable Mention

AWARDED FOR EXCELLENT APPLICATIONS TO THE GOLDWATER SCHOLARSHIP

Saint Peter, MN

2016

- Proposal on Immunoglobulin G Subclass Switching Impacts Sensitivity of an Immunoassay Targeting Francisella Tularensis Lipopolysaccharide

Nevada Undergraduate Research Award

GIVEN TO UNDERGRADUATE STUDENTS WITH PROMISING RESEARCH PROPOSALS

University of Nevada, Reno

2014

- Awarded 3 consecutive years

American Society for Microbiology Undergraduate Research Fellow

COMPETITIVE NATIONAL FELLOWSHIP FOR RESEARCH IN MICROBIOLOGY

Washington, DC

2016

- Led to a poster presentation at ASM Microbe 2017

Nevada INBRE Undergraduate Research Opportunity Program

FUNDING FOR UNDERGRADUATE RESEARCH IN BIOSCIENCES

University of Nevada, Reno

2015

Publications

- **Kirosingh, A.S.**, De La Parte, L., Ty, M., Kakuru, A., Muhindo, M. K., Thulin, N., Kamya, M., Feeney, M., Dorsey, G., Wang, T.T., Jagannathan P., Cellular correlates for protection against malaria acquired across multiple pregnancies (manuscript in preparation)
- **Kirosingh, A.S.**, Gupta, A.S., Chevee, V., Davis, N., Cumnock, K., Lissner, M., Schneider, D.S. Malaria Susceptibility Loci Identified in the Diversity Outbred Mouse Population (manuscript in preparation)
- Hurtado, P.J., **Kirosingh, A.S.**, 2019. Generalizations of the ‘Linear Chain Trick’: incorporating more flexible dwell time distributions into mean field ODE models. J. Math. Biol. 79, 1831–1883. <https://doi.org/10.1007/s00285-019-01412-w>
- Nualnoi, T., **Kirosingh, A.**, Pandit, S.G., Thorkildson, P., Brett, P.J., Burtnick, M.N., AuCoin, D.P., 2016. In vivo Distribution and Clearance of Purified Capsular Polysaccharide from Burkholderia pseudomallei in a Murine Model. PLOS Neglected Tropical Diseases 10, e0005217. <https://doi.org/10.1371/journal.pntd.0005217>
- Nualnoi, T., **Kirosingh, A.**, Basallo, K., Hau, D., Gates-Hollingsworth, M.A., Thorkildson, P., Crump, R.B., Reed, D.E., Pandit, S., AuCoin, D.P., 2018. Immunoglobulin G subclass switching impacts sensitivity of an immunoassay targeting Francisella tularensis lipopolysaccharide. PLOS ONE 13, e0195308. <https://doi.org/10.1371/journal.pone.0195308>

PUBLISHED ABSTRACTS

- Hurtado, P., **Kirosingh, A.**, 2018. The Generalized Linear Chain Trick: A new tool to build ODE models with more flexible dwell-time distributions. Presented at the 2018 ESA Annual Meeting (August 5 – 10), ESA.
- **Kirosingh, A.**, 2017. PROBABILITY DISTRIBUTIONS OF SYSTEM AVERAGE INTERRUPTION FREQUENCY INDEX. Presented at the 2017 AAAS Annual Meeting (February 16-20, 2017), AAAS.