

Tony J. Lam

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PROFILE

[insert here]

SKILLS

Research

[insert here]

Tools

[insert here]

Language

English, Cantonese (Chinese),
Mandarin (Chinese)

EDUCATION

Ph.D., Bioinformatics (Informatics)

2016 – Present | Indiana University, Bloomington, IN | Advisor: Yuzhen Ye

M.S., Computer Science

2016 – 2018 | Indiana University, Bloomington, IN

B.S., Microbiology

2009 – 2013 | University of Hawaii at Manoa, Honolulu, HI

PROFESSIONAL EXPERIENCE

Research Consultant, Microbiome and Me LLC

August 2019 – Present

- Provide bioinformatics consultancy to academic and private company stake holders.
- Build customized pipelines, analyze omics and NGS datasets.
- Deliverables include: experimental design, taxonomic classification, phylogenetic analysis, genomic analysis, variant calling, and detailed analysis reports.

Research Intern, Vertex Pharmaceuticals

Human Genomics Department, Computational Genomics Team

June 2018 – August 2018

- Assisted in disease mechanism and biomarker discovery of an ongoing drug discovery and disease program.
- Performed transcriptomic analysis of disease models to gain insight into disease etiology.
- Characterized gene expression changes in response to various compound treatments.
- Implemented RNAseq variant calling pipeline for cell line mutation validation.

Environmental Health Specialist, State of Hawaii

Hawaii Occupational Safety and Health (HIOSH)

March 2014 – October 2015

- Enforcement of Occupational Safety and Health Standards, 29 CFR Parts 1910 and 1926
- Duties include: Hazard Assessment, Air Monitoring, Noise Monitoring, Audits.

ADDITIONAL EXPERIENCE

Undergraduate Research Assistant, University of Hawaii

John A. Burns School of Medicine, Institute for Biogenesis Research

September 2013 – February 2014

- Working in the lab of Dr. Richard Allsopp, studying the role of Hypoxia-inducible factor 1-alpha (HIF-1-alpha) on Telomerase Reverse Transcriptase (TERT) gene expression.
- Performed basic wet-lab work (e.g. media preparation, PCR, and histochemical staining).

Undergraduate Research Assistant, University of Hawaii

Microbiology Department

August 2012 – July 2013

- Undergraduate research assistant in the lab of Dr. Guangyi Wang and Dr. Xin Wang, studying consolidated bioprocessing (CBP), the conversion of biomass into biofuels, through the bioengineering of facultative anaerobes.
- Performed basic wet-lab work (e.g. bacterial isolation, bacterial culturing, and PCR).

SELECTED PUBLICATIONS

Lam, T. J., and Ye, Y. (2019). Long reads reveal the diversification and dynamics of CRISPR reservoir in microbiomes. *BMC genomics*, 20.1, 567.

Lam, T. J., and Ye, Y. (2019). CRISPRs for Strain Tracking and Their Applications to Microbiota Transplantation Data Analysis. *The CRISPR journal*, 2(1), 41-50.