

Miley Sinantha-Hu – Curriculum Vitae

E-mail: sinanthahu@gmail.com | Tel/WhatsApp: +1(530)722-8113

EDUCATION

Stanford University Stanford, CA, USA

Master of Science Biology (Coterminal Degree)

August 2021 – June 2022

Advisor: Dr. Liqun Luo

GPA: 4.06/4.00

Stanford University

August 2017 – June 2022

Bachelor of Science Biology with Honors, Education Policy Minor

Honors Thesis: *Proteomic Profiling of Purkinje Cell Surface Reveals the Critical Role of Armadillo-like helical domain containing protein 4 in Mammalian Dendrite Morphogenesis*. Awarded Firestone Medal for Excellence

RESEARCH

Research Study Coordinator, Swiss Tropical and Public Health Institute, Dept. of Epidemiology

Vientiane, Lao PDR

PI: Drs. Günther Fink, Peter Odermatt, Somphou Sayasone, and Jordyn Wallenborn

January 2023 – Present

- Manage data collection of prospective multi-generational birth cohort that enrolled over 12,000 participants
- Partner with local institutions: Ministry of Public Health, national and district hospitals, village health offices
- Analyze the relationship between selected antenatal care facility and time burden of travel to seek care

Researcher (Volunteer), Lao-Oxford-Mahosot Hospital-Wellcome Trust Research Unit

Vientiane, Lao PDR

PI: Drs. Audrey Dubot-Pérès and Matthew Robinson

January 2023 – Present

- Assess and map nationwide seroprevalence of hepatitis E virus via ELISA assay of national blood bank donations
- Optimize PCR for spotted fever rickettsioses in historic tick samples

U.S. Fulbright Research Fellow, Lao Tropical Public Health Institute

Vientiane, Lao PDR

PI: Dr. Somphou Sayasone

August 2022 – May 2023

- Interview village health volunteers for ethnographic account of community practices in rural areas
- Detect *O. viverrini* liver fluke infection from fecal samples via FECT analysis

Research Assistant, Stanford University, Dept. of Biology

Stanford, CA, USA

PI: Dr. Liqun Luo

January 2019 – June 2022

- Implemented forward genetic and proteomic techniques to investigate novel regulatory cell-autonomous effects of select cell-surface proteins upon dendrite morphogenesis in mouse Purkinje cell development

PUBLICATIONS and PRESENTATIONS

Sinantha-Hu, M. Estimating anti-Hepatitis E Virus Immunoglobulin G Positive Rate and Mapping Seroprevalence in all 18 Provinces of Laos. Presented at: U.S. NSF Ecology and Evolution of Infectious Disease Conference. 2024 June 25; Stanford University, Stanford CA.

Wallenborn, J.T., **Sinantha-Hu, M.**, Ouipoulikoune, V., Kounnavong, S., Siengsounthone, L., Probst-Hensch, N., Odermatt, P., Sayasone, S., & Fink, G. (2024) Study Protocol: A Longitudinal Multigenerational Birth Cohort in Lao People's Democratic Republic. *BMC Public Health*. (Under review)

Sinantha-Hu, M. Profiling Critical Cell Surface Proteins in Neuronal Dendrite Morphogenesis. Presented at: Stanford University Dept. of Biology, Departmental Honors Thesis Symposium. 2022 May 20; Stanford University, Stanford, CA. One of four undergraduates selected to present from a thesis cohort of 60.

Shuster, S. A., Li, J., Chon, U., **Sinantha-Hu, M. C.**, Luginbuhl, D. J., Udeshi, N. D., Carey, D. K., Takeo, Y. H., Xie, Q., Xu, C., Mani, D. R., Han, S., Ting, A. Y., Carr, S. A., & Luo, L. (2022). In situ cell-type-specific cell-surface proteomic profiling in mice. *Neuron*, 110(23), 3882–3896.e9. <https://doi.org/10.1016/j.neuron.2022.09.025>

Takeo, Y. H., Shuster, S. A., Jiang, L., **Hu, M. C.**, Luginbuhl, D. J., Rüllicke, T., Contreras, X., Hippenmeyer, S., Wagner, M. J., Ganguli, S., & Luo, L. (2021). GluD2- and Cbln1-mediated competitive interactions shape the dendritic arbors of cerebellar Purkinje cells. *Neuron*, 109(4), 629–644.e8. <https://doi.org/10.1016/j.neuron.2020.11.028>

WORK EXPERIENCE

Health Emergency Preparedness Analyst, San Mateo County Emergency Medical Services **South San Francisco, CA, USA**

August 2020 – September 2021

- Managed fulfillment of FEMA grants serving all county general acute care hospitals and skilled nursing facilities
- Analyzed, visualized, and presented COVID-19 community data to local health jurisdiction stakeholders
- Deployed as an EMT to administer vaccines and assist pharmacy operations at COVID-19 mass vaccination clinic

COVID-19 Response Emergency Medical Technician (EMT), Independent Contractor

Bay Area, CA, USA

March 2020 – September 2020

- **San Mateo County EMS** – Cared for COVID-19 patients in an acute alternate care site for hospital overflow, administered nasopharyngeal swab tests for COVID-19, provided overnight medical support to Santa Cruz CZU Lightning Fire evacuees during ongoing COVID-19 response
- **AMI Expeditionary Healthcare** – Transported COVID-19 positive patients, implemented PPE and isolation procedure trainings at skilled nursing facilities, conducted healthcare facility outbreak assessment
- **Verily Life Sciences** – Administered mid-turbinate swab test for COVID-19

TEACHING EXPERIENCE

International Program for Health in the Tropics, Lao Tropical Public Health Institute

Vientiane, Lao PDR

Lecturer, English for Health Science

September 2022 – Present

- Designed and taught curriculum on English (USA) academic writing conventions for over 50 MSc students
- Mentored 12 students over three graduating classes for close thesis revision

Dept. of Emergency Medicine, Stanford School of Medicine

Stanford, CA, USA

Teaching Assistant, EMED 111: Emergency Medical Technician Training

Fall 2018, Winter 2020

- Led practicum labs consistent with National Registry of Emergency Medical Technician and California state certification rubrics on medical, trauma, patient assessment, and patient extrication skills
- Lectured on medical and trauma EMS topics and led journal club sessions, recorded on Zoom and in-person

Stanford Graduate School of Education, Stanford University

Stanford, CA, USA

Community Engaged Learning Coordinator, EDUC97X: Science Education & Community Service

June 2018 – June 2020

- Facilitated weekly site visits for four undergraduate mentors to host hands-on science programming for over 40 third-grade students in East Palo Alto

HONORS, AWARDS AND FELLOWSHIPS

Firestone Medal for Excellence in Undergraduate Research, \$500.00

June 2022

Awarded by Stanford University to the top 10% of undergraduate honors theses

U.S. Fulbright Open Study/Research Award, \$22,000.00

May 2022

10-month full funding (\$22,000) in Lao PDR at the Lao Tropical and Public Health Institute

Stanford Biology Summer Undergraduate Research Fellowship, \$7,500.00

June 2019, June 2020

3-month funding to conduct wet lab experiments

Education Partner Fellowship, \$10,000.00

January 2020

12-month funding awarded by Stanford University Haas Center for Public Service to design science-teaching curricula

Joint Science-Education Grant, \$8,000.00

June 2018

3-month funding awarded by Stanford University Haas Center for Public Service to conduct wet lab experiments

VOLUNTEERING/ACTIVITIES (current; Vientiane, Lao PDR)

- **Open Street Map Laos**: (co-founder) working group increasing open-access geospatial data availability for Laos
- **Panya.nivej Pottery Studio**: teaching pottery to local school-aged youths and processing natural clay onsite

SKILLS

- **Wet Lab (BSL-3)**: PCR, ELISA, LAMP, FECT, CRISPR-Cas9, cloning, microscopy, tissue histology, proteomic analysis
- **Dry lab**: ArcGIS, STATA18, R, Open Data Kit (ODK), DHIS2, Adobe Suite, CAD, LaTeX
- **Qualitative**: semi-structured interview, ethnography, encoding analysis, knowledge-attitudes-perception survey
- **Languages**: English (Native), Lao (Workplace Proficiency), Thai (Intermediate), Spanish (Intermediate)