

**Tomás Martín León, PhD – Postdoctoral Researcher & Lecturer**  
2121 Berkeley Way #5302, School of Public Health, Berkeley, CA 94720 USA

**EXPERIENCE**

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**Marshall Lab (University of California, Berkeley)** **Berkeley, California**  
**Postdoctoral Researcher, Epidemiology & Biostatistics** 2018 – Present

- Generating mechanistic models of fine-scale mosquito dispersal incorporating wind and landscape variables for validation and prediction and for comparison with genetic methods of estimating dispersal
- Expanding mathematical models of disease transmission and genetic control to include environmental factors such as temperature and rainfall dependencies
- Investigating the use of drones for data collection and informing mosquito population dynamics models

**Tropical Disease Research Laboratory (Khon Kaen University) / Chinese Center for Disease Control and Prevention** **Khon Kaen, Thailand/ Jiangmen and Chengdu, China**  
**Graduate Researcher/Fulbright Scholar** 2013 - 2018

- Developed hydrology-driven metapopulation disease transmission model for liver flukes in Thailand
- Conducted field work for M.S. and Ph.D. in Thai and Chinese villages studying the transmission of the liver flukes *Opisthorchis viverrini* and *Clonorchis sinensis* in aquaculture and natural settings
- Planned and coordinated research experiments and lab operations with collaborators and local field teams, processing water, snail, fish, and reservoir host samples

**American Jobs Project** **Berkeley, CA**  
**State of Georgia Intern** 2014

- Researched Georgia's competitive advantages in clean energy economy for job creation and development
- Interviewed major stakeholders in government, industry, non-profit, and academia, generating memos for use in shaping state clean energy policy

**Centers for Disease Control and Prevention (NCEH/ATSDR)** **Chamblee, GA**  
**Collegiate Leader in Environmental Health Intern/ORISE Fellow** 2011 - 2012

- Prepared environmental chemical exposure reports for brownfield sites across United States
- Developed programming tool to calculate doses of chemical and particulate emission exposures
- Modeled and analyzed emissions from contaminated Chinese drywall to determine human health effects

**Environmental Microbial Genomics Lab (Georgia Institute of Technology)** **Atlanta, GA**  
**Undergraduate Researcher with Dr. Konstantinidis** 2010 - 2012

- Studied strains of *E. coli* to differentiate between them in order to better determine which species indicate fecal contamination in water sources through isolation work and metagenomic mapping

**EDUCATION**

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**University of California, Berkeley, EHS Graduate Group** **Berkeley, California**  
**Doctor of Philosophy in Environmental Health Sciences,** 2018  
Designated Emphasis in Development Engineering

**Dissertation:** Elucidating Liver Fluke Transmission Dynamics: Synthesizing Lab, Field, & Modeling Methods

- National Science Foundation Graduate Research Fellow, Foreign Language & Area Studies Fellow, and Fulbright Thailand Research Scholar

**Master of Science in Global Health and Environment** **GPA: 3.98** 2014  
**Thesis:** Environmental Factors Impacting Liver Fluke Transmission in Natural Waters and Aquaculture Systems

**Georgia Institute of Technology, College of Engineering**  
**Bachelor of Science in Environmental Engineering**  
Minor in Sociology

**Atlanta, Georgia**  
GPA: 3.97 2012

- President's Scholar, Outstanding Senior in CEE, Visionary Service and Leadership Award

## **RECENT ACADEMIC MANUSCRIPTS**

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T.M. León, A. Cornel, K.K. Brisco, J.M. Marshall (2020, in prep). Maximum likelihood method for analyzing mark-release-recapture data of *Aedes aegypti* using environmental and landscape data. Invited submission in *Ecology Letters*.

T.M León, V. Plermkamon, K. Kuntiyawichai, B. Sripa, R.C. Spear (2019, submitted). Hydrology-informed metapopulation modeling of liver fluke transmission in the Lawa Lake complex of northeast Thailand. Preprint available on bioRxiv: <https://www.biorxiv.org/content/biorxiv/early/2019/03/06/569913.full.pdf>

J.M. Marshall, R. Raban, N.P. Kandul, J.R. Edula, T.M. León, O. Akbari (2019). Winning the tug-of-war between effector gene design and pathogen evolution in vector population replacement strategies. *Frontiers in Genetics*.

J.C. Utazirubanda, T.M. León, P. Ngom (2019). Variable selection via Group LASSO Approach: Application to the Cox Regression and frailty model. *Communication in Statistics: Simulation and Computation*.

## **TEACHING**

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### **University of California, Berkeley**

Introduction to GIS for Public Health – instructor of record and lecturer (2020)

Environmental and Occupational Epidemiology – guest lecture, “WaSH and Helminth Disease Epidemiology” (2019, 2020)

CRISPR Genome Editing: From Biology to Technology – guest lecture, “Gene Drives” (2020)

Infectious Disease Modeling – guest lecture, “Introduction to Stochastic Modeling” (2019)

### **Patten University/Prison University Project**

Public Health – curriculum designer and lead instructor (2019)

Environmental Justice Workshop – research assistant and guest lecturer (2019)

## **SERVICE**

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### **Students Supervised**

Thien-An Ha, MPH Candidate, Epidemiology & Biostatistics, School of Public Health, UC-Berkeley 2019-2020

Cheyenne Butcher, MS, Environmental Health Sciences, School of Public Health, UC-Berkeley 2017-2018

### **Thesis Committees**

Luis Rodrigo Careaga Sotomayor, MS Computer Science, Tecnológico de Monterrey, México 2019

## **SKILLS**

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**Languages:** English – native; Spanish – conversational; Thai – conversational

**Programming:** R – advanced; Python, MATLAB, C++ – basic

**Other:** GIS – advanced; Git – intermediate

**Hobbies:** Hiking, puzzling, collecting flags and audiocassettes, volunteering, world percussion