

Michael L. Otte

Email: MichaelOtte1@gmail.com

Cell: (831) 704-6563

Freenome, Inc.

A Computational Genomics, Non-Invasive Cancer Diagnostics, and Liquid Biopsy Co.

201 Gateway Blvd

South San Francisco, CA 94080

CURRENT POSITION

Freenome, Inc.

Senior Software Engineer

South San Francisco, CA

September 2015-Present

EDUCATION

Dartmouth College, Hanover, NH

June 2013

B.A. Socio-Cultural Anthropology (Honors Student with Research Grant)

Coursework and Research completed for degree in Biology, Immunology Concentration

Coursework completed for Pre-Medicine Requirements

GRANTS AND AWARDS

Honors Citation in Anthropology, Professor James Igoe

August 2012

Dartmouth College

C. Everett Koop Scholar

November 2011

Dartmouth Center on Addiction, Recovery & Education

Honors Citation in Anthropology, Chair Dale Eickelman

August 2011

Dartmouth College

Howard Hughes Medical Institute Scholar Research Grant

July 2011

The Howard Hughes Medical Institute

Claire Garber Goodman Research Grant

May 2011

Dartmouth College

Dartmouth Keenan Family Scholar

January 2009

Dartmouth College

RESEARCH EXPERIENCE

Freenome, South San Francisco, CA

September 2015-Present

CTO, VP of Product, Software Engineer - freenome.com

- Conducted research in classification and biomarker discovery in cancer research via cloud-based computing of cell-free DNA (cfDNA).
- Heavily involved in high-throughput bioinformatics work on next-generation sequencing data from raw read data to analysis.
- Developed an in-house next-generation sequencing laboratory information management system (LIMS).
- Developed a drag-and-drop genome browser for genetic variant analysis.

- Co-authored grants (National Science Foundation) and was involved in manuscript writing on cell-free DNA analysis.
- Conducted academic collaborations with labs from Massachusetts General Hospital, UCSD, UCSF, and others.

Dartmouth-Hitchcock Medical Clinic, Lebanon, NH May 2011-August 2013

Undergraduate Researcher - geiselmed.dartmouth.edu/rigby/

Immunological mechanisms and effects of Rituximab on B cell depletion

- Studied the effects of rituximab (a.k.a. rituxan) in depletion of B cells via antibody-mediated cell shaving and complement dependent cell cytotoxicity
- Performed over 100 laser flowcytometry experiments through the entire process from experimental design to analysis and QA/QC
- Techniques included assay prep, PBMC and sera isolation from whole blood, cell carrying, basic microscopy and staining (e.g. ethidium bromide staining), and laser flow cytometry
- Resulting paper: *Induction of interleukin-6 production by rituximab in human B cells*. doi: 10.1002/art.38798 (not a listed co-author)

Dartmouth College, Hanover, NH

May 2011-June 2013

Undergraduate Researcher - Ethnographic Research

The Way of the True Pilgrim: Finding Meaning on the Camino de Santiago

- Conducted ethnographic field work for 3 months, hiking about 1,000 miles of the St. James Way pilgrimage road in France and Spain.
- Completed literature research on topic of pilgrimage in English and Spanish.
- Studied the group effects of pilgrims on the "Camino de Santiago" (the St. James Way), a historically, Roman Catholic pilgrimage in the field.
- Conducted in-field ethnographic research, including surveys, interviews, group discussions, observational field notes, and recordings.

RELATED EXPERIENCE

C. Everett Koop Institute, Hanover, NH

June 2012-June 2013

Personal Assistant to Dr. C. Everett Koop

- Organized speaker events with prominent physicians and policymakers including Dr. Samuel Kessel.
- Answered emails and coordinated meetings for the former surgeon general.
- Helped coordinate the funerary event at Dartmouth College for Dr. C. Everett Koop.

National Registry of Emergency Medical Technicians Aug 2010-March 2015

Emergency Medical Technician

Multiple Locations including Haiti, California, New Hampshire

- Opened up free clinics in rural areas of Haiti with a U.S. disaster relief team of doctors and nurses after the catastrophic 2010 earthquake.
- Constructed and installed a natural "biodigester" to provide cooking gas for a rural Haitian village.

- Worked over 100+ hours responding and staying on-call as a first responder in New Hampshire.
- Interacted with medical personnel and patients in a U.S. clinic as a clinical medical technician.
- Nationally, California, and New Hampshire certified as an emergency medical technician and basic life support instructor.
- Certified in emergency crisis management by Emergency Management Institute of the U.S. Department of Homeland Security and FEMA.

SOFTWARE EXPERIENCE

Python	Javascript	HTML5+CSS3	PostgreSQL
MySQL	shell scripting	Nginx+Gunicorn	Java
C++	PHP	Word/Excel/Powerpoint	

INTERESTS

- I enjoy contributing to open/free source software projects (e.g. Airflow), conducting biological and ethnographic research, rock climbing, surfing, singing, and volunteering.
- I started coding in Hypercard when I was 10 and donated my proceeds to charities.
- I used to be a member of the Greater Philadelphia Chamber of Commerce.