

PROFESSIONAL SUMMARY

PhD in genetics with extensive genomics and bioinformatics experience including next-generation sequencing analysis and machine learning/deep learning expertise. 15+ years of research experience including molecular biology and genetic manipulation in numerous *in vitro* and *in vivo* systems. Expert in CRISPR-Cas systems and their therapeutic applications. Strong independent and collaborative publication record in both primary research and scientific literature reviews. Passionate about genome editing, aging biology, epigenetics, and neuroscience.

EDUCATION

Stanford University, Stanford, CA 2014 – 2020

Ph.D. in Genetics

Thesis Project: Chromatin accessibility dynamics underlie a decline in neural stem cell (NSC) migratory ability with age

Massachusetts Institute of Technology (MIT), Cambridge, MA 2009 – 2013

Bachelor's of Science in Biological Engineering

Major: Biological Engineering, Minor: Mathematics

SKILLS

Computational Languages: R, Python, PyTorch, Bash, Matlab

Bioinformatics: RNA-seq, ChIP-seq, ATAC-seq pipeline analysis (bowtie2, tophat, cufflinks, SAMtools, Bedtools, Picard, MACS2, DESeq2, EdgeR, deepTools, DiffBind, ChIPSeeker, Homer, NucleoATAC), scRNA-seq analysis (Seurat), long read sequencing analysis (NanoQC, Minimap2)

Machine Learning: Supervised machine learning (ElasticNet, SVM, Random Forest, XGBoost), Unsupervised machine learning (PCA, MDS, t-SNE, UMAP), Markov chain Monte Carlo (MCMC) sampling, Deep learning (CNNs, LLMs)

Molecular Biology: ATAC-seq library generation, CRISPR-Cas9 genome editing, lentiviral construction, FACS, immunofluorescence staining, tissue culture, cryosectioning, confocal microscopy, qPCR, western blots

Mouse Animal Procedures: Large-scale animal studies, mouse colony husbandry, brain microdissections, multi-tissue necropsies, paraformaldehyde perfusions

C. elegans Animal Procedures: Animal husbandry, lifespan assays, genetic crosses, extrachromosomal microinjections, biolistic bombardment, UV integration

PROFESSIONAL EXPERIENCE

EpiCRISPR Biotechnologies, South San Francisco, CA June 2021-July 2024

Head of Biological Data Science

Biological Data Scientist II

Biological Data Scientist I

Stanford University – Department of Genetics, Stanford, CA July 2015-June 2021

Postdoctoral scholar with Dr. Anne Brunet

Graduate student with Dr. Anne Brunet

Harvard School of Public Health – Department of GCD, Cambridge, MA July 2013 – July 2014

Research technician for Dr. William Mair

MIT – Guarente Lab for the Study of Aging, Cambridge, MA Feb 2011 – May 2013

Research Internship with Dr. Leonard Guarente

Hôpital Pitié-Salpêtrière Neuroepidemiology Lab, Paris, France Summer 2012

Research Internship with Dr. Christophe Tzourio

University of Toronto (MaRS Centre) – Rottapel Lab, Toronto, ON, Canada Summer 2010

Research Internship with Dr. Robert Rottapel

MIT – Laboratory for Multiscale Regenerative Technologies, Cambridge, MA Jan – April 2010

Research Internship with Dr. Sangeeta Bhatia

University of Toronto (MaRS Centre) – Rottapel Lab, Toronto, ON, Canada Nov 2008 – Sep 2009

Research Internship with Dr. Robert Rottapel