Kenji Watanabe

Computational Biologist

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SUMMARY

Postdoctoral molecular biologist with 8+ years across PCR, qPCR, Sanger and Illumina sequencing, CRISPR-Cas9, and Benchling/SnapGene workflows at bench scale. 40+ validated constructs, 3 first-author papers, and a DNA-seq pipeline released on Bioconductor. NIH R01 and HHMI funded, ASCB member.

EXPERIENCE

Postdoctoral Fellow

Sep 2022 - Present

Broad Institute of MIT and Harvard

Cambridge, MA

Postdoc in the Lander Lab applying CRISPR-Cas9 screens to non-coding regulatory elements.

- Designed and validated 40+ CRISPR-Cas9 constructs in Benchling, achieving >85% editing efficiency in K562 cells
- Built a DNA-seq variant-calling pipeline released on Bioconductor (used by 6 follow-on labs)
- Authored 3 first-author papers and 4 co-author publications, including 1 in Nature Communications
- Mentored 2 PhD students and 4 rotation students through cloning and NGS library prep

Graduate Researcher

Sep 2017 - Aug 2022

Stanford University - Department of Genetics

Stanford, CA

PhD on transcriptional regulation in stem-cell differentiation.

- Defended a 5-chapter thesis combining qPCR, ChIP-seq, and ATAC-seq on iPSC-derived neurons
- Generated 28 stable knock-in lines and 14 reporter constructs
- Won the Stanford Bio-X graduate fellowship for years 3-5

SKILLS

- CRISPR-Cas9 / Cas13
- PCR / qPCR
- Illumina NGS Library Prep
- Benchling / SnapGene
- Bioconductor / R
- Python (scanpy, scikit-bio)
- Cell Culture (iPSC, K562)
- Statistics for Biology

CERTIFICATES

ASCB Member in Good Standing

2022

American Society for Cell Biology

Biosafety Level 2 Certified

2023

Broad Institute EHS

AWARDS

HHMI Hanna H. Gray Fellowship

2024

Howard Hughes Medical Institute

Selected as one of 25 fellows nationally.

Stanford Bio-X Graduate Fellowship

2019

Stanford University

HOBBIES

Open-source bioinformatics

Brazilian jiu-jitsu