Soobin Lim

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Education & Honors

University of California, Los Angeles — Los Angeles, California
Bachelor of Science: Biochemistry — Sep 2022 — Jun 2026

Dolores Cannon Southam Commencement Award — University of California, Los Angeles

- Selective honor recognizing outstanding research contributions and academic excellence among graduating seniors in Department of Chemistry and Biochemistry

RESEARCH EXPERIENCE

Tinoco Lab, Department of Chemistry and Biochemistry, UCLA — Los Angeles, California
Research Associate - Gut Virome & Metabolic Genomics — Sep 2025 — Present

- **Python/BLASTP pipeline:** built a screening workflow to identify phage-encoded bile salt hydrolases in gut phage database; prioritized high-confidence candidates by filters including viral genome quality, catalytic-residue conservation.
- **Genetic Knockout Strategy:** identified Bile Salt Hydrolase-negative host strains and designed an endogenous BSH knockout using prophage mapping software to separate host and phage contributions to bile-acid metabolism.
- **LC-MS metabolomics and protein biochemistry:** Developing paired LC-MS and RNA-seq analyses with phage-induction and infection assays to quantify effects on host gene expression and bile-acid metabolism.

HUM GEN 199 - Epigenetic Aging in the Human Brain — Los Angeles, California
Primary Research Assistant — Mar 2025 — Jun 2025

- **DNA methylation analysis:** analyzed human brain profiles from mid-gestation through adulthood to define developmental and age-associated methylation trajectories across neuronal and glial cell type.
- **Differential methylation analysis:** identified age-associated CpG sites and differentially methylated regions shared across life stages and brain regions, prioritizing loci implicated in neurodevelopmental and neurodegenerative pathways.
- **Epigenetic clock modeling:** built and cross-validated a region-specific Python model to quantify deviations from expected brain age and explore potential associations with disease risk.

Luo Lab, Department of Human Genetics, UCLA — Los Angeles, California
Undergraduate Researcher - Spatial & Single-Cell Epigenomics — Aug 2024 — Jun 2025

- **Spatial epigenomics:** applied pi-seq-based workflows to mouse and human brain tissue, including tissue processing, permeabilization, in situ ATAC-seq, scRNA-seq, DNA methylation library preparation, and quality control.
- **Single-cell and spatial analysis:** analyzed datasets in Python using UMAP, Leiden clustering, and neuronal/glial marker annotation to resolve cell populations.
- **Regulatory Mapping:** mapped spatial gradients of gene expression and chromatin accessibility across cortical layers, relating cell-type-specific regulatory elements to brain structure and developmental trajectories.

SKILLS

- **Cell & Molecular Biology:** Mammalian cell culture; cell viability and apoptosis assays; DNA/RNA extraction and quantification; PCR/qPCR; immunofluorescence; confocal microscopy; flow cytometry/FACS; Western blotting
- **Genomics & Epigenomics:** Single-cell and spatial genomics; ATAC-seq; scRNA-seq; DNA methylation library and NGS library prep; library QC; gene expression analysis; genetic knockout protocol development assays
- **Computational:** Python; pandas; NumPy; scikit-learn; conda; matplotlib; single-cell and spatial analysis; UMAP; Leiden clustering, cell-type annotation; read alignment and QC; regression and cross-validation

Industry Experiences

Deloitte Singapore — Singapore, Singapore
M&A Corporate Finance Summer Analyst - Biotech/Healthcare market landscape and data — Jul 2025 — Sep 2025

- Analyzed biotech and healthcare market landscapes and company data to support M&A evaluation.

Deloitte Korea — Seoul, South Korea
Brand Strategy&Market Consulting Intern - IVF/consumer health analysis — Jun 2023 — Aug 2023

- Analyzed IVF and consumer-health markets to inform brand strategy and market recommendations.