

# Anthony Neil Tan

213-268-6986 • anthonyneil.tan@berkeley.edu • <https://www.linkedin.com/in/aneiltan/>

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## PROFESSIONAL AND TECHNICAL EXPERIENCE

**Counter Culture Labs (member-based 501(c)3 community biology laboratory)** March 2025 – present  
*President and Board Member* Oakland, CA

- Oversaw institutional partnerships, grant proposals & budgets, compliance with biosafety regulations
- Established Bay Area community bio relationships to strengthen resource availability and project support
- Built lab infrastructure for three new project divisions: plant biology, aquatic biology, and cell culture

**Self-Employed Independent Scientist** June 2024 – present  
*Wet-Lab Biology Instructor / Independent Projects* San Francisco Bay Area, CA

- Taught over 30 classes on self-made wet-lab biology workshops and handled all business operations; lectured at Berkeley City College; courses offered include CRISPR Precision Gene Editing, Plant Genetic Engineering, DNA Molecular Biology, Bioreactor Fundamentals; workshops net revenue to date over \$28k
- Consulted startups on how to operate lab equipment, improve lab workflows, and design experiments
- **Stealth startup project:** Genetically engineered plants with plans for commercialization; vector design, cloning, agrobacterium-mediated transformation, plant tissue culture and regeneration

**USDA Plant Gene Expression Center – Dr. Fletcher Lab** May 2024 – September 2024  
*Research Assistant* Albany, CA

- Investigated regulatory roles of CLE signaling peptides among various several transcriptional regulators in *Arabidopsis* shoot and floral meristem activity; grew dozens of mutant genotypes for phenotypical analysis
- Identified noteworthy mutants with enlarged meristem by screening specimens with confocal microscopy

**SURF Rose Hills Independent Research Scholar** January 2023 – May 2024  
*Researcher on In-vivo elicitation of QS-21 in Quillaja Saponaria* UC Berkeley College of Letters & Science, CA

- Studied how abiotic factors (UV-C radiation and jasmonic acid foliar application) elicit QS-21 saponin production in *Q. Saponaria*; designed UV-C radiation setup and jasmonic acid foliar spray formulation
- Travelled to Chile to learn best growing practices and validated the viability of *Q. saponaria* in hydroponics
- Planted hundreds of seeds from 23 Chilean trees for use as in-vivo saponin elicitation subjects. Transferred saplings to private greenhouse for future experimentation after 2+ years of biomass accumulation

**Joint BioEnergy Institute Plant Biosystems Design Division – Dr. Shih Lab** June 2022 – December 2022  
*Plant Genetic Engineering Assistant for PhD Candidate Matthew Szarzanowicz* Berkeley, CA

- Tackled the problem of plant recalcitrance to genetic engineering and regeneration by inserting Plant Developmental Regulators into model organisms to develop a more effective genetic engineering protocol
- Created written protocols on Benchling for plant genetic engineering and molecular cloning techniques
- Designed 12 plasmid vectors with SnapGene and performed cloning & plant tissue culture experiments

**Soapbark Tree Vaccine Adjuvant Project – Dr. San Martin Lab** August 2021 – June 2022  
*Project Manager for the Plant Biology Division* UC Berkeley Oxford Tract Greenhouse, CA

- Developed a robust seed sorting and planting SOP for the soapbark tree and increased work output by 30%
- Researched how to elicit saponin production in the soapbark trees to be harvested for vaccine adjuvants
- Recruited four assistants and led our effort in planting 8,500 trees in four months

**New Age Meats (cell-based meat startup)** February 2021 – August 2021  
*Bioengineering Intern* Berkeley, CA

- Developed a novel attachment and growth process for our cell culture workflows to improve the baseline biomass output of our in-house bioreactor systems by over 20% and authored SOPs for new-hires
  - Developed a user-friendly metabolite database to provide detailed monitoring of cell culture nutrients
  - Implemented a relational-database management system for cell data, saving 60% time spent documenting
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## EDUCATION

**University of California Berkeley Bachelor of Science: Bioengineering**  
*Core Competencies: Plasmid Design, Molecular Cloning, Plant Genetic Engineering, Plant Tissue Culture*