Wilton T. Lam

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QUALIFICATION SUMMARY

- 5+ years of research experience in biochemistry and chemistry
- Developed novel methodologies for multi-step complex total syntheses of lipid mediators
- Proficient in compound characterizations using analytical chemistry techniques: Liquid chromatography-mass spectrometry (LC-MS), NMR spectroscopy, UV-visible spectroscopy, infrared (IR) spectroscopy
- Familiar with structural-activity relationship computational software, programming, machine learning: Schrödinger, Molsoft, Python, Java, C++
- Familiar with biochemistry and molecular biology: Polymerase chain reaction (PCR), cloning, protein expression, site-directed mutagenesis, fast protein liquid chromatography (FPLC)
- Proficient in verbal and written communication: Signals electronic laboratory notebook, ChemDraw, MS office w/VBA

EDUCATION

Ph.D., Organic Chemistry, University of Southern California, Los Angeles, CA — Dec 2020 expected
Adviser: Nicos A. Petasis
Dissertation title: Total synthesis of sulfido-conjugate lipid mediators

M.S., Computer Science (Data Science), University of Southern California, Los Angeles, CA — Dec 2020 expected

B.S., Biochemistry/Chemistry, minor concentration: Mathematics, University of California San Diego, San Diego, CA — Mar 2015
Adviser: Patricia A. Jennings
Undergraduate research: The NEET family of iron/sulfur proteins
Graduated *magna cum laude* (GPA 3.87/4.00)

RESEARCH EXPERIENCE

Research Associate, University of Southern California, Department of Chemistry — Aug 2015–present

- Synthesized 4 families of stereochemically pure omega-3 fatty acid pro-resolving mediator metabolites and their isotopic/isomeric analogs
- Evaluated and confirmed the purities of products by LC-MS, NMR and UV-Vis

Undergraduate Researcher, UCSD Department of Chemistry and Biochemistry — Apr 2014–May 2015

- Created a phosphomimetic mutant of mitoNEET (CISD1) protein as well as performed experiments to investigate the effects

WORK EXPERIENCE

Teaching Assistant, University of Southern California, Department of Chemistry — Aug 2015–May 2016

- Led undergraduate organic chemistry laboratory classes of up to 25 students on a TA team
- Directed the preparation of chemicals and apparatus

Math Tutor, El Camino College, Department of Mathematics — Aug 2011–May 2013

- Trained students in understanding mathematics by clarifying abstract concepts via one-on-one tutoring

AWARDS & HONORS

- Gilead Ph.D. Fellowship (USC): $35,000 annual top-up fellowship for 5 years — Feb 2015
- Muir Caledonian Society Inductee (UCSD): for Muir students who reach senior status with a 3.80 GPA — Nov 2014

VOLUNTEER EXPERIENCE

- Bioscience Talent Connection event volunteer, BCLA, University of Southern California — Feb 2018
  - Contributed with the BCLA team for setting up the event
- National Chemistry Week booth staff, California Science Center — Oct 2017
  - Demonstrated simple chemical experiments to around 100 school children

SELECTED PUBLICATIONS AND PRESENTATIONS (3 POSTERS/2 TALKS IN ADDITION)

- Maresin Conjugates in Tissue Regeneration Protect Mice from Post-influenza Pneumococcal Pneumonia by Modulating Macrophage Phenotype, Tavares, L.P. *et al.* **Lam, T.F.**, Petasis, N.A., Levy, B.D. *Mucosal Immunology*, Under Review.
- Total Synthesis of DHA-Derived Epoxides and their Tissue Regenerative Sulfido-conjugates, **Lam, T.F.**, Nshimiyimana, R., Petasis, N.A. 257th ACS National Meeting & Exposition, San Diego, CA, USA, Aug 2019, ORGN-131.