

Aaron J Lim

Undergraduate Student | Chemical Biosciences

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| Education | Bachelor of Science in Chemical Biosciences University of Oklahoma, Expected 2027 GPA: 3.94 High School Diploma Edmond North High School / Westmoore High School GPA: 3.98 ACT: 34 | 2023– Present 2019–2023 |
| Research Experience | HST Harvard–MIT Summer Institute in Biomedical Optics Research Intern Harvard Medical School and Massachusetts General Hospital – Wellman Center for Photomedicine / Supervisor: Dr. Tayyaba Hasan, PhD Project: Photodynamic priming in pancreatic cancer models using red-light-based photodynamic therapy (PDT); assisting on additional projects exploring immune modulation and antimicrobial applications of PDT Honors Research Assistant (HRAP) University of Oklahoma – Department of Chemistry & Biochemistry / Supervisor: Dr. Yuanning Feng, PhD Project: Design, synthesis, and characterization of organic NIR-absorbing donor-acceptor cocrystal phototherapeutic nanoparticles UROP Research Assistant | Summer 2025 2024– Present 2025– Present |
| List of Publications #Equal Contribution | 4 Lim, A. J.; Shibu, S.; Aslam, S. <i>Scholars Walk Revival Resolution, CR-113-06 / GS25-22</i> . University of Oklahoma Student Government Association. Passed by Undergraduate Congress and Graduate Senate; Signed by SGA President, April 2025 . 3 Huang, J. Y.; Yu, H.; Lim, A. J.; Feng, Y.* Homochirality and Self-Replication Promoted by Supramolecular Recognition. <i>Beilstein J. Org. Chem.</i> 2025 , Under Review. 2 Lim, A. J.; Littlefield, K. P.; Alkalani, Z.; Feng, Y.* Synergistic Cancer Photoimmunotherapy by Harnessing Near Infrared-Activated Nanoparticles Containing Charge Transfer Complexes. <i>Angew. Chem. Int. Ed.</i> 2025 , 64, e202423550. (IF: 16.9; 5 citations) 1 Ou, C.#; Lv, J.#; Lim, A. J.; Guo, Q.-H.*; Feng, Y.* A Light-Driven Chloride Anion Transporter. <i>Chem</i> 2024 , 11, 2940–2942. (IF: 19.6) | |
| Peer Review Experiences | 2 ACS Materials Letters / tz-2025-00638j ACS Publications / Deputy Editor: Hongcai Zhou 1 Science China Materials / SCMS-2025-0224 Springer / Associate Editor: Xuesi Chen | 2025 2025 |

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| Awards | 9 Best Oral Presentation Award – HST Harvard–MIT Summer Institute in Biomedical Optics Program | 2025 |
| | Awarded at the conclusion of the program's poster symposium, selected from a cohort of 39 summer interns at the Wellman Center for Photomedicine | |
| | 8 Honors Research Assistant Program | 2025 |
| | \$1000 awarded; 1 of 25 students selected each semester for competitive program | |
| | 7 Dodge Family Academic Scholar Award | 2025 |
| | \$3000 awarded to top 5 students in the Dodge Family College of Arts and Sciences for exceptional research across 30 departments | |
| | 6 Undergraduate Research Opportunities Program (UROP) Grant | 2025 |
| | \$1000 awarded to lead independent research project: "Skin Infections and Hygiene Practices in Oklahoma High School Wrestlers: A Cross-Sectional Survey." | |
| | 5 President's Award for Outstanding Sophomores at the University of Oklahoma | 2025 |
| | Awarded to top 15 (0.29%) sophomore undergraduate students | |
| | 4 Dr. Floyd E. Farha Excellence in Chemistry Scholarship Award | 2025 |
| | \$1000 awarded to 1 exceptional student in Department of Chemistry and Biochemistry at the University of Oklahoma | |
| | 3 Herbert A. and Lela Mitchell Berlin Endowed Scholarship Award | 2025 |
| | \$1800 awarded to exceptional students from the College of Arts and Sciences | |
| | 2 Pace Award at the University of Oklahoma | 2024 |
| | Awarded to top 1% of freshman undergraduate students | |
| | 1 Best Undergraduate Poster Award at the 2nd Annual Department Research Showcase | 2024 |
| | Department of Chemistry and Biochemistry at the University of Oklahoma | |
| Leadership and Service | 12 Founder/CEO of PhotoMedX – Translational Photomedicine Startup | 2025– Present |
| | <ul style="list-style-type: none"> Invented and developing nanocrystal-based platforms for photoimmunotherapy (PIT) and cancer theranostics Disclosed to the University TTO; planning synthesis and characterization with transition to in vitro testing | |
| | 11 Chair-Elect President, Chemistry Club (100+ members) | 2025– Present |
| | <ul style="list-style-type: none"> Organized events including guest speakers and workshops for summer internships, industry jobs, graduate school application, research opportunities, biotech entrepreneurship, and more | |
| | 10 Co-Founder/Co-Chair of Healthcare Affordability Policy Coalition (HAPC) | 2025– Present |
| | <ul style="list-style-type: none"> Organizing annual advocacy day for students and volunteers to meet with legislators on healthcare affordability policies Mobilizing students and legislators to advance healthcare affordability policies through coordinated advocacy | |
| | 9 Policy Analyst, Social Equity Action Lab (SEAL) | 2025– Present |
| | <ul style="list-style-type: none"> Selected to join policy initiative providing health briefs for the New Jersey gubernatorial race | |
| | 8 Founder/Organizer of Pre-Med Speaker Series | 2025– Present |
| | <ul style="list-style-type: none"> Established monthly Zoom event connecting premedical students with MD and PhD trainees (guest speakers from Harvard Medical School) Reached 70+ student sign-ups within the first 24 hours of launch | |

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| 7 Student Representative, University Libraries Student Advisory Council | 2025– Present |
| <ul style="list-style-type: none"> Selected as 1 of 2 student representatives from OU's largest college (~35% of student body) to advise library administration on policies, services, and new initiatives while communicating student needs | |
| 6 Academic Integrity Council Associate | 2025– Present |
| <ul style="list-style-type: none"> Adjudicate academic misconduct cases and educate peers on the Academic Integrity Code as part of a selective 50+ member council with a 25% acceptance rate | |
| 5 Student Government Association Congress Associate (100+ members) | 2025– Present |
| <ul style="list-style-type: none"> Authored and led legislation to revive the Scholars Walk project honoring nationally competitive scholarship winners | |
| 4 Medical Device Make-A-Thon Competition Team Captain | Spring 2025 |
| <ul style="list-style-type: none"> Led engineering team for medical device development competition hosted by the Stephenson Department of Biomedical Engineering | |
| 3 President/Founder, OU Cooking Club (350+ members) | 2024– 2025 |
| <ul style="list-style-type: none"> Founded and expanded the first culinary-focused student organization, securing partnerships and organizing large-scale events | |
| 2 Treasurer, Korean Student Association (100+ members) | 2024– 2025 |
| <ul style="list-style-type: none"> Maintained accurate financial records, secured \$3000 in student government funding, and processed reimbursements | |
| 1 Founder / Corresponding Secretary / Head Recruitment / Homecoming Chair, Phi Kappa Psi Fraternity | 2023– 2024 |
| <ul style="list-style-type: none"> Led re-establishment of chapter presence through alumni coordination and recruitment initiatives Recruited students across campus to rebuild chapter membership, growing from 1 to 25+ active brothers | |

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| Work Experience | Certified Nursing Assistant (CNA) at St. Anthony Bone and Joint Hospital | 2024– Present |
| | <ul style="list-style-type: none"> Assisted patients with daily activities, including toileting and mobility Monitored and recorded vital signs (EPIC system) Prepared patient rooms, helped with admissions, delivered meals, disposed of waste, and supported nurses with direct patient care 150+ hours | |

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| Poster Presentations | 1 Lim, A. J.#; Mooradian, M.#; Haresh, P.#; Cabral, F.#; Hasan, T.* Photodynamic Modulation of Stellate Cell Differentiation in a 3D Organoid Model of Pancreatic Cancer <ul style="list-style-type: none"> Presented at the poster symposium, HST Harvard-MIT Summer Institute in Biomedical Optics Program (August 2025) Presented at the 3rd Annual Department Research Showcase, Department of Chemistry & Biochemistry, University of Oklahoma (September 2025) 2 Mason, S. A.#; Lancaster, J. B.#; Lim, A. J.#; Feng, Y.* Characterizations of Alkoxy-Substituted Quadrupolar Fluorescent Dyes <ul style="list-style-type: none"> Presented at the American Chemical Society (ACS) Southwest Regional Meeting (October 2024) Presented at the 2nd Annual Department Research Showcase, Department of | |
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Conferences Attended 1 **American Chemical Society (ACS) Southwest Regional Meeting**

October 2024 / Waco Convention Center / Waco / Texas / United States

Skills and Techniques

- Fluent in English and Korean
- Proficient in ChemDraw, MestReNova, Microsoft Office Suite, and scientific presentations
- Experienced in research grant writing and peer reviewing manuscripts
- Skilled in organic synthesis and chemical characterization techniques, including microwave synthesis, flash chromatography, NMR spectroscopy, and UV-Vis spec
- Skilled in cell culturing techniques, including PDAC organoid passaging, 96-well spheroid culture, single-cell suspension, immunohistochemistry (IHC), immunofluorescence, confocal microscopy, FACS analysis, Operetta imaging, and cell viability assays; experienced in photodynamic therapy (PDT) experiments

Volunteering Experiences

- **SSM Health Hospice** 2025–Present
- **Emergency Medical Services (EMS) Stretcher Team for Football Games** 2023–2024

Shadowing Experiences

- **Dr. Yakir Levin**, MD, PhD – Assistant Professor and Dermatologist, Massachusetts General Hospital (Boston, MA, USA) 8 Hours
- **Dr. Jonah Rubin**, MD – Pulmonology & Critical Care, Massachusetts General Hospital (Boston, MA, USA) 4 Hours
- **Dr. Chul-Ho Kim**, MD, PhD – Chief Professor & Clinical Chair, Otorhinolaryngology (ENT), Head & Neck Cancer Center, Ajou University Hospital (Suwon, South Korea) 32 Hours
- **Dr. Joong-Dae Kim**, MD – Hospital Director, Burn Clinic, Daejeon Hwa Hospital (Daejeon, South Korea) 8 Hours

Relevant Coursework

Completed: Organic Chemistry 1 and 2, Physics 1 and 2, Genetics, Microbiology, Introduction to Biochemistry, and Molecular Biology

Current: Pathogenic Microbiology and Infectious Diseases, Introduction to Public Health and Community Health, and Health Data and Statistics

Professional Memberships

- **American Medical Student Association (AMSA)** 2025–Present
- **American Chemical Society (ACS)** 2024–Present

Personal Interests

- Cooking (specializing in Neapolitan pizza)
- Music: classical piano, flute, and trumpet performance
- Competitive wrestling (Folkstyle/Freestyle/Greco-Roman)
- Cowboy marksmanship sports and recreational fishing

Professional Reference

Dr. Yuanning Feng | Assistant Professor / Research Supervisor
Department of Chemistry and Biochemistry / University of Oklahoma
Email: yf@ou.edu