

Reem Barakji

Beirut, Lebanon • reem.barakji@lau.edu • +96176040669

EDUCATION

Lebanese American University-LAU | Beirut, Lebanon

Expected Graduation May 2026

Bachelor of Science in Biology

Awarded a highly competitive full merit and leadership scholarship (MEPI Tomorrow's Leaders Program) funded by the US Department of State.

CGPA: 3.28

James Madison University-JMU | Harrisonburg, Virginia, USA

Study Abroad Program – Spring 2025

Jan 2025 – May 2025

Selected to participate in semester long international exchange program at JMU

Galilee Secondary School | Beirut, Lebanon

July 2023

Lebanese Baccalaureate (Life Science) - Score: 17.55/ 20

RESEARCH EXPERIENCE

LAU Undergraduate Research and Discovery Program, Research Assistant | Beirut, Lebanon May 2025 – Present

- Investigate the teaching effectiveness of several instructional approaches in undergraduate biology courses by analyzing learning outcomes and students' perceptions.
- Perform quantitative analysis using SPSS to assess the feedbacks of the different teaching strategies.
- Contribute to the preparation of research intended for academic publication.

ToRead, Research and Co-Design Intern | Beirut, Lebanon

Jun 2025 – Oct 2025

- Led the design, planning, and organizing of Takadam 2.0 hackathon with 30 participants, generating innovative solutions for the enhancement of platform user engagement.
- Conducted data analysis and research to support the improvement of the Takadam platform.
- Coordinated with participants and potential stakeholders for a successful implementation and follow up of project outcomes.

MedisPharm, Medical Research Intern | Beirut, Lebanon

Jun 2025 – Aug 2025

- Conducted research on various disease mechanisms, causes, and pharmacological treatment, elevating my knowledge in therapeutical and clinical applications.
- Analyzed medical databases and enhanced the workflow efficiency within the medical department.
- Organized the scientific information, supporting knowledge management.

PROFESSIONAL EXPERIENCE

AIIESEC, Research and Outreach intern | Beirut, Lebanon

Oct 2025 – Present

- Conduct research and interpret data to support project development and impact assessment within the organization.
- Lead the outreach with potential partners to strengthen collaborations aligned with the United Nations Sustainable Development Goals.

Al Naqab Center for Youth Activities | Beirut, Lebanon

Sep 2025 – Present

- Delivering Biology and Chemistry tutoring sessions to high school students, enhancing understanding of academic concepts.
- Utilized diverse teaching methods to address different students learning needs while improving engagement and academic performance.

ACADEMIC PROJECTS

ResistED: MEPI Capstone Project

Aug 2025

- Developed ResistEd: a MEPI capstone project addressing antimicrobial resistance in Lebanon through a research and impact-oriented approach.
- Conducted analysis on antimicrobial resistant strains of *E. coli*, examining causes and public health impact while identifying the gaps in awareness and intervention strategies.
- Designed an impact-driven solutions and stakeholder-based recommendations addressing healthcare practices, awareness and community education.

Immune-Evasive Pancreatic Organoid via CRISPR-Edited Exosome Signaling **Nov 2025**

- Proposed a conceptual research framework integrating CRISPRs-edited exosome signaling with pancreatic β -organoid to address immune rejection in Type 1 diabetes.
- Conducted literature analysis on gene editing, exosome biology, and organoid engineering to develop an innovative therapeutic approach.
- Designed a multi-stage experimental model outlining methods for immune modulation, including CRISPR editing, exosome integration, and immune culture systems.

Protein Structure Analysis *ChimeraX* **Oct 2025**

- Conducted structural analysis of deoxygenated hemoglobin, examining the role of key amino acid residues (notably histidine) in protein structure–function relationships.
- Utilized ChimeraX for molecular visualization, residue interaction analysis, and structural interpretation.
- Produced a scientific report with publication-quality figures and structural illustrations generated using ChimeraX.

VOLUNTEERING & LEADERSHIP EXPERIENCE

UN SDG Brain Lab V5.0 | Lebanon **Oct 2025 – Present**

- Completed training in sustainability, governance, and social entrepreneurship delivered by the UN Global Compact Network in Lebanon.
- Engaged in sessions covering problem identification, solution development, and business model design.
- Applied acquired knowledge through participation in the Fair-Trade Innovation Challenge, addressing youth disengagement in agriculture in Lebanon.
- Collaborated within a team to design sustainable solutions integrating Fair Trade principles and revenue-generating models.

MMKN, Volunteer Tutor | Beirut, Lebanon **Oct 2025 – Present**

- Delivered remote tutoring sessions in physics and biology to support high school students' academic performance and understanding.
- Provided guidance and study strategies to improve problem-solving skills and exam readiness.

AIIESEC, Team Leader | Beirut, Lebanon **Aug 2025 – Present**

- Led a team of 8 members to plan and execute community-impact projects.
- Coordinated communication and collaboration to achieve project objectives efficiently.
- Developed initiatives promoting leadership, cross-cultural exchange, and active community engagement.

Beirut Erasmus International Club, Coordination Team Member | Beirut, Lebanon **Aug 2025 – Present**

- Coordinated and organized youth led events promoting cultural exchange.
- Established partnerships and supported Erasmus exchange participants in adapting to social and academic life.

JMU Alternative Spring Break Program, Counselor | Camp Royall, North Carolina, USA **March 2025**

- Engaged in a week-long community service experience at Camp Royall, a program under the Autism Society of North Carolina.
- Served as a dedicated counselor for a camper with autism, assisting with daily activities and ensuring a supportive, inclusive environment.

- Collaborated with fellow JMU volunteers to promote social inclusion and adaptive learning experiences for neurodivergent campers.

Talia Charity, Team Leader | Beirut, Lebanon

Dec 2023 – Jan 2024

- Led a team of 5 volunteers to design and implement community outreach initiatives supporting underserved populations.
- Coordinated logistics, tasks distribution and on ground operations to ensure efficient delivery of charitable services.
- Organized donations outreach events improving community support.

Nation Station Association, Outreach | Achrafieh, Lebanon

Oct 2023 - April 2024

- Conducted research to identify potential funding sources for workshops under the "Muruna" project.
- Assisted in developing a sales plan for products made by women participating in the workshops.
- Engaged with stakeholders to secure funding and support for the project.

PROGRAMS & INTERNATIONAL EXPERIENCES

World Learning, Experiment Digital Participant | Virtual Exchange

Jun 2022 – Aug 2022

- Participated in cross cultural virtual focused on global collaboration and leadership.
- Developed a project addressing climate change issue in Lebanon through impactful solutions.

New York Academy of Science, Junior Academy Participant | Virtual Exchange

2021 – 2022

- Collaborated with an international team on STEM related research project addressing global challenge.
- Established a project on COVID 19 vaccination misconceptions and promoting awareness.

CERTIFICATES & TRAININGS

- Adaptive Leadership Certification - Harvard based methodology (42 hours training)
- Cancer Biology Certificate – Johns Hopkins University (via Coursera)
- CITI Program Biomedical Research Training – Certified in research ethics and compliance.
- The first aid training and life-saving techniques – Training with Barbish Institution
- BUS 305: Leadership in Public and Private Sectors

SKILLS

- Statistical Analysis: SPSS
- Laboratory techniques: PCR, microscopy, electrophoresis
- Research Skills: data analysis, scientific writing
- Tools: Microsoft office, ChimeraX

LANGUAGES

- Arabic – Native
- English – fluent
- French - Intermediate