SUKHMANPREET **KAUR**

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Summary

Biology researcher with a strong focus on molecular and cellular biology. Currently conducting independent research at CSUSB on the influenza virus and contributing to microalgal biomass research at UCR. Passionate about scientific discovery and pursuing a future career as a professor in the biological sciences.

Education and Training

Open University for Biological Sciences **Jan 2025 - Present**
California State University, San Bernardino *(Pursuing MS Biology)* San Bernardino, CA
Bachelor of Science: **Biology** **05/2023**
Guru Nanak Dev University *(Graduated with Distinction)* India

Skills

Molecular & Cellular Biology Techniques: Cell culture and maintenance, cell counting (manual & automated), cryopreservation, freezing/thawing cells, RNA extraction and purification, qRT-PCR, gel electrophoresis, cDNA synthesis / reverse transcription plasmid construction, BSL-2 practices (PPE, decontamination, virus handling)
Microscopy & Instrumentation: Light and fluorescence microscopy, inverted and compound microscopes, NanoDrop 2000, Bio-Rad TC20 Automated Cell Counter
Field & Ecological Skills: Plant species identification, plant conservation data collection, GPS/GIS for land and vegetation monitoring
Research & Professional Skills: Scientific communication, collaboration, problem-solving, accurate data recording, attention to detail
Software & Data Tools: NanoDrop software, Image Lab, Microsoft Office Suite, Google Workspace, basic data analysis

Experience

Undergraduate Research – Department of Ecology, and Organismal Biology at UCR **06/2025 to Current**
Riverside , CA
- Processed ~155 river water samples to assess microalgal biomass in the Santa Ana River.
- Identified and counted ~23,000 algal cells using 40× microscopy and hemocytometer analysis.
- Measured algal cell size and maintained organized sample records for biomass analysis.

Independent Researcher – Molecular Virology CSUSB **09/2025 to Current**
- Investigating NP-peptide inhibition of influenza A viral mRNA in A549 cells.
- Performing BSL-2 viral infection assays using MOI-controlled inocula and stable GFP/NP-peptide cell lines
- Extracting and evaluating RNA quality with Trizol, NanoDrop metrics, and bleach agarose gels.
- Conducting cDNA synthesis and SYBR-based qRT-PCR to quantify viral gene expressionPerforming BSL-2 viral infection assays using MOI-controlled inocula and stable GFP/NP-peptide cell lines

Minerva Hoyt Internship – Joshua Tree National Park 🖇 **01/2024 to 05/2025**
Joshua Tree, CA
- Performed data collection on various plant and animal species within the confines of JNTP
- Enhanced accuracy in data entry, ensuring well-organized records.
- Collected necessary details for research endeavors and documentation.
- Engaged in educational programs to enhance conservation and environmental awareness
- Collaborated with Joshua Tree National Park employees in Science and Resource Stewardship Division.

Science Tutor (**Self-employed)** **06/2023 to 07/2024**
Gurdaspur, Punjab
- Instructed a diverse group of 12 high school students in Chemistry and Biology.
- Assessed student mastery through tests, quizzes, and hands-on experiments.
- Clarified complex science with visuals, analogies, and real-world examples.

Volunteer

Volunteer / Mojave Desert Land Trust (MDLT) - Joshua Tree, CA
- Assisted with land conservation projects, including habitat restoration and invasive species removal.
- Participated in educational programs and community outreach initiatives to promote environmental awareness.
- Conducted field surveys and data collection to support ongoing research and conservation efforts.
- Collaborated with park rangers and staff on various projects to preserve the natural and cultural resources of the park.

Accomplishments

- Minerva Hoyt Intern 2025: Selected in a competitive internship program focused on plant conservation and research
- Featured artist in the 2025 edition of HOWL Magazine. Awarded for excellence in visual art by Copper Mountain College
- University Youth Festival 2022 and 2023: Awarded third place for outstanding performance in painting flora
- Mohindra Pride 2022: Awarded for outstanding public speaking
- Biological Society Flower Show 2023: Recognized for innovative representation of fossilized plants

Personal Interests

- Hiking and Nature Exploration • Reading and Research • Volunteering • Nature Journaling • Art and Illustration • Singing