YAO XIANG

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SUMMARY

Bioinformatics undergraduate with a computational focus on biological data analysis and modeling. Experience in Python and R, independent computational biology projects, and first-author research exposure, with growing interest in structure-based computational drug discovery.

EDUCATION

UNIVERSITY OF CALIFORNIA, SAN DIEGO
Bachelor of Science, Biology w/Spec Bioinformatics   **Expected Jun. 2029**

CHENGDU NO.7 HIGH SCHOOL INTERNATIONAL DEPARTMENT
                                                                                                                    Jun. 2025
- GPA: 4.0/4.0
- A-Level: Biology: A*, Chemistry: A, Mathematics: A
- IELTS: Overall 7.5 (Listening 8.5, Reading 8.0, Writing 6.5, Speaking 6.5)

EXPERIENCE

INSTITUTE OF CLINICAL PATHOLOGY AT WEST CHINA HOSPITAL, SICHUAN UNIVERSITY, P.R.C.

                                                                                                                    Jul. 2023 – Aug. 2023
Intern
- Assisted with proteomic workflow using Proteome Discoverer
- Prepared tissue samples using microtome under supervision of technician.
- Helped with basic tasks during a liver perfusion and disassociation experiment of rat, learning workflow and experiment protocols.
- Measured and evaluated hepatic spheroid suspensions using a Coulter Counter and recorded quality-control data.
- Reviewed literature on bioartificial liver technologies, summarizing limitations and challenges of current major approaches

PUBLICATION

A meta-analysis of efficiency of traditional Chinese medicine concerning physical recovery in COVID-19
DOI: 10.54254/3029-0821/2/2024014
                                                                                                                    Sep. 2023 – Sep. 2024
First Author
- Reviewed and summarized 48 peer-reviewed studies on TCM and SARS-CoV-2 infection.
- Critically evaluated the efficacy of four major TCM drugs in comparison with conventional medicines for COVID-19.

SKILLS & ACTIVITIES

- Certification in Coursera
  - Python for Data Sciences, AI & Development
  - Applied Bioinformatics Specialization
- Experience in Python, R, JavaScript, HTML.
- Implemented a third-order Markov model in Python to evaluate protein-coding potential of DNA sequences (GitHub).
- Built an R-based simulation of data analysis workflow using ggplot2 (GitHub).
- Experience with NCBI databases (GenBank, BLAST) and the Galaxy analysis platform.
- Basic wet-lab skills (buffer and tissue preparation)
- Experience in analyzing genomic and proteomic data using FASTA/FASTQ file formats.
- Gold in British Biology Olympiad 2024, Gold in Cambridge Chemistry Contest 2024
- Founder and former president of Life Science Club at Chengdu No.7 High School.
- Amateur French Horn player, avid hiker, Touhou Project enthusiast.