Lin Yuan

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EDUCATION

Cornell University Sep 2024 - Now
- Ph.D. in Genetics, Genomics, and Development Ithaca, NY
- Under first-year lab rotations with Prof. April Wei, Prof. Jaehee Kim, and Prof. Andrew Clark

The Chinese University of Hong Kong (CUHK) Sep 2019 - Jul 2024
- B.Sc. in Cell and Molecular Biology, First Class Honours Hong Kong SAR
- Stream: Science, Technology And Research (STAR)
- Minor: Computer Science
- Cumulative GPA: 3.854/4.000; Major GPA: 3.944/4.000

University of California, Berkeley Jan 2022 - May 2022
- Berkeley Biosciences Study Abroad (BBSA) Program Berkeley, CA
- Cumulative GPA: 4.000/4.000

University of Toronto (UofT) Sep 2021 - Dec 2021
- Exchange Program between CUHK and UofT (St. George Campus) Toronto, ON
- Cumulative GPA: 4.000/4.000

RESEARCH EXPERIENCE

Population genomics on non-model organisms Apr 2022 - July 2024
Supervisor: Professor Rasmus Nielsen, University of California, Berkeley
- On-site: Apr 2022 - Aug 2022; Remote: Sep 2022 - Jul 2024
- Effect of genomic rescue in Florida *Puma concolor* population: Characterized the population structure, performed global and local ancestry inference, and revealed the inter- and intra-population relatedness
- Color and genetic variation of *Oophaga pumilio* morphs predate the archipelago formation: Identified color polymorphism-related genetic variants with DE analysis, functional annotation and gene-tree plotting, and characterized population structure with 4-pop test

Multi-omics on crustaceans Sep 2022 - May 2024
Supervisor: Professor Ling Ming Tsang, the Chinese University of Hong Kong
- Multi-omics on the herbivory evolution of mangrove crabs: Performed functional annotation and comparative genomic analysis about lignocellulolytic genes of hosts, and revealed microbiota-related herbivory
- Profiled gut microbiota composition and revealed taxon DA and taxon-function correlation in six crab species

Application of human organoids in the environmental monitoring Jul 2023 - Aug 2023
Supervisor: Dr. Wen Liu, Karolinska Institutet
- Reviewed culturing protocols of human colorectal organoids and typical microplastic pollution in the mangrove ecosystem, and formulated the first draft of the research proposal

Single-cell ATAC-seq analysis on mouse microglia May 2021 - Aug 2021
Supervisor: Professor Ting Fung Chan, the Chinese University of Hong Kong
- Performed scATAC-seq analysis with MAESTRO, SnapATAC, and scATAC-pro

Environmental monitoring with remote-sensing techniques Jun 2020 - Aug 2020, Jul 2019 - Aug 2019
Supervisor: Professor Ruili Li, Peking University Shenzhen Graduate School
- Sampled more than 200 mangrove trees from six nature reserves, summarized mangrove diversity assessment approaches, and assisted in conducting UAV-based monitoring
- Developed software for thermal imaging-based insect counting and applied for patents as a co-inventor: CN111066735A, CN111161230A, CN111178354A

PUBLICATIONS

1. Diana Aguilar-Gómez, **Lin Yuan**, Yulin Zhang, Alexander Ochoa, Melanie Culver, Robert Fitak, Dave Onorato, Kirk Lohmueller, Ramus Nielsen. **Genetic rescue of Florida Panthers reduced homozygosity but did not swamp**

ancestral genotypes [under 2nd-round review: PNAS]

2. Diana Aguilar-Gómez, Layla Freeborn, **Lin Yuan**, Lydia L. Smith, Alex Guzman, Andrew H. Vaughn, Emma Steigerwald, Adam Stuckert, Yusan Yang, Tyler Linderoth, Matthew MacManes, Corinne Richards-Zawacki, Rasmus Nielsen. **Evolution and Diversification of the Aposematic Poison Frog, Oophaga pumilio, in Bocas del Toro** [biorxiv]

TEACHING EXPERIENCE

Undergraduate Teaching Assistant of BCHE2030 at CUHK Sep 2022 - Dec 2022
- Held bi-weekly tutorials and Q&A sessions as one of the six TAs for over 270 sophomores taking BCHE2030 (Fundamentals of Biochemistry)

Voluntary Teacher at Yuanfen Community, Shenzhen Oct 2019 - Nov 2019
- Organized weekly voluntary teaching sessions for 40 migrant children as a member of Fujia Shenzhen Lychee Program (CUHK I·CARE Social Service Project)

HONORS AND AWARDS

HKSAR Government Scholarship 2023 - 2024
- Government-funded scholarship (80,000HKD) in recognition of outstanding academic achievements

Kunkle and Pommerenke Full-Tuition Scholarship 2021 - 2022, 2023 - 2024
- College Annual Big Scholarship (42,100HKD), 16 quotas for about 3200 students

Chung Chi College Departmental Prize - Cell and Molecular Biology 2023 - 2024
- Awarded to best academically performed final year student in the class

Chung Chi College Valedictorian Nominee 2023 - 2024

Dean's List (Top 10%), Faculty of Science 2019 - 2020, 2020 - 2021, 2022 - 2023, 2023 - 2024

Hong Kong, China - Asia-Pacific Economic Cooperation Scholarship 2020 - 2021, 2023 - 2024

Summer Research Scholarship: Chung Chi FLY Award 2022 - 2023

Chung Chi College Class Scholarship 2020 - 2021, 2021 - 2022
- Awarded to non-final year student with Top 1 annual academic record per department

Exchange Scholarships: Yasumoto International Exchange Scholarship, HKSAR Reaching Out Award, Chung Chi EYE Award, Faculty Exchange Scholarship 2021 - 2022

HKSAR Talent Development Scholarship 2020 - 2021
- Category: Innovation, Science and Technology

EXTRACURRICULAR ACTIVITIES

Guest Speaker/Student Representative
- School of Life Sciences CMB Chill Club May 2024
- CUHK Information Day Student Sharing (School of Life Sciences) Oct 2023
- CUHK Faculty of Science STARS Briefing Sep 2022
- Mainland Undergraduate Association ELTU1001 Workshop Sep 2020

Committee Member Mar 2021 - Mar 2022
- CUHK Cell and Molecular Biology Class Society 2021

I-Ambassador and Activity Organizer Sep 2020 - Sep 2021
- CUHK Office of Student Affairs i-ambassador Scheme

Assistant Helper Aug 2020 - Sep 2020
- CUHK Mainland Undergraduate Orientation 2020

Gold Medalist Sep 2019
- 50m Breaststroke (Novice Group), CUHK Chung Chi College 51st Aquatic Meet

SKILLS

Languages:
Mandarin (Native), English (IELTS overall 8, TOEFL 112), Cantonese (Conversational)

Wet Lab Techniques:
PCR, western blot, gel electrophoresis, DNA transformation, simple dissection and staining, plate preparation and spreading, DNA/protein extraction, simple cell culture...

Coding Skills:
C/C++, JavaScript/HTML/CSS, LaTeX, Linux Shell, Python, R, SQL/JDBC

Operating Systems:
Linux, Windows, macOS