

Lin Yuan

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EDUCATION

Cornell University - Ph.D. in Genetics, Genomics, and Development - Supervisor: Professor April (Xinzhu) Wei	Sep 2024 - Now Ithaca, NY
The Chinese University of Hong Kong (CUHK) - B.Sc. in Cell and Molecular Biology, First Class Honours - Stream: Science, Technology And Research (STAR) - Minor: Computer Science - GPA: 3.9/4.0	Sep 2019 - Jul 2024 Hong Kong SAR
University of California, Berkeley - Berkeley Biosciences Study Abroad (BBSA) Program - GPA: 4.0/4.0	Jan 2022 - May 2022 Berkeley, CA
University of Toronto (UofT) - Exchange Program between CUHK and UofT (St. George Campus) - GPA: 4.0/4.0	Sep 2021 - Dec 2021 Toronto, ON

RESEARCH EXPERIENCE

Population genetics analyses on recombination and gene conversion <i>Supervisor: Professor April Wei, Cornell University</i> - Simulate and detect gene conversion with human biobank-scale datasets - Infer recombination landscape and perform downstream analyses with pangenome-derived data - Develop scalable methods for genotype imputation with Genotype Representation Graphs	Aug 2024 - now
Evolutionary genomics on non-model organisms <i>Supervisor: Professor Rasmus Nielsen, University of California, Berkeley</i> - On-site: Apr 2022 - Aug 2022; Remote: Sep 2022 - Jul 2024 - Effect of genetic rescue in Florida <i>Puma concolor</i> population: Characterized the population structure, performed global and local ancestry inference, and revealed the inter- and intra-population relatedness - Evolution and diversification of <i>Oophaga pumilio</i> : Characterized population structure and identified color polymorphism-related genetic variants with DE analysis, functional annotation and gene-tree plotting	Apr 2022 - July 2024
Multi-omics on crustaceans <i>Supervisor: Professor Ling Ming Tsang, the Chinese University of Hong Kong</i> - 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	Sep 2022 - May 2024
Application of human organoids in the environmental monitoring <i>Supervisor: Dr. Wen Liu, Karolinska Institutet</i> - Reviewed culturing protocols of human colorectal organoids and typical microplastic pollution in the mangrove ecosystem, and formulated the first draft of the research proposal	Jul 2023 - Aug 2023
Single-cell ATAC-seq analysis on mouse microglia <i>Supervisor: Professor Ting Fung Chan, the Chinese University of Hong Kong</i> - Performed scATAC-seq analysis with MAESTRO, SnapATAC, and scATAC-pro	May 2021 - Aug 2021
Environmental monitoring with remote-sensing techniques <i>Supervisor: Professor Ruili Li, Peking University Shenzhen Graduate School</i> - 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	Jun 2020 - Aug 2020, Jul 2019 - Aug 2019

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 (2025)** [\[PNAS\]](#)
- 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, Kevin J. McGraw, Corinne Richards-Zawacki, Rasmus Nielsen. **Selection-driven color variation in the aposematic strawberry poison frog, Oophaga pumilio (2026)** [\[Current Biology\]](#)

TEACHING EXPERIENCE

- Graduate Teaching Assistant of BIOMG2800 at Cornell** Aug 2025 - Dec 2025
 - TA duty: Held weekly office hours and problem-solving sessions; graded weekly assignments; test-ran, proctored and graded four exams; liaised between instructors and undergrad TAs for course instructional support
- Undergraduate Teaching Assistant of BCHE2030 at CUHK** Sep 2022 - Dec 2022
 - TA duty: 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)

ACADEMIC PRESENTATIONS

- Cornell Life Sciences Open House 2026** Mar 2026
 - Poster Presentation: Pangenome Enhances Recombination Landscape Analyses in a Han Chinese Population

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 awardees selected from 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 Chinese (Native), English (IELTS 8, TOEFL 112), Cantonese (Intermediate), Japanese (N5)

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:

Linux Shell, Python, R, $\text{\LaTeX}$, C/C++, JavaScript/HTML/CSS, SQL/JDBC

Operating Systems:

Linux, Windows, macOS