

# YI-YUAN (IAN) LEE

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## EDUCATION

### Cornell University

Ph.D. in Computational Biology

- Life Sciences Technology Innovation Fellow, 2024
- Cornell CVG Distinguished Scholar, 2024

Ithaca, NY  
Expected 2026

### Carnegie Mellon University

M.S. in Computational Biology, School of Computer Science

Pittsburgh, PA  
May 2020

### National Taiwan University

B.S. in Biochemical Science and Technology

Taipei, Taiwan  
June 2014

## PUBLICATIONS

- **Yi-Yuan Lee** et al., Structurally informed screening of host-microbiome protein-protein interactions. [Manuscript]
- Shao-Chia Lu, **Yi-Yuan Lee**, et al., FastAd: A Versatile Toolkit for Rapid Generation of Single Adenoviruses or Diverse Adenoviral Vector Libraries, Molecular Therapy Methods & Clinical Development, 2024.
- Tzu-Hui Hsu, Yu-Chan Chang, **Yi-Yuan Lee** et al., B4GALT1-dependent galectin-8 binding with TGF- $\beta$  receptor suppresses colorectal cancer progression and metastasis. Cell Death & Disease, 2024.
- **Yi-Yuan Lee** et al., HypoRiPPAtlas as an Atlas of hypothetical natural products for mass spectrometry database search, Nature Communications, 2023.
- Richa Rastogi, Yair Schiff, Alon Hacohen, Zhaozhi Li, **Ian Lee**, Yuntian Deng, Mert R. Sabuncu, Volodymyr Kuleshov, Semi-Parametric Inducing Point Networks and Neural Processes, ICLR poster presentation, 2023.
- Jung-Lin Wu et al., including **Yi-Yuan Lee**, "Phosphoproteomics Reveals the Role of Constitutive KAP1 Phosphorylation by B-Cell Receptor Signaling in Chronic Lymphocytic Leukemia", Molecular Cancer Research, 2022.
- Liu Cao, Mustafa Guler, Azat Tagirdzhanov, **Yi-Yuan Lee**, Alexey Gurevich, Hosein Mohimani, "MolDiscovery: Learning Mass Spectrometry Fragmentation of Small Molecules", Nature Chemical Biology, 2021.
- Michelle et al., including **Yi-Yuan Lee**, "A community resource for paired genomic and metabolomic data mining", Nature Chemical Biology, 2021.
- W.C. Su, S.-F. Hsu, **Y.-Y. Lee**, et al., "A Nucleolar Protein, Ribosomal RNA Processing 1 Homolog B (RRP1B), Enhances the Recruitment of Cellular mRNA in Influenza Virus Transcription", Journal of Virology, 2015.

## PATENT AND AWARD

- Behsaz Bahar et. al, including **Yi-Yuan Lee**, "System for Identifying Structures of Molecular Compounds from Mass Spectrometry Data", U.S. Patent application 20220208540, June 30 2022 (pending)
- Part of the DOE award, "DE-SC0021340: Discovery of Signaling Small Molecules (e.g. quorum sensing molecules) from the Microbiome, PI: Mohimani, Hosein. (2021)".

## RESEARCH AND WORK EXPERIENCE

### Computational Biology Field, Cornell University

Ph.D. Candidate

Sep 2022 - Now  
Prof. Ilana Brito

- Design and implement a computational pipeline for discovering novel host-microbiome protein-protein interactions. Manuscript in preparation.
- Develop scripts for analyzing immunological responses to various gut microbes via single cell RNA sequencing data.
- Mentor undergraduate students.

### Regeneron Pharmaceuticals

Ph.D. Intern

May 2024 - Aug 2024  
Director Dr. Cuie Hu

- Evaluated generative AI models in the drug discovery.

### Computational Biology Department, Carnegie Mellon University

Graduate Research Associate

Sep 2018 - May 2021  
Prof. Hosein Mohimani

- Developed deep neural networks for discovering novel bioactive molecules. Published in Nature Communications in 2023.
- Developed a subgraph isomorphism-based chemical structure predictor to accelerate mass spectrometry database searches, using C++ and Rust.
- Mentored 3 undergraduate students.