

Curriculum Vitae

Hung-Yu (Eric) Chiang

Graduate student in Biophysics Program at University of Wisconsin – Madison

Address: 5001 Sheboygan Ave. Apt. 316, Madison, WI, 53705

Email: hchiang22@wisc.edu

Phone: (608) 687-6817

<https://orcid.org/0000-0002-5495-6548>

Education

M.S. 06/2016, Biochemical Sciences, National Taiwan University, Taipei, Taiwan

B.S. 06/2014, Biological Sciences and Technology, National University of Tainan, Tainan, Taiwan

Personal Statement

My undergraduate training (2011-2014) at the National University of Tainan involves cancer chemoprevention, ubiquitin-proteasome system and ubiquitin signal autophagic degradation in lung cancer cells (*J. Funct. Foods* 2015, *Int. J. Science and Engineering* 2013). My master's training at National Taiwan University focuses on protein purification, enzyme kinetics, crystallography, and the protein structure of GDP-fucose synthetase. I joined Dr. Shui's group at the Institute of Biomedical Sciences in Academia Sinica in March 2018 as a Research Associate to study mucosal immunology, with a focus on mucosal host defense and inflammatory diseases in the gut. During the past 4 years, my 1st author-publication focus is the role of IL-22/IL-18 in gastrointestinal host defense and Crohn's pathogenesis (*Nat Commun.* 2022). Moreover, other research focuses on investigating why the N-glycan-binding protein, Galectin-9, or ATF3 is a risk factor for inflammatory bowel disease in humans (*Front. Immunol.* 2018 and *Nat Comms.* 2020). In addition, I was exploring how Galectin-9, found to regulate lysosomes in gut epithelium, contributes to the initiation of Parkinson's disease via an epithelium-enteric neuron axis.

Publications

- 2022 **Hung-Yu Chiang**, Lu Hsueh-Han, Sudhakar Janaki, Yu-Wen Chen, Nien-Shin Shih, Yi-Ting Weng, and Jr-Wen Shui. "IL-22 initiates an IL-18-dependent epithelial response circuit to enforce intestinal host defence" *Nature Communications* (2022) 13: 874. <https://doi.org/10.1038/s41467-022-28478-3>
Impact Factor = 17.763 (5 Year JIF), 5/73 in Multidisciplinary Sciences (Rank by 5 Year JIF)
- 2020 Janaki N. Sudhakar, Hsueh-Han Lu, **Hung-Yu Chiang**, Ching-Shu Suen, Ming-Jing Hwang, Sung-Yu Wu, Chia-Ning Shen, Yao-Ming Chang, Fu-An Li, Fu-Tong Liu & Jr-Wen Shui. "Lumenal Galectin-9-Lamp2 interaction regulates lysosome and autophagy to prevent pathogenesis in the intestine and pancreas" *Nature Communications* (2020) 11: 4286. <https://doi.org/10.1038/s41467-020-18102-7>
Impact Factor = 17.763 (5 Year JIF), 5/73 in Multidisciplinary Sciences (Rank by 5 Year JIF)
- 2018 Doaa Glal, Janaki N. Sudhakar, Hsueh-Han Lu, Ming-Che Liu, **Hung-Yu Chiang**, Yen-Chun Liu, Ching-Feng Cheng, and Jr-Wen Shui. "ATF3 Sustains IL-22-Induced STAT3 Phosphorylation to Maintain Mucosal Immunity Through Inhibiting Phosphatases." *Frontiers in Immunology* (2018) 9: 2522.
<https://dx.doi.org/10.3389%2Ffimmu.2018.02522>
Impact Factor = 8.876 (5 Year JIF), 28/162 in Immunology (Rank by 5 Year JIF)
- 2015 Tsui-Ling Chang, **Hung-Yu Chiang**, Jia-Yi Shen, Shu-Wei Lin, Pei-Jane Tsai. "Phenolic compounds stage an interplay between the ubiquitin-proteasome system and ubiquitin signal autophagic degradation for the ubiquitin-based cancer chemoprevention." *Journal of Functional Foods* (2015) 17, 857-871.
<https://doi.org/10.1016/j.jff.2015.06.010>
Impact Factor = 5.178 (5 Year JIF), 41/143 in Food Science & Technology (Rank by 5 Year JIF)
- 2013 Tsui-Ling Chang, **Hung-Yu Chiang**, Jia-Yi Shen, Yi-Fan Tu. "Targeting Proteasome by Phenolic Compounds in Cancers." *International Journal of Science and Engineering* (2013) 3, 33-35.
[https://doi.org/10.6159/ijse.2013.\(3-4\).04](https://doi.org/10.6159/ijse.2013.(3-4).04)

Leadership

- 2014 – 2015 Teaching Assistant, Biochemistry Experiments Course, Department of Biological Science, NTU.
- 2013 – 2014 Class Representative, Undergraduate, Department of Biological Sciences of Technology, NUTN.
- 2012 – 2013 Minister of Activities Department, Undergraduate Students' Association, NUTN.

Academic Honors/Experience

- 2022 [The Robert K.S. Lim and Shih-Chun Wang Memorial Scholarships and Awards, Taiwan](#)
- 2022 [Young Investigator Travel Awards, 20th Int. Congress of Mucosal Immunology \(ICMI\), Seattle, USA](#)
- 2022 [Selected Oral presentation, 20th Int. Congress of Mucosal Immunology \(ICMI\), Seattle, USA](#)
- 2021 Passed the review by the 2022 Hung Taiwan-Duke University Fellowship committee
- 2021 Travel Award of Oral Competition, 2021 IBMS Research Day Competition (8 recipients), Taiwan
- 2021 Travel Award, 2021 Annual Conference of the Chinese Society of Immunology (CSI) (18 recipients), Taiwan
- 2021 Selected Poster presentation, 2021 Annual Conference of the Chinese Society of Immunology (CSI), Taiwan
- 2020 Selected Oral presentation, 2020 Annual Conference of Chinese Society of Immunology (CSI), Taiwan
- 2019 Selected Poster presentation, 2019 NHRI / IBMS Joint Int. Conference on Inflammation & Disease, Taiwan
- 2019 [Selected Poster presentation, 19th Int. Congress of Mucosal Immunology \(ICMI\), Brisbane, Australia](#)
- 2019 1st merit award, Oral presentation competition, 34th Joint Annual Conference of Biomedical Science (JACBS) (2 recipients), Taiwan
- 2019 Selected Oral presentation, 34th Joint Annual Conference of Biomedical Science (JACBS), Taiwan
- 2016 Poster presentation, 2016 poster competition, College of Life Science, National Taiwan University, Taiwan

Research Experience

Research Associate, Institute of Biomedical Sciences, Academia Sinica

Taiwan

PI: Dr. Jr-Wen Shui

Mar. 2018 – Aug. 2022

- Studying the regulation of the gut-brain axis: to investigate how lysosome dysfunction in the gut contributes to Parkinson's disease. (Ongoing project)
- Revealing that IL-22 serves as a key cytokine in a signaling cascade in epithelium to control adherent-invasive E. Coli colonization through crosstalk between IL-18-producing epithelial cells and IFN γ -producing T cells. (*Nat Commun.* 2022)
- Characterized the preventive role of Galectin-9 and Lamp2 in the regulation of lysosome and autophagy in the intestine and pancreas. (*Nat Commun.* 2020)
- Defined the role of ATF3 in inflammatory bowel disease (IBD) through regulation of IL-22/pStat3 pathway. (*Front. Immunol.* 2018)

Graduate student, Institute of Biological Chemistry, Academia Sinica

Taiwan

PI: Dr. Chun-Hung Lin

Aug. 2014 – Oct. 2016

- Identified the protein structure and activity of GDP-fucose synthetase in *Bacteroides fragilis* to explain the catalyze reaction via x-ray crystallography and enzyme kinetics.

Undergraduate student, National University of Tainan

Taiwan

PI: Dr. Tsui-Ling Chang

Jun. 2011 – July. 2014

- Examined phenolic compounds' cancer prevention through inhibiting E1 in 26S proteasome pathway. (*J. Funct. Foods* 2015, *Int. J. Science and Engineering* 2013)