

# Yen-Chung Chen

PHD CANDIDATE

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## Education

### New York University

DOCTOR OF PHILOSOPHY: BIOLOGY, GPA: 4.0/4.0

- Henry M. MacKracken Fellow
- NYSTEM Predoctoral Fellow

New York, NY, U.S.A.

Sep. 2018 – Present

### National Taiwan University

DOCTOR OF MEDICINE, GPA: 3.45/4.0, GRE: V160/Q170/AW4.5

Taipei, Taiwan

Sep. 2007 – Jun. 2014

## Research Experience

### Dr. Claude Desplan Lab, New York University

PHD CANDIDATE

- Molecular logic of spatial patterning in the fly visual system

NY, USA

June 2019 – Current

### Dr. Jun-An Chen Lab, Institute of Molecular Biology, Academia Sinica

RESEARCH ASSISTANT

- Studying the roles of non-coding RNAs in diseases and development with patient derived iPS cells

Taipei, Taiwan

August 2015 – August 2018

### Dr. Min-Chuan Huang Lab, National Taiwan University College of Medicine

UNDERGRADUATE RESEARCH

- Screening dysregulated glycosyltransferase expression in hepatic cancer

Taipei, Taiwan

January 2009 – August 2010

## Publications

Félix Simon, Isabel Holguera, **Yen-Chung Chen**, Jennifer Malin, Priscilla Valentino, Ted Erclik, Claude Desplan. "High-Throughput Identification of the Spatial Origins of *Drosophila* Optic Lobe Neurons Using Single-Cell mRNA-sequencing" *bioRxiv*. 2024.02.05.578975 (2024)

Jennifer A. Malin, **Yen-Chung Chen**, Félix Simon, Evelyn Keefer, Claude Desplan. "Spatial Patterning Controls Neuron Numbers in the *Drosophila* Visual System" *Developmental Cell*. S1534580724001485 (2024)

Yu-Chieh David Chen, **Yen-Chung Chen**, Raghuvanshi Rajesh, Nathalie Shoji, Maisha Jacy, Haluk Lacin, Ted Erclik, Claude Desplan. "Using Single-Cell RNA Sequencing to Generate Predictive Cell-Type-Specific Split-GAL4 Reagents throughout Development" *Proceedings of the National Academy of Sciences* **120**(32), e2307451120 (2023)

Tai-Heng Chen, Shih-Hsin Chang, Yu-Fu Wu, Ya-Ping Yen, Fang-Yu Hsu, **Yen-Chung Chen**, Yang Ming, Ho-Chiang Hsu, Yi-Ching Su, Sheng-Tang Wong, Jui-Hung Hung, Shih-Hwa Chiou, Yuh-Jyh Jong, Jun-An Chen. "MiR34 Contributes to Spinal Muscular Atrophy and AAV9-mediated Delivery of MiR34a Ameliorates the Motor Deficits in SMA Mice" *Molecular Therapy - Nucleic Acids*. S2162253123000641 (2023)

Ee Shan Liao, Suoqin Jin, **Yen-Chung Chen**, Wei-Szu Liu, Maëliß Calon, Stéphane Nedelec, Qing Nie, Jun-An Chen. "Single-Cell Transcriptomic Analysis Reveals Diversity within Mammalian Spinal Motor Neurons" *Nature Communications* **14**(1), 46 (2023)

Tzu-Chiao Lu, Maria Brbić, Ye-Jin Park, ..., **Yen-Chung Chen**, ..., Hongjie Li. "Aging Fly Cell Atlas Identifies Exhaustive Aging Features at Cellular Resolution" *Science* **380**(6650), eadg0934 (2023)

**Yen-Chung Chen**, Nikolaos Konstantinides. "Integration of Spatial and Temporal Patterning in the Invertebrate and Vertebrate Nervous System" *Frontiers in Neuroscience* **16**, 854422 (2022)

Brianne A. Kent, Constance Holman, Emmanuella Amoako, ..., **Yen-Chung Chen**, ..., Tracey L. Weissgerber. "Recommendations for Empowering Early Career Researchers to Improve Research Culture and Practice" *PLOS Biology* **20**(7), e3001680 (2022)

Nikolaos Konstantinides, Isabel Holguera, Anthony M. Rossi, Aristides Escobar, Liébaud Dudragne, **Yen-Chung Chen**, Thinh N. Tran, Azalia M. Martínez Jaimes, Mehmet Neset Özel, Félix Simon, Zhiping Shao, Nadejda M. Tsankova, John F. Fullard, Uwe Walldorf, Panos Roussos, Claude Desplan. "A Complete Temporal Transcription Factor Series in the Fly Visual System" *Nature* **604**(7905), 316–322 (2022)

Seungjae Lee, **Yen-Chung Chen**, FCA Consortium, Austin E. Gillen, J. Matthew Taliaferro, Bart Deplancke, Hongjie Li, Eric C. Lai. "Diverse Cell-Specific Patterns of Alternative Polyadenylation in *Drosophila*" *Nature Communications* **13**(1), 5372 (2022)

Mehmet Neset Özel, Félix Simon, Shadi Jafari, Isabel Holguera, **Yen-Chung Chen**, Najate Benhra, Rana Naja El-Danaf, Katarina Kapuralin, Jennifer Amy Malin, Nikolaos Konstantinides, Claude Desplan. "Neuronal Diversity and Convergence in a Visual System Developmental Atlas" *Nature* **589**(7840), 88–95 (2021)

**Yen-Chung Chen**, Claude Desplan. "Gene Regulatory Networks during the Development of the *Drosophila* Visual System" *Current Topics in Developmental Biology* **139**, 89–125 (2020)

Ying-Tsen Tung, Kuan-Chih Peng, **Yen-Chung Chen**, Ya-Ping Yen, Mien Chang, Sebastian Thams, Jun-An Chen. "Mir-17~92 Confers Motor Neuron Subtype Differential Resistance to ALS-Associated Degeneration" *Cell Stem Cell* **25**(2), 193–209.e7 (2019)

Ya-Ping Yen, Wen-Fu Hsieh, Ya-Yin Tsai, Ya-Lin Lu, Ee Shan Liao, Ho-Chiang Hsu, **Yen-Chung Chen**, Ting-Chun Liu, Mien Chang, Joye Li, Shau-Ping Lin, Jui-Hung Hung, Jun-An Chen. "Dlk1-Dio3 Locus-Derived lncRNAs Perpetuate Postmitotic Motor Neuron Cell Fate and Subtype Identity" *eLife* **7**, e38080 (2018)

## Honors & Awards

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2024	<b>The Charlotte A. Pann Memorial Research Award</b> , New York University	<a href="#">NY, USA</a>
2023	<b>Dean's Outstanding Graduate Student Teaching Award</b> , New York University	<a href="#">NY, USA</a>
2022	<b>Training Program in Stem Cell and Regenerative Biology</b> , NYSTEM	<a href="#">NY, USA</a>
2022	<b>Kopac Teaching Award II</b> , New York University	<a href="#">NY, USA</a>
2022	<b>Chair's Graduate Fellowship</b> , New York University	<a href="#">NY, USA</a>
2022	<b>Taiwanese Government Scholarship to Study Abroad</b> , Ministry of Education	<a href="#">Taiwan</a>
2017	<b>Best Poster</b> , International Conference of Developmental Biology, Stem Cells and Regenerative Medicine	<a href="#">Taiwan</a>

## Membership and Services

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### Mentor Program

MENTOR

Consulting graduate school applicants in biological sciences

[Project Tyra](#)

[2022 and 2023](#)

### preLights

PRELIGHTER

Share and highlight preprints to advocate open discussion of scientific publications

[Company of Biologists](#)

[Sep. 2018 – Aug. 2020](#)

### eLife Community Ambassadors

ELIFE COMMUNITY AMBASSADOR

Advocating better statistical practices, data reusability and reproducibility

[eLife](#)

[Apr 2019 – Jun 2020](#)

## Teaching and Work

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### R Bootcamp for Summer Undergraduate Research Program

INSTRUCTOR

A 10-session bootcamp for R in biology

[New York University](#)

[Summer 2021, 2022, and 2023](#)

### Statistics in Biology

GRADUATE TEACHING ASSISTANT

Recitation sessions of R and statistic methods

[New York University](#)

[Fall 2022](#)

### Sophomore Scholars Seminar

GRADUATE TEACHING ASSISTANT

Discussion panels about evo-devo, immunology, gene editing, and art

[New York University](#)

[Fall 2021 and Spring 2022](#)

### Applied Genomics

GRADUATE TEACHING ASSISTANT

Design and host recitation sessions for the use of modern genomic tools for alignment, variant calling, RNA-Seq, and ChIP-seq

[New York University](#)

[Spring 2021](#)

### Principles of Biology I/II

GRADUATE TEACHING ASSISTANT

Manage recitation sections to help undergrads from a diverse field appreciate various aspects of life sciences

[New York University](#)

[Fall 2019 and Spring 2020](#)

## Techniques

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<b>Bioinformatics</b>	R, Python, C, and next-generation sequencing pipeline setup on Linux
<b>Tissue culture</b>	Stem cell culture and directed differentiation
<b>Animal model</b>	Fly dissection and whole-mount immunostaining
<b>Molecular biology</b>	Molecular cloning, Western blotting, real-time QPCR, and gene editing