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**Education**

1993-1997 BSc, Department of Chemistry, National Chung Cheng University, Taiwan.
1997-1999 MSc, Institute of Biochemical Sciences, National Taiwan University, Taiwan.
2002-2006 PhD, The Wellcome Trust Cancer Research UK Gurdon Institute, University of Cambridge, UK.

Research and Professional Positions Held in Chronological Sequence

2001-2002 Teaching Instructor, Institute of Biochemical Sciences, National Taiwan University, Taiwan.
2002-2006 PhD student, Supervised by Dr. Enrique Amaya, The Wellcome Trust/CR UK Gurdon Institute, University of Cambridge, UK
2007-2012 Postdoctoral Fellow, Supervised by Dr. Hynek Wichterle, Columbia University, USA.
2012-2019 Assistant Research Fellow, Principal Investigator, Institute of Molecular Biology, Academia Sinica, Taiwan.
2019-2023 Associate Research Fellow, Principal Investigator, Institute of Molecular Biology, Academia Sinica, Taiwan.
2023-present Full Research Fellow, Principal Investigator, Institute of Molecular Biology, Academia Sinica, Taiwan.
2025-present Deputy Director, Institute of Molecular Biology, Academia Sinica, Taiwan.

Research Interests

The focus of research in my laboratory is to elucidate how neurons establish individual identity in the developing nervous system and why only specific neuron subtypes are vulnerable in neurodegenerative diseases. We tackle these questions by studying non-coding RNAs and their roles during motor neuron (MN) generation and degeneration. My laboratory employs MNs generated from mouse and human embryonic stem cells (ESCs) and induced pluripotent stem cells (iPSCs), as well as mouse/chicken animal models to investigate MN development and disease. We have developed a series of stem cell lines and animal models to study the functions of microRNAs and lncRNAs by “gain-of-function” and “loss-of-function” approaches. Apart from elucidating the basic molecular mechanisms underlying neuronal diversity specification during central nervous system development, we use stem cells to study MN diseases. In particular, we are engaged in establishing

patient-specific iPSC-based models of Spinal Muscular Atrophy (SMA) and Amyotrophic Lateral Sclerosis (ALS). We perform single cell multiomics on healthy and ALS iPSC-derived MNs to functionally characterize non-coding RNA pathologies in MNs. I am also a core member of the Neuroscience Program and RNA Program in Academia Sinica, which provide strong and stable consortia for inter-institutional collaborations. In summary, I employ multidisciplinary approaches, from *in vitro* stem cells to *in vivo* mouse models, to study MN development and degeneration.

Major Honors and Awards

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| 2000 | Presidential Award in NCCU |
| 2002-2005 | Taiwan International PhD Scholarship |
| 2002-2006 | The Wellcome Trust Scholarship |
| 2008-2009 | Taiwan National Science Council Postdoctoral Fellowship |
| 2012-2015 | Taiwan National Science Council Talented Investigator Fellowship |
| 2018-2022 | Academia Sinica Career Development Award |
| 2018 | Academia Sinica Junior Research Investigators Award |
| 2019 | The 15 th TienTe Lee Award-Young Scientists, TienTe Lee Biomedical Foundation |
| 2019 | Outstanding Alumni Award of National Chung Cheng University |
| 2020 | MOST Outstanding Research Award |
| 2020-2025 | MOST Frontier Science Research Program |
| 2021-2023 | Academia Sinica Presidential Scholars Program |
| 2023 | NHRI multiple time awardee |
| 2024 | NSTC Outstanding Research Award |
| 2026-2030 | Academia Sinica Investigator Project Grant |
| 2025-2026 | Ewha Global Fellow, Ewha Womans University, Korea |