

Min-Lang Huang

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Education

- 1992 B.S. Biology, Tunghai University, Taiwan
- 1994 M.S. Botany, National Chung Hsing University, Taiwan
- 2002 Ph.D. Neuroscience, National Yang Ming University, Taiwan

Current Position

- Associate Professor, Department of Biomedical Sciences, National Chung Cheng University, Taiwan

Experience

- 2011/8 - Associate Professor, Department of Biomedical Sciences, National Chung Cheng University, Taiwan
- 2003/7 - Assistant Professor, Department of Biomedical Sciences, National Chung Cheng University, Taiwan
- 2003/1 - Distinguished Post-Doctoral Fellow, Institute of Molecular Biology, Academia Sinica, Taiwan

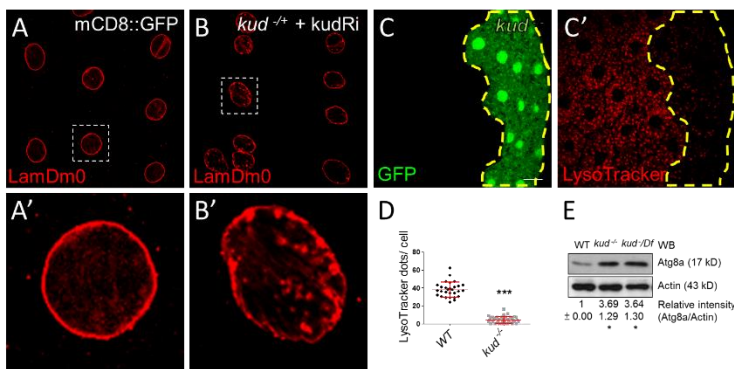
Honors and Awards

- 2000: Award of excellent Ph.D. thesis sponsored by Dr. Chien-Tien Hsu in CSCMB. The 8th Symposium on Recent Advances in Cellular and Molecular Biology.
- 1999: Outstanding Poster Award in CSCMB. The 7th Symposium on Recent Advances in Cellular and Molecular Biology.
- 1998: Poster Award in CSCMB. The 6th Symposium on Recent Advances in Cellular and Molecular Biology.

Research

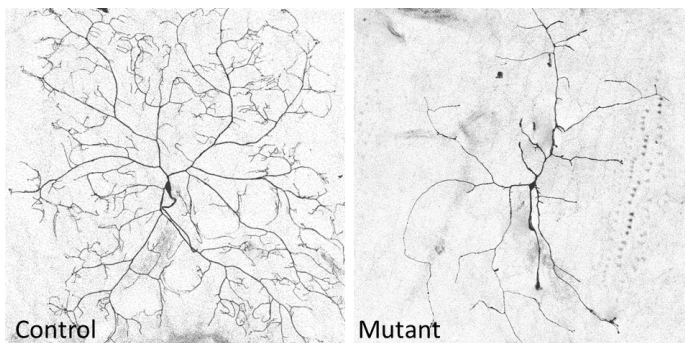
The story of Kuduk

The human transmembrane protein TMEM258 is a component of the evolutionarily conserved oligosaccharyltransferase (OST) complexes, which are essential for N-linked protein glycosylation. Aberrant TMEM258 expression is associated with spinocerebellar ataxia type 20 and inflammatory bowel diseases. We previously identified the *Drosophila* ortholog Kuduk (Kud) and found that Kud modulates the nuclear envelope architecture and autophagy. Interestingly, we found that Kud can localize not only at endoplasmic reticulum where OST-mediated glycosylation occurs, but also at the nuclear envelope and unidentified cytoplasmic puncta. The observation suggests that Kud exhibits OST-independent functions. Our study will provide the knowledge not only for the molecular functions of Kud, but also for the pathogenesis of the diseases associated with TMEM258.



Neural development

Dendrites are cell-specific characteristics of neurons, and are critical to receive stimulations from upstream neurons or the environment. Aberrant dendritic morphologies impair neuronal circuits and are correlated with neurological and neurodevelopmental disorders. The knowledge of mechanisms for controlling the dendrite patterning remains largely unclear. The *Drosophila* nervous system is well characterized in the cellular number and morphology. We aim to use *Drosophila* as a platform to carry out genetic screenings to study the cellular machineries for dendrite morphogenesis.



Publications

1. Ding ZY, Wang YH, Huang YC, Lee MC, Tseng MJ, Chi YH, and **Huang ML**. Outer nuclear membrane protein Kuduk modulates the LINC complex and nuclear envelope architecture. *J Cell Biol* 216, 2827-2841 (2017)
2. Lin MD, Lee HT, Wang SC, Li HR, Hsien HL, Cheng KW, Chang YD, **Huang ML**, Yu JK, Chen YH. Expression of phosphatase of regenerating liver family genes during embryogenesis: an evolutionary developmental analysis among *Drosophila*, amphioxus, and zebrafish. *BMC Developmental Biology*; 13:18 (2013)
3. Wang CC, Lo JC, Chien CT, **Huang ML**. Spatially controlled expression of the *Drosophila* pseudouridine synthase RluA-1. *International Journal of Developmental Biology*; 55(2):223-7 (2011)
4. Ding ZY, Wang YH, Luo ZK, Lee HF, Hwang J, Chien CT, **Huang ML**. Glial cell adhesive molecule Unzipped mediates axon guidance in *Drosophila*. *Developmental Dynamic*; 240(1):122-34. (2011)
5. Lu KT, Sun CL, Wo PY, Yen HH, Tang TH, Ng MC, **Huang ML**, Yang YL. Hippocampal Neurogenesis following Traumatic Brain Injury was Mediated by Vascular Endothelial Growth Factor Receptor 2 and Raf/MEK/ERK Cascade. *Journal of Neurotrauma*; 28(3):441-50. (2011)
6. Wang LC, Chen KY, Pan H, Wu CC, Chen PH, Liao YT, Li C, **Huang ML**, Hsiao KM. Muscleblind participates in RNA toxicity of expanded CAG and CUG repeats in *Caenorhabditis elegans*. *Cellular and Molecular Life Sciences*; 68(7):1255-67. (2011)
7. Wang YH, **Huang ML**. Organogenesis and tumorigenesis: Insight from the JAK/STAT pathway in the *Drosophila* eye. *Developmental Dynamic*; 239(10):2522-33. (2010)
8. Wang YH, **Huang ML**. Reduction of Lobe leads to TORC1 hypoactivation that induces ectopic Jak/STAT signaling to impair *Drosophila* eye development. *Mechanisms of Development*; 126(10):781-90. (2009)
9. **Huang ML**, Hsu CH, Chien CT. The proneural gene *amos* promotes multiple dendritic neuron formation in the *Drosophila* peripheral nervous system. *Neuron* 25(1): 57-67. (2000)