

## TIEN-HSIEN CHANG

張典顯

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### EDUCATION

**Ph.D.** (1986) State University of New York at Buffalo  
**M.A.** (1983) State University of New York at Buffalo  
**B.S.** (1979) National Taiwan University

### PROFESSIONAL EXPERIENCES

2019–Present **Research Fellow**, Genomics Research Center, Academia Sinica  
2016–Present **Deputy Director**, Genomics Research Center, Academia Sinica  
2006–Present **Associate Research Fellow**, Genomics Research Center, Academia Sinica, Taiwan  
2004 (Apr.-June) **Visiting Professor**, National Chung Cheng University, Chia-Yi, Taiwan (Ministry of Education, Taiwan)  
2004 (Apr.-Sept.) **Visiting Scholar**, Genomics Research Center, Academia Sinica, Taiwan  
2002 **Sabbatical leave** in Dr. Manuel Ares's lab, University of California, Santa Cruz.  
1998 **Associate Professor** of Molecular Genetics, Ohio State University, Columbus, Ohio  
1991–1997 **Assistant Professor** of Molecular Genetics, Ohio State University, Columbus, Ohio  
1986–1991 **Postdoctoral Fellow** with Dr. John Abelson at the Division of Biology, California Institute of Technology, Pasadena  
1981–1986 **Graduate Student Assistant** with Dr. Jeremy Bruenn, Department of Biological Sciences, State University of New York at Buffalo

### AWARDS AND HONORS

2019 第 17 屆有庠科技論文獎 (生技醫藥類)  
2018–19 臺灣扶輪公益獎 (Taiwan Rotary Club Association Public Service Award)  
2018 科技部特殊優秀人才獎 (MOST Outstanding Performance Award)  
2018 Outstanding Teaching Award, National Taiwan University  
2014 PI of the Month, Academia Sinica Taiwan International Graduate Program  
2005 Dean's Award for Classroom Teaching, College of Biological Sciences, the Ohio State University  
2004 Taiwan Ministry of Education Visiting Professorship  
1999 Outstanding Teaching Award, College of Biological Sciences, the Ohio State University

### SELECTED PUBLICATIONS

1. Yeh, C.-S., Wang, Z., Miao, F., Ma, H., Kao, C.-T., Hsu, T.-S., Yu, J.-H., Hung, E.-T., Lin, C.-C., Kuan, C.-Y., Zhou, C., Qu, G.-Z., Jiang, J., Liu, G., Wang, J. P., Li, W.\*, Chiang, V. L.\*,

- Chang, T.-H.\*, Lin, Y.-C. J.\* (2019) A novel synthetic-genetic-array based yeast one-hybrid system for high discovery rate and short processing time. *Genome Research*, DOI:10.1101/gr.245951.118 (*In Press*). (\*Corresponding author)
2. Chang, S.-L., Wang, H.-K., Tung, L., and Chang, T.-H.\* (2018) Adaptive transcription-splicing re-synchronization upon losing an essential splicing factor. *Nature Ecol. Evol.* **2**, 1818-1823. (\*Corresponding author) (Press release by Academia Sinica; widely covered in major news media)
  3. Yeh, C.-S., Chang, S.-L., Chen, J.-H., Wang, H.-K., Chou, Y.-C., Wang, C.-H., Huang, S.-H., Larson, A., Pleiss, P. A., Chang, W.-h., and Chang, T.-H.\* (2017) The conserved AU-dinucleotide at the 5' end of nascent U1 snRNA is optimized for the interaction with nuclear cap-binding-complex. *Nucleic Acids Res.* **45**, 9679-9693. (\*Corresponding author)
  4. Chang, T.-H.\*, Tung, L., Yeh, F.-L., Chen, J.-H., Chang, S.-L. (2013) Functions of the DExD/H-box proteins in nuclear pre-mRNA splicing. *Biochim. Biophys. Acta - Gene Regulatory Mechanisms* **1829**, 764-774. (Invited Review) (\*Corresponding author)
  5. Huang, J.-Y., Su, W.-C., Jeng, K.-S., Chang, T.-H.\*, and Lai, M. M. C.\* (2012) Attenuation of 40S ribosomal subunit abundance differentially affects host and HCV translation and suppresses HCV replication. *PLoS Pathog.* **8**(6): e1002766. doi:10.1371/journal.ppat.1002766 (\*Corresponding author) (*Selected for highlighting by Asia-Pacific International Molecular Biology Network [A-IMBN] Research Website, which is jointly produced by A-IMBN and NPG Nature Asia-Pacific*) (Press release by Academia Sinica; widely covered in major news media and special report by Taiwan Public TV Service)
  6. Hage, R., Tung, L., Du, H., Stands, L., Rosbash, M., and Chang, T.-H.\* (2009) A targeted bypass screen identifies Ynl187p, Prp42p, Snu71p, and Cbp80p for stable U1 snRNP/pre-mRNA interaction. *Mol. Cell. Biol.* **29**, 3941-3952. (\*Corresponding author)
  7. Burckin, T., Nagel, R., Mandel-Gutfreund, Y., Shiue, L., Clark, T., Chong, J.-L., Chang, T.-H., Squazzo, S., Hartzog, G., and Ares, M., Jr. (2005) Exploring functional relationships between components of the transcription, splicing, and mRNA export machineries by gene expression phenotype analysis. *Nature Struct. Mol. Biol.* **12**, 175-182.
  8. Chong, J.-L., Chuang, R.-Y., Tung, L., and Chang, T.-H. (2004) Ded1p, a conserved DExD/H-box translation factor, can promote L-A virus negative-strand RNA synthesis *in vitro*. *Nucl. Acids Res.* **32**, 2031-2038.
  9. Tseng-Rogenski, S. S.-I, Chong, J.-L., Thomas, C. B., Enomoto, S. Berman, J., and Chang, T.-H. (2003) Functional conservation of Dhh1p, a DExD/H-box protein in *Saccharomyces cerevisiae*. *Nucl. Acids Res.* **31**, 4995-5002.
  10. Chen, J. Y.-F., Stands, L., Staley, J. P., Jackups, Jr., R. R., Latus, L. J., and Chang, T.-H. (2001) Specific alterations of U1-C protein or U1 small nuclear RNA can eliminate the requirement of Prp28p, an essential DEAD-box splicing factor. *Mol. Cell.* **7**, 227-232.
  11. Tseng, S. S.-I, Weaver, P. L., Liu, Y., Hitomi, M., Tartakoff, A. M., and Chang, T.-H. (1998) A cytosolic RNA helicase required for poly(A)<sup>+</sup> RNA export. *EMBO J.* **17**, 2651-2662.
  12. Chuang, R.-Y., Weaver, P. L., Liu, Z., and Chang, T.-H. (1997) Requirement of the DEAD-box protein Ded1p for messenger RNA translation. *Science*, **275**, 1468-1471.
  13. Weaver, P. L., Sun, C., and Chang, T.-H. (1997). Dbp3p, a putative RNA helicase in *Saccharomyces cerevisiae*, is required for efficient pre-ribosomal RNA processing predominantly site A<sub>3</sub>. *Mol. Cell. Biol.* **17**, 1354-1365.
  14. Chang, T.-H., Latus, L. J., Liu, Z., and Abbott, J. (1997) Genetic interactions of conserved regions in the DEAD-box protein Prp28p. *Nucl. Acids Res.* **25**, 5033-5040.
  15. Ruby, S. W., Chang, T.-H., and Abelson, J. (1993). Four yeast spliceosomal proteins (PRP5, PRP9, PRP11, and PRP21) interact to promote U2 snRNP binding to pre-mRNA. *Genes Dev.* **7**, 1909-1925.
  16. Chang, T.-H., Arenas, J., and Abelson, J. (1990) Identification of five putative yeast RNA helicase genes. *Proc. Natl. Acad. Sci. USA* **87**, 1571-1575.
  17. Chang, T.-H., Clark, M. W., Lustig, A. J., Cusick, M. E., and Abelson, J. (1988) RNA11 protein is associated with the yeast spliceosome and is localized in the periphery of the cell nucleus. *Mol. Cell. Biol.* **8**, 2379-2393.