

## BIOGRAPHICAL SKETCH

NAME in English <b>Bertrand Tan</b>	POSITION TITLE Professor, Department of Biomedical Sciences
NAME in Chinese 譚賢明	

### EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE (if applicable)	MM/YY	FIELD OF STUDY
Department of Molecular and Cell Biology, University of California at Berkeley	B.S.	05/95	Biochemistry and Molecular Biology
Institute of Molecular Medicine, National Taiwan University	Ph.D.	02/04	Gene Regulation
Institute of Molecular Medicine, National Taiwan University	Post-doc	01/07	Gene Regulation/ Epigenetics

### A. Positions and Honors

#### Positions and Employment

2007/02~2011/07	Assistant Professor, Department of Biomedical Sciences, Chang Gung University, Tao-Yuan, Taiwan, R.O.C.
2011/08~2015/07	Associate Professor, Department of Biomedical Sciences, Chang Gung University, Tao-Yuan, Taiwan, R.O.C.
2015/08~	Professor, Department of Biomedical Sciences, Chang Gung University, Tao-Yuan, Taiwan, R.O.C.

#### Honors

2015 Academia Sinica Research Award for Young Research Investigators (104 年度中研院年輕學者著作獎)  
Chang Gung University Research Excellence Award – 2013, 2015  
2015 MOST Wu Ta-You Research Award (104 年度科技部吳大猷紀念獎)

### B. Selected Peer-reviewed Publications (2012-2017) (in chronological order)

#### Referred papers (\*first/equal contribution or corresponding author)

1. Wu SM, Huang PJ, Chang YF, Lee CC, Yang CY, Tsai WS, Liu H, Tan BC\*. circIncRNAet: An integrated web-based resource for mapping functional networks of long or circular forms of non-coding RNAs. Under revision at **GigaScience**. 2017.
2. Lai YH, Liu H, Chiang WF, Chen TW, Chu L, Yu JS, Chen SJ, Chen HC, Tan BC\*. MiR-31-5p-ACOX1 Axis Enhances Tumorigenic Fitness in Oral Squamous Cell Carcinoma Via the Promigratory Prostaglandin E2. **Theranostics**. 2017. (Accepted)
3. Shih CT, Chang YF, Chen YT, Ma CP, Chen HW, Yang CC, Lu JC, Tsai YS, Chen HC, Tan, BC\*. The PPAR $\gamma$ -SETD8 axis constitutes an epigenetic, p53-independent checkpoint on p21-mediated cellular senescence. **Aging Cell** (SCI), 2017 Aug;16(4):797-813.

4. Yang CC, Chen YT, Chang YF, Liu H, Kuo YP, Shih CT, Liao WC, Chen HW, Tsai WS, Tan BC\*. ADAR1-mediated 3' UTR editing and expression control of anti-apoptosis genes fine-tunes cellular apoptosis response. **Cell Death Dis.** (SCI), 2017; doi:10.1038/cddis.2017.12.
5. Ma TH, Lee LW, Lee CC, Yi YH, Chan SP\*, Tan BC\*, Lo SJ\*. Genetic control of nucleolar size: An evolutionary perspective. **Nucleus** (SCI), 2016 Apr 25;7(2):112-20.
6. Chung IH, Liu H, Lin YH, Chi HC, Huang YH, Yang CC, Yeh CT, Tan BC\*, Lin KH\*. ChIP-on-chip analysis of thyroid hormone-regulated genes and their physiological significance. **Oncotarget** (SCI), 2016 Mar 8;7(16):22448-59.
7. Zhong X, Peng J, Shen QS, Chen JY, Gao H, Luan X, Yan S, Huang X, Zhang SJ, Xu L, Zhang X, Tan BC, Li CY\*. RhesusBase PopGateway: Genome-wide Population Genetics Atlas in Rhesus Macaque. **Mol Biol Evol.** (SCI), 2016 Feb 16; pii: msw025.
8. Yi YH, Ma TH, Lee LW, Chiou PT, Chen PH, Lee CM, Chu YD, Yu H, Hsiung KC, Tsai YT, Lee CC, Chang YS, Chan SP\*, Tan BC\*, Lo SJ\*. A genetic cascade of *let-7-ncl-1-fib-1* modulates nucleolar size and rRNA pool in *Caenorhabditis elegans*. **PLoS Genet.** (SCI), 2015 Oct 22;11(10):e1005580.
9. Yang XZ, Chen JY, Liu CJ, Peng J, Wee YR, Han X, Wang C, Zhong X, Shen QS, Liu H, Cao H, Chen XW, Tan BC\*, Li CY\*. Selectively Constrained RNA Editing Regulation Crosstalks with piRNA Biogenesis in Primates. **Mol Biol Evol.** (SCI), 2015 Dec;32(12):3143-57.
10. Chen JY, Shen QS, Zhou WZ, Peng J, He BZ, Li Y, Liu CJ, Luan X, Ding W, Li S, Chen C, Tan BC, Zhang YE, He A\*, Li CY\*. Emergence, Retention and Selection: A Trilogy of Origination for Functional De Novo Proteins from Ancestral LncRNAs in Primates. **PLoS Genet.** (SCI), 2015 Jul 15;11(7):e10005391.
11. Chen WY, Shih HT, Liu KY, Shih ZS, Chen LK, Tsai TH, Chen MJ, Liu H, Tan BC, Chen CY, Lee HH, Loppin B, Ait-Ahmed O, Wu JT. Intellectual disability-associated dBRWD3 regulates gene expression through inhibition of HIRA/YEM-mediated chromatin deposition of histone H3.3. **EMBO Rep.** (SCI), 2015 Apr;16(4):528-38.
12. Huang PJ, Lee CC, Tan BC, Yeh YM, Huang KY, Gan RC, Chen TW, Lee CY, Yang ST, Liao CS, Liu H, Tang P. Vanno: A Visualization-aided Variant Annotation Tool. **Hum Mutat.** (SCI), 2015 Feb;36(2):167-74.
13. Huang PJ, Lee CC, Tan BC, Yeh YM, Chu LJ, Chen TW, Chang KP, Lee CY, Gan RC, Liu H, Tang P. CMPD: cancer mutant proteome database. **Nucleic Acids Res.** (SCI), 2015 Jan 28;43(Database issue):D849-55.
14. Liu H, Ma CP, Chen YT, Schuyler SC, Chang KP, Tan BC\*. Functional impact of RNA editing and ADARs on regulation of gene expression: perspectives from deep sequencing studies. **Cell & Bioscience** (SCI), 2014 Aug 19;4:44.
15. Hsu HC, Liu YS, Tseng KC, Tan BC\*, Chen SJ\*, Chen HC\*. LGR5 regulates survival through mitochondria-mediated apoptosis and by targeting the Wnt/ $\beta$ -catenin signaling pathway in colorectal cancer cells. **Cell Signal.** (SCI), 2014 Jul 12;26(11):2333-2342.
16. Lee CW, Yang FC, Chang HY, Chou H, Tan BC, Lee SC\*. Interaction between Salt-inducible kinase 2 and protein phosphatase 2A regulates the activity of calcium/calmodulin-dependent protein kinase I and protein phosphatase methylesterase-1. **J Biol Chem.** (SCI), 2014 Jul 25;289(30):21108-19.
17. Zhang SJ, Liu CJ, Yu P, Zhong X, Chen JY, Yang X, Peng J, Yan S, Wang C, Zhu X, Xiong J, Zhang YE, Tan BC, Li CY\*. Evolutionary interrogation of human biology in well-annotated genomic framework of rhesus macaque. **Mol Biol Evol.** (SCI), 2014 May;31(5):1309-24.

18. Chen JY, Peng Z, Zhang R, Yang XZ, Tan BC, Fang H, Liu CJ, Shi M, Ye ZQ, Zhang YE, Deng M, Zhang X\*, Li CY\*. RNA editome in rhesus macaque shaped by purifying selection. **PLoS Genet.** (SCI), 2014 Apr 10;10(4):e1004274.
19. Hsieh CL, Liu H, Huang Y, Kang L, Chen HW, Chen YT, Wee YR, Chen SJ, and Tan BC\*. ADAR1 deaminase contributes to scheduled skeletal myogenesis progression via stage-specific functions. **Cell Death Differ.** (SCI), 2014 May; 21(5):707-719.
20. Chen HW, Yang CC, Hsieh CL, Liu H, Lee SC, and Tan BC\*. A functional genomic approach reveals the transcriptional role of EDD in the expression and function of angiogenesis regulator ACVRL1. **Biochim Biophys Acta.** (SCI), 2013 Dec; 1829(12): 1309-1319.
21. Yang FC, Lin YH, Chen WH, Huang JY, Chang HY, Su SH, Wang HT, Chiang CY, Hsu PH, Tsai MD, Tan BC, Lee SC\*. Interaction between salt-inducible kinase 2 (SIK2) and p97/VCP regulates ER-associated protein degradation in mammalian cells. **J Biol Chem.** (SCI), 2013 Nov; 288(47):33861-72.
22. Yang FC, Tan BC (co-first author), Chen WH, Lin YH, Huang JY, Chang HY, Sun HY, Hsu PH, Liou GG, Shen J, Chang CJ, Han CC, Tsai MD, and Lee SC\*. Reversible acetylation regulates salt-inducible kinase (SIK2) and its function in autophagy. **J Biol Chem.** (SCI), 2013 Mar; 288(9):6227-37.
23. Tan BC, Yang CC, Hsieh CL, Chou YH, Zhong CZ, Yung BYM\*, Liu H\*. Epigenetic silencing of ribosomal RNA genes by Mybbp1a. **J Biomed Sci.** (SCI), 2012 May; 19:57.
24. Yang CC, Liu H, Chen SL, Wang TH, Hsieh CL, Huang Y, Chen SJ, Chen HC, Yung BYM\*, Tan BC\*. Epigenetic silencing of myogenic gene program by Myb-binding protein 1a suppresses myogenesis. **EMBO J.** (SCI), 2012 Apr; 31(7):1739-1751.
25. Peng Z, Cheng Y, Tan BC (co-first author), Kang L, Tian Z, Zhu Y, Zhang W, Liang Y, Hu X, Tan X, Guo J, Dong Z, Liang Y, Bao L, and Wang J\*. Comprehensive analysis of RNA-Seq data reveals extensive RNA editing in a human transcriptome. **Nat. Biotechnol.** (SCI), 2012 Mar; 30(3):253-260.

## C. Research Support

### Ongoing Research Support

MOST104-2320-B-182-029-MY3, Ministry of Science and Technology 08/15-07/18

Functional decoding of development-associated RNA editomes: skeletal myogenesis as a research model.

Role: PI

MOST105-2314-B-182-061-MY4, Ministry of Science and Technology 08/16-07/20

Decoding the cryptic messages of RNA recoding events in protein functions and developmental processes: Tmem63b as an example.

Role: PI

CMRPD3E0153, Chang Gung Memorial Hospital, 01/17-12/17

The transcriptional role of RNA editor ADAR1 and its pathophysiological significance.

Role: PI

CMRPD1F0442, Chang Gung Memorial Hospital, 10/17-09/18

Characterization of the developmental and physiological consequences of RNA editing events.

Role: PI

### Completed Research Support (2009-2013)

CMRPD170301-3, Chang Gung Memorial Hospital, 09/08-08/11

The role of a novel DNA-binding protein WDHD1 in RNA processing and its link to diseases.

Role: PI

NHRI-EX99-9923SC, National Health Research Institute, 01/10-12/13

The role of a novel DNA-binding protein WDHD1 in RNA processing and its link to diseases.

Role: PI

MOST100-2320-B-182-022, Ministry of Science and Technology, 08/11-07/12

Functional role of RNA editing enzyme ADAR in transcriptome landscaping and its developmental relevance.

Role: PI

CMRPD1A0321-3, Chang Gung Memorial Hospital, 07/11-06/14

Functional and physiological significance of human RNA editome.

Role: PI

MOST101-2320-B-182-036-MY3, Ministry of Science and Technology, 08/12-07/15

Functional role of RNA editing enzyme ADAR in transcriptome landscaping and its developmental relevance.

Role: PI

MOST101-2321-B-182-009, Ministry of Science and Technology, 08/12-07/15

Functional interplay between RNA editing and antisense transcription in cellular response to hypoxia stress.

Role: PI

CMRPD1C0841-3, Chang Gung Memorial Hospital, 01/14-12/16

Roles of ADAR and RNA editing in HDV replication and human liver diseases.

Role: PI

NHRI-EX103-10321SI, National Health Research Institute, 01/14-12/16

Roles of ADAR and RNA editing in host-virus interaction and associated diseases.

Role: PI