

CURRICULUM VITAE

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Tel	18086113785	Fax	
Research Interest			
<p>Sex dimorphism in phenotype is mainly caused by genes differentially expressed between sexes (called sex-biased genes). Many sex-biased genes are genes that encode long noncoding RNAs (lncRNA). Although some sex-biased lncRNAs have been found to regulate gonad development, the function of most lncRNAs are still unknown. Our previous study validated the transcriptome annotation of noncoding functional elements, and suggested the contribution of sex-related drives in the evolution of noncoding sequences in animal genomes. Although some sex-biased lncRNAs were found to be involved in sex development, the function of most sex-biased lncRNAs were still unknown. We thus focus on sex-biased lncRNAs, systematically identifying sex-biased lncRNAs in multiple animal species (including fruitfly, zebrafish, medaka, chicken, human, and etc.) with high-throughput sequencing techniques, and exploring their evolutionary mechanisms, functions in sex development, and potential effects on diseases. The implementation of our study will provide a solid foundation for revealing the function of sex-biased lncRNAs, and be important for precision medicine.</p>			
Professional Memberships			
Other Roles			



Education & Working Experience

Education:

2006 – 2011 Ph.D, Bioinformatics, Center for Bioinformatics, College of Life Sciences, Peking University, Beijing, China. Dissertation: Deficiency of X-linked inverted duplicates in *Drosophila melanogaster* and the underlying mechanisms. Mentor: Dr. Manyuan Long.

2002 – 2006 Bachelor of Science, Biotechnology, National life science and technology talents training base, College of Life Science and Technology, Huazhong Agricultural University, Wuhan, Hubei, China.

2003 – 2006 Bachelor of Arts, Journalism, School of Journalism and Communication, Wuhan University, Wuhan, Hubei, China.

Professional Experiences:

2016.9-Present Professor, College of Life Sciences & Technology, Huazhong Agricultural University, Wuhan, China.

2011.9-2016.9 Postdoc, Laboratory of Cellular and Developmental Biology, National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health, Bethesda, MD, United States. Mentor: Dr. Brian Oliver.

Publications

1. Shi MW#, Zhang NA#, Shi CP, Liu CJ, Luo ZH, Wang DY, Guo AY*, Chen ZX*. SAGD: a Comprehensive Sex-Associated Gene Database from Transcriptomes. *Nucleic Acids Research*. 47(D1): D835-D840 (2019).
2. Chen ZX*, Oliver B, Zhang YE, Gao G, Long M*. Expressed Structurally-stable Inverted Duplicates in Mammalian Genomes as Functional Noncoding Elements. *Genome Biology and Evolution*. 9(4):981–992 (2017).

3. Chen ZX & Oliver B*. X Chromosome and Autosome Dosage Responses in *Drosophila melanogaster* Heads. *G3-Genes Genomes Genetics*. 5(6):1057-63 (2015).
4. Chen ZX[#], Sturgill D[#], Qu J, Jiang H, Park S, Boley N, Suzuki AM, Fletcher AR, Plachetzki DC, FitzGerald PC, Artieri CG, Atallah J, Barmina O, Brown JB, Blankenburg KP, Clough E, Dasgupta A, Gubbala S, Han Y, Jayaseelan JC, Kalra D, Kim YA, Kovar CL, Lee SL, Li M, Malley JD, Malone JH, Mathew T, Mattiuzzo NR, Munidasa M, Muzny DM, Ongeri F, Perales L, Przytycka TM, Pu LL, Robinson G, Thornton RL, Saada N, Scherer SE, Smith HE, Vinson C, Warner CB, Worley KC, Wu YQ, Zou X, Cherbas P, Kellis M, Eisen MB, Piano F, Kionte K, Fitch DH, Sternberg PW, Cutter AD, Duff MO, Hoskins RA, Graveley BR, Gibbs RA, Bickel PJ, Kopp A, Carninci P, Celniker SE, Oliver B*, Richards S. Comparative analysis of the *D.melanogaster* modENCODE transcriptome annotation. *Genome Research*. 24:1209-23 (2014).
5. Chen ZX*, Golovkina K, Sultana H, Kumar S, Oliver B. Transcriptional effects of gene dose reduction. *Biology of Sex Differences*, 5(1): 5 (2014).
6. Chen ZX, Zhang YE, Vibranovski M, Luo J, Gao G*, Long M*. Deficiency of X-linked inverted duplicates with male-biased expression and the underlying evolutionary mechanisms in the *Drosophila* genome. *Mol Biol Evol*. 28:2823-2832 (2011).