

## **Dake Zhang**

Key Laboratory of Genomic and Precision Medicine  
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### **Position**

2012/01-Pres Associate Professor (Project), Beijing Institute of Genomics, Chinese Academy of Sciences.  
2009/07-2012/01 Assistant Professor, Beijing Institute of Genomics, Chinese Academy of Sciences.

### **Education**

2004/09-2009/06 Ph.D. Genetics, Beijing Institute of Genomics, Chinese Academy of Sciences.  
1999/09-2004/06 B.S. Clinical Medicine, Jining Medical College.

### **Experience**

2014/12-2015/12 Visiting Scholar, Department of Molecular and Human Genetics, Baylor College of Medicine

### **Patent**

Method in detection of hepatocellular cell proliferation in peripheral blood plasma.

### **Professional qualification**

Senior Genetic Counselor, Chinese Board of Genetic Counseling

### **Publication (\*First author\$Corresponding author)**

1. Chen W\*, Zhang K\*, Dong P\*, Fanning G, Tao C, Zhang H, Guo S, Wang Z, Hong Y, Yang X, Lai S, Ding H, Zhao H, Zeng C\$, Protzer U\$, **Zhang D\$**. Noninvasive chimeric DNA profiling identifies tumor - originated HBV integrants contributing to viral antigen expression in liver cancer. *Hepatology International*. 2020. **Accepted**
2. Liu, S\*; Hong, Y. \*; Cui, K.; Guan, J.; Han, L.; Chen, W.; Xu, Z.; Gong, K.; Ou, Y.; Zeng, C.; Li, S.; **Zhang, D\$**; Hu, D\$, Four-Generation Pedigree of Monozygotic Female Twins to Reveal Genetic Factors in Twinning Process by Whole-Genome Sequencing. *Twin Res Hum Genet* 2018, 1-8.
3. Zhang H\*, Zhao F\*, Hutchinson D\*, Sun W, Ajami N, Lai S, Wong M, Petrosino JF, Fang J, Jiang J, Chen W, Reinach P, Qu J, Zeng C, **Zhang D\$**, and Zhou X\$. Conjunctival Microbiome Changes Associated With Soft Contact Lens and Orthokeratology Lens Wearing Conjunctival Microbiome in Contact Lens Wearers. *Investigative Ophthalmology & Visual Science*, 2017, 58(1): 128-136.
4. Li F\*, **Zhang D\$**, Li Y, Jiang D, Luo S, Du N, Chen W, Deng L, Zeng C\$. Whole genome characterization of hepatitis B virus quasispecies with massively parallel pyrosequencing. *Clin Microbiol Infect*. Epub 2014 Oct 29.
5. **Zhang D\***, Du N\*, Ma S\*, Hu Q, Lu G, Chen W, Zeng C\$ *In vitro* Transcriptome Analysis of Two Chinese Isolates of *Streptococcus suis* Serotype 2. *Genomics, Proteomics & Bioinformatics*. 2014 pii: S1672-0229(14)00134-X.
6. Lin Z\*, Gong K\*, Pang B, Zeng C, **Zhang D\$**. Birt-hogg-dubé syndrome with clear cell renal cell carcinoma in a Chinese family. *Internal medicine* (Tokyo, Japan) 2014, 53 (24), 2825.
7. Xu Z, Wu G, Li F, Bai J, Xing W, **Zhang D\$**, Zeng C\$. Positive selection signals of hepatitis B virus and their association with disease stages and viral genotypes. *Infect Genet Evol* 2013, 19C:176-187.
8. **Zhang D\***, Dong P\*, Zhang K, Deng L, Bach C, Chen W, Li F, Protzer U, Ding H, Zeng C. Whole genome HBV deletion profiles and the accumulation of preS deletion mutant during antiviral treatment. *BMC Microbiology* 2012, 12:307.
9. **Zhang D\***, Ma S\*, Zhang X\*, Zhao H, Ding H, Zeng C. Prevalent HBV point mutations and mutation combinations at BCP/preC region and their association with liver disease progression. *BMC Infect Dis* 2010, 10:271.
10. Deng L, Tang X, Chen W, Lin J, Lai Z, Liu Z, **Zhang D\$**: Scanning for genomic regions subject to selective sweeps using SNP-MaP strategy. *Genomics Proteomics Bioinformatics* 2010, 8(4):256-261.
11. **Zhang D\***, Chen J, Deng L, et al. Evolutionary selection associated with the multi-function of overlapping genes in the hepatitis B virus. *Infect Genet Evol*. Jan 2010;10(1):84-88.
12. Deng L, Tang X, Chen W, Lin J, Lai Z, Liu Z, **Zhang D\$**. Scanning for Genomic Regions Subject to Selective Sweeps Using SNP-MaP Strategy. *Genomics Proteomics Bioinformatics*. 2010 Dec; 8(4): 256-261.
13. Li, Y., Xia, Y., Han, M., Chen, G., **Zhang, D.**, Thasler, W.E., Protzer, U., and Ning, Q. 2017. IFN-alpha-mediated Base Excision Repair Pathway Correlates with Antiviral Response Against Hepatitis B Virus Infection. *Scientific Reports*. 7, 12715.

14. Hu J, Xu Y, Li C, Hao J, Peng S, Chu X, Zhang D, Xu D, Meng S\$. A cross-talk between Hepatitis B virus and host mRNAs confers viral adaptation to liver. **Scientific Reports**. 2015 Jul 17;5:10572.
15. Xia H, Hu C, **Zhang D**, S Tang S, Zhang Z, Kou Z, Fan Z, Bente D, Zeng C, Li T. Metagenomic Profile of the Viral Communities in Rhipicephalus spp. Ticks from Yunnan, China. *PloS One* 2015 10 (3), e0121609.
16. Tang X, Deng L, **Zhang D**, Lin J, Wei Y, Zhou Q, Li X, Li G, Liang S. Gene2DGE: A Perl Package for Gene Model Renewal with Digital Gene Expression Data. **Genomics Proteomics Bioinformatics** 2012, 10(1):51-54.
17. Tang H, Yao Y, **Zhang D**, Meng X, Wang L, Yu H, Ma L, Xu P. A Novel NADH-dependent and FAD-containing Hydroxylase Is Crucial for Nicotine Degradation by *Pseudomonas putida*. **J Biol Chem** 2011, 286(45):39179-39187.
18. Deng L, **Zhang D**, Richards E, et al. Constructing an initial map of transmission distortion based on high density HapMap SNPs across the human autosomes. **J Genet Genomics**. Dec 2009;36 (12):703-709.
19. Tang H, Wang S, Ma L, Meng X, Deng Z, **Zhang D**, Ma C, Xu P. A novel gene, encoding 6-hydroxy-3-succinoylpyridine hydroxylase, involved in nicotine degradation by *Pseudomonas putida* strain S16. **Appl Environ Microbiol** 2008, 74(5):1567-1574.

### **Invited Talks**

**Zhang D.** Novel solutions in tumor genomic studies and current progress. Forum of Molecular Imaging and New technology in Precise Diagnosis and Treatment of Cancer, Jul 2017, Beijing, China

**Zhang D.** Viral quasispecies analysis based on NGS platform. Sino-German workshop "Viral hepatitis: viral and host genomics at the omics era", Oct 2013, Beijing, China

**Zhang D**, Li F, Jiang D, Luo S, Li Y, Zeng C. Whole-genome characterization of hepatitis B viral quasispecies in advanced liver disease patients and chronic carriers dissected by ultra-deep massively parallel pyrosequencing. International Meeting: The Molecular Biology of Hepatitis B Viruses, Sep 2012, Oxford, UK

**Zhang D**, Deng L, Ma S, Ji F, Ding H, Zeng C. Analysis of HBV deletions and their correlation with antiviral medication. International Conference on Viral Hepatitis: Past Accomplishments and Unfulfilled Quests (ICVH), Apr 2008, Xiamen, China

### **Grants (Principal Investigator)**

Innovation Promotion Association CAS (2016098, 2016.1-2019.12)

Evolution mechanism of tumor heterogeneity and individual treatment strategies, Major State Basic Research Development Program (2014CB542000), Major Researcher in sub-project (2014.1-2018.12)

Identification of lncRNAs specific to hepatocellular carcinoma in peripheral blood and their functional analysis, National Natural Science Foundation of China (2013.1-2015.12)

Transcriptome analysis of multi-organs of rat models of diabetes, Institutional Funds for Young Scholar, Beijing Institute of Genomics (2011.2-2012.2)

Transcriptome analysis of bacteria pathogens including *S. suis* 2 Chinese isolates, Key Laboratory of Pathogenic Microbiology and Immunology, Chinese Academy of Sciences, 2009CASPMI-007 (2010.1-2011.12)

### **Reviewer**

Journals:

*Chinese Journal of Bioinformatics*

*Hereditas (Beijing)*

*Database*

*Journal of Medical Virology*

*Infection, Genetics and Evolution*