Biosketch



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Prof. Zhenghong Yuan is the trustee of the Chinese Society for Microbiology, the recipient of National Outstanding Youth Foundation of China, and the Chief Scientist of the National Key Basic Research Program of China.

His main research areas are the interaction and mechanism of the hepatitis B virus infection with the innate immune system, and the identification of emerging infectious disease pathogen. His representative results include: revealing the new mechanism of impairment of innate immune responses in chronic HBV infection by the hepatitis B virus through the surface antigen and polymerase; proposing the new mechanism of IFN- α inhibiting HBV replication by exosome; discovering the miRNA molecules associated with the early response to interferon treatment; detecting the new human H7N9 avian flu virus infection and its drug-resistant mutation. he has published more than 100 papers in SCI journals including N Engl J Med, Lancet, Nature Immunol, Hepatology, J Virol and J Biol Chem etc.

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Selected Publications:

- 1. Liu Y, Li J, Chen J, Li Y, Wang W, Du X, Song W, Zhang W, Lin L, **Yuan Z***. 2015. Hepatitis B Virus Polymerase Disrupts K63-Linked Ubiquitination of STING To Block Innate Cytosolic DNA-Sensing Pathways. Journal of Virology 89:2287-2300.
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- 3. Wang S, Chen Z, Hu C, Qian F, Cheng Y, Wu M, Shi B, Chen J, Hu Y*, **Yuan Z***. 2013. Hepatitis B Virus Surface Antigen Selectively Inhibits TLR2 Ligand-Induced IL-12 Production in Monocytes/Macrophages by Interfering with JNK Activation. Journal of Immunology 190:5142-5151.

- 4. Li J, Liu K, Liu Y, Xu Y, Zhang F, Yang H, Liu J, Pan T, Chen J, Wu M, Zhou X, **Yuan Z***. 2013. Exosomes mediate the cell-to-cell transmission of IFN-alpha-induced antiviral activity. Nat Immunol 14:793-803.
- 5. Zhang X, Lu W, Zheng Y, Wang W, Bai L, Chen L, Feng Y, Zhang Z, **Yuan Z*.** 2016. In situ analysis of intrahepatic virological events in chronic hepatitis B virus infection. J Clin Invest 126:1079-1092.
- 6. Xiang C, Du Y, Meng G, Soon Yi L, Sun S, Song N, Zhang X, Xiao Y, Wang J, Yi Z, Liu Y, Xie B, Wu M, Shu J, Sun D, Jia J, Liang Z, Sun D, Huang Y, Shi Y, Xu J, Lu F, Li C, Xiang K, **Yuan Z***, Lu S, Deng H. 2019. Long-term functional maintenance of primary human hepatocytes in vitro. Science 364:399-402.
- 7. Zhang W, Chen J, Wu M, Zhang X, Zhang M, Yue L, Li Y, Liu J, Li B, Shen F, Wang Y, Bai L, Protzer U, Levrero M, Yuan Z*. 2017. PRMT5 restricts hepatitis B virus replication through epigenetic repression of covalently closed circular DNA transcription and interference with pregenomic RNA encapsidation. Hepatology 66:398-415.
- 8. Chen J, Zhang W, Lin J, Wang F, Wu M, Chen C, Zheng Y, Peng X, Li J, **Yuan Z***. 2014. An efficient antiviral strategy for targeting hepatitis B virus genome using transcription activator-like effector nucleases. Mol Ther 22:303-311.
- 9. Gao R, Cao B, Hu Y, Feng Z, Wang D, Hu W, Chen J, Jie Z, Qiu H, Xu K, Xu X, Lu H, Zhu W, Gao Z, Xiang N, Shen Y, He Z, Gu Y, Zhang Z, Yang Y, Zhao X, Zhou L, Li X, Zou S, Zhang Y, Li X, Yang L, Guo J, Dong J, Li Q, Dong L, Zhu Y, Bai T, Wang S, Hao P, Yang W, Zhang Y, Han J, Yu H, Li D, Gao GF, Wu G, Wang Y, Yuan Z*, Shu Y. 2013. Human infection with a novel avian-origin influenza A (H7N9) virus. N Engl J Med 368:1888-1897.

10. Hu Y, Lu S, Song Z, Wang W, Hao P, Li J, Zhang X, Yen HL, Shi B, Li T, Guan W, Xu L, Liu Y, Wang S, Zhang X, Tian D, Zhu Z, He J, Huang K, Chen H, Zheng L, Li X, Ping J, Kang B, Xi X, Zha L, Li Y, Zhang Z, Peiris M, Yuan Z*. 2013. Association between adverse clinical outcome in human disease caused by novel influenza A H7N9 virus and sustained viral shedding and emergence of antiviral resistance. Lancet 381:2273-2279.

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