



1 2 3 4 5

当前位置: 首页 > 师资队伍 > 基础医学系 > 教研系列 > 张林琦

## 基础医学系



张林琦

### 履历

2007- 至今 清华大学医学院教授, 北京协和医学院兼职教授, 清华大学艾滋病综合研究中心主任, 全球健康与传染病研究中心主任  
2013-2016 清华大学医学院副院长  
2011-2013 清华大学医学院基础医学系主任  
1997-2007 美国洛克菲勒大学助理教授和副教授  
1993-1997 美国纽约大学博士后  
1988-1993 英国爱丁堡大学分子遗传学系博士, 博士后  
1981-1985 北京师范大学生物系学士

## 研究领域与方向

艾滋病等人类重大病毒性传染病的致病机理，重点研究疾病进展过程中病毒与免疫系统相互作用关系，研发抗病毒药物、抗体和疫苗。通过解析多克隆和单克隆抗体的结构和功能，综合分析人体保护性抗体反应的组成特点，并利用结构生物学和系统生物学手段，理性设计优化单克隆抗体和疫苗，力争率先研发成功根治艾滋病的治疗策略和高效艾滋病疫苗。在研的其它方向还包括埃博拉病毒，寨卡病毒，中东呼吸道冠状病毒，禽流感病毒等新发突发高致病性病毒。此外，担任清华大学医学院全球健康学科建设总协调人，负责相关学科人才引进、教学、科研和对外合作，积极推动新需求和新形势下的学科发展。

## 学术荣誉与奖励

2016 当选为非洲科学院院士  
2016 连续三年爱思唯尔中国高被引学者感染和免疫专业第一名  
2016 清华大学教育教学成果一等奖  
2015 “十一五”到“十三五”国家科技重大专项艾滋病粘膜疫苗首席科学家  
2015 获国家科技进步奖二等奖  
2008 国家自然科学基金杰出青年基金  
2007 科技部“973”计划首席科学家  
2007 “新世纪百千万人才工程”国家级人选  
2003 国家自然科学基金海外杰出青年基金

## 关键词

艾滋病毒，致病机理，抗体，疫苗，新发突发传染病，全球健康与传染病

## 代表性论文

1. Zhou P, Wang H, Fang M, Li Y, Wang H, Shi S, Li Z, Wu J, Han X, Shi X, Shang H, Zhou T, Zhang L. 2019. Broadly resistant HIV-1 against CD4-binding site neutralizing antibodies. *PLoS Pathog* 15:e1007819.
2. Xu J, Jia W, Wang P, Zhang S, Shi X, Wang X, Zhang L. 2019. Antibodies and vaccines against Middle East respiratory syndrome coronavirus. *Emerg Microbes Infect* 8:841-856.
3. Wang Q, Liu L, Ren W, Gettie A, Wang H, Liang Q, Shi X, Montefiori DC, Zhou T, Zhang L. 2019. A Single Substitution in gp41 Modulates the Neutralization Profile of SHIV during In Vivo Adaptation. *Cell Rep* 27:2593-2607.e5.
4. Wang P, Zuo Y, Sun J, Zuo T, Zhang S, Guo S, Shi X, Liang M, Zhou P, Zhang L, Wang X. 2019. Structural and functional definition of a vulnerable site on the hemagglutinin of highly pathogenic avian influenza A virus H5N1. *J Biol Chem* 294:4290-4303.
5. Wang L, Wang R, Wang L, Ben H, Yu L, Gao F, Shi X, Yin C, Zhang F, Xiang Y, Zhang L. 2019. Structural Basis for Neutralization and Protection by a Zika Virus-Specific Human Antibody. *Cell Rep* 26:3360-3368.e5.
6. Li G, Jiang Y, Zhang L. 2019. HIV upsurge in China's students. *Science* 364:711.
7. Jia W, Channappanavar R, Zhang C, Li M, Zhou H, Zhang S, Zhou P, Xu J, Shan S, Shi X, Wang X, Zhao J, Zhou D, Perlman S, Zhang L. 2019. Single intranasal immunization with chimpanzee adenovirus-based vaccine induces sustained and protective immunity against MERS-CoV infection. *Emerg Microbes Infect* 8:760-772.
8. Zuo Y, Wang P, Sun J, Guo S, Wang G, Zuo T, Fan S, Zhou P, Liang M, Shi X, Wang X, Zhang L. 2018. Complementary recognition of the receptor-binding site of highly pathogenic H5N1 influenza viruses by two human neutralizing antibodies. *J Biol Chem* 293:16503-16517.
9. Zhang S, Zhou P, Wang P, Li Y, Jiang L, Jia W, Wang H, Fan A, Wang D, Shi X, Fang X, Hammel M, Wang S, Wang X, Zhang L. 2018. Structural Definition of a Unique Neutralization Epitope on the Receptor-Binding Domain of MERS-CoV Spike Glycoprotein. *Cell Rep* 24:441-452.

10. Zhang L, Zhong P, Zhai X, Shao Y, Lu S. 2018. Open letter from Chinese HIV professionals on human genome editing. *Lancet* 3:33082-4.
11. Wang H, Chen X, Wang D, Yao C, Wang Q, Xie J, Shi X, Xiang Y, Liu W, Zhang L. 2018. Epitope-focused immunogens against the CD4-binding site of HIV-1 envelope protein induce neutralizing antibodies against auto- and heterologous viruses. *J Biol Chem* 293:830-846.
12. Wang FS, Zhang L, Douek D, McMichael A, Xu XN, Lewin SR. 2018. Strategies for an HIV cure: progress and challenges. *Nat Immunol* 19:1155-1158.
13. Li C, Gao F, Yu L, Wang R, Jiang Y, Shi X, Yin C, Tang X, Zhang F, Xu Z, Zhang L. 2018. A Single Injection of Human Neutralizing Antibody Protects against Zika Virus Infection and Microcephaly in Developing Mouse Embryos. *Cell Rep* 23:1424-1434.
14. Yu L, Wang R, Gao F, Li M, Liu J, Wang J, Hong W, Zhao L, Wen Y, Yin C, Wang H, Zhang Q, Li Y, Zhou P, Zhang R, Liu Y, Tang X, Guan Y, Qin CF, Chen L, Shi X, Jin X, Cheng G, Zhang F, Zhang L. 2017. Delineating antibody recognition against Zika virus during natural infection. *JCI Insight* 2(12):93042.
15. Shi B, Li J, Shi X, Jia W, Wen Y, Hu X, Zhuang F, Xi J, Zhang L. 2017. TALEN-Mediated Knockout of CCR5 Confers Protection Against Infection of Human Immunodeficiency Virus. *J Acquir Immune Defic Syndr* 74:229-241.
16. Zhang Q, Gui M, Niu X, He S, Wang R, Feng Y, Kroeker A, Zuo Y, Wang H, Wang Y, Li J, Li C, Shi Y, Shi X, Gao GF, Xiang Y, Qiu X, Chen L, Zhang L. 2016. Potent neutralizing monoclonal antibodies against Ebola virus infection. *Sci Rep* 6:25856.
17. Jin S, Ji Y, Wang Q, Wang H, Shi X, Han X, Zhou T, Shang H, Zhang L. 2016. Spatiotemporal hierarchy in antibody recognition against transmitted HIV-1 envelope glycoprotein during natural infection. *Retrovirology* 13:12.
18. Zuo T, Sun J, Wang G, Jiang L, Zuo Y, Li D, Shi X, Liu X, Fan S, Ren H, Hu H, Sun L, Zhou B, Liang M, Zhou P, Wang X, Zhang L. 2015. Comprehensive analysis of antibody recognition in convalescent humans from highly pathogenic avian influenza H5N1 infection. *Nat Commun* 6:8855.
19. Jiang L, Wang N, Zuo T, Shi X, Poon KM, Wu Y, Gao F, Li D, Wang R, Guo J, Fu L, Yuen KY, Zheng BJ, Wang X, Zhang L. 2014. Potent Neutralization of MERS-CoV by Human Neutralizing Monoclonal Antibodies to the Viral Spike Glycoprotein. *Sci Transl Med* 6:234ra59.
20. Wang N, Shi X, Jiang L, Zhang S, Wang D, Tong P, Guo D, Fu L, Cui Y, Liu X, Arledge KC, Chen YH, Zhang L, Wang X. 2013. Structure of MERS-CoV spike receptor-binding domain complexed with human receptor DPP4. *Cell Res* 23:986-93.
21. Sun C, Chen Z, Tang X, Zhang Y, Feng L, Du Y, Xiao L, Liu L, Zhu W, Chen L, Zhang L. 2013. Mucosal priming with a replicating-vaccinia virus-based vaccine elicits protective immunity to simian immunodeficiency virus challenge in rhesus monkeys. *J Virol* 87:5669-77.
22. Shang H, Xu J, Han X, Spero Li J, Arledge KC, Zhang L. 2012. HIV prevention: Bring safe sex to China. *Nature* 485:576-7.
23. Guo D, Shi X, Arledge KC, Song D, Jiang L, Fu L, Gong X, Zhang S, Wang X, Zhang L. 2012. A single residue within the V5 region of HIV-1 envelope facilitates viral escape from the broadly neutralizing monoclonal antibody VRC01. *J Biol Chem* 287:43170-9.
24. Zuo T, Shi X, Liu Z, Guo L, Zhao Q, Guan T, Pan X, Jia N, Cao W, Zhou B, Goldin M, Zhang L. 2011. Comprehensive analysis of pathogen-specific antibody response in vivo based on an antigen library displayed on surface of yeast. *J Biol Chem* 286:33511-9.
25. Shang H, Han X, Shi X, Zuo T, Goldin M, Chen D, Han B, Sun W, Wu H, Wang X, Zhang L. 2011. Genetic and Neutralization Sensitivity of Diverse HIV-1 env Clones from Chronically Infected Patients in China. *J Biol Chem* 286:14531-41.
26. Liu Z, Shan M, Li L, Lu L, Meng S, Chen C, He Y, Jiang S, Zhang L. 2010. In Vitro Selection and Characterization of HIV-1 Variants with Increased Resistance to Sifuvirtide, a Novel HIV-1 Fusion Inhibitor. *J Biol Chem* 286:3277-87.
27. Lu L, Jia M, Ma Y, Yang L, Chen Z, HO DD, Jiang Y, Zhang L. 2008. The Changing face of HIV in China. *Nature* 455:607-609.
28. He Y, Xiao Y, Song H, Liang Q, Ju D, Chen X, Lu H, Jing W, Jiang S, Zhang L. 2008. Design and Evaluation of Sifuvirtide, a Novel HIV-1 Fusion Inhibitor. *J Biol Chem* 283:11126-34.
29. Chen HY, Di Mascio M, Perelson AS, Ho DD, Zhang L. 2007. Determination of virus burst size in vivo using a single-cycle SIV in rhesus macaques. *Proc Natl Acad Sci U S A* 104:19079-84.
30. Zhang L, Chung C, Hu BS, He T, Guo Y, Kim AJ, Skulsky E, Jin X, Hurley A, Ramratnam B, Markowitz M, Ho DD. 2000. Genetic characterization of rebounding HIV-1 after cessation of highly active antiretroviral therapy. *J Clin Invest* 106:839-45.
31. Ho DD, Zhang L. 2000. HIV-1 rebound after anti-retroviral therapy. *Nat Med* 6:736-7.
32. Zhang L, Ramratnam B, Tenner-Racz K, He Y, Vesanen M, Lewin S, Talal A, Racz P, Perelson AS, Korber BT, Markowitz M, Ho DD. 1999. Quantifying residual HIV-1 replication in patients receiving combination antiretroviral therapy. *N Engl J Med* 340:1605-13.

33. Zhang L, Lewin SR, Markowitz M, Lin HH, Skulsky E, Karanickolas R, He Y, Jin X, Tuttleton S, Vesanan M, Spiegel H, Kost R, van Lunzen J, Stellbrink HJ, Wolinsky S, Borkowsky W, Palumbo P, Kostrikis LG, Ho DD. 1999. Measuring recent thymic emigrants in blood of normal and HIV-1-infected individuals before and after effective therapy. *J Exp Med* 190:725-32.

34. Zhang L, He T, Huang Y, Chen Z, Guo Y, Wu S, Kunstman KJ, Brown RC, Phair JP, Neumann AU, Ho DD, Wolinsky SM. 1998. Chemokine coreceptor usage by diverse primary isolates of human immunodeficiency virus type 1. *J Virol* 72:9307-12.

35. Zhang L, Huang Y, He T, Cao Y, Ho DD. 1996. HIV-1 subtype and second-receptor use. *Nature* 383:768.

36. Zhang LQ, MacKenzie P, Cleland A, Holmes EC, Brown AJ, Simmonds P. 1993. Selection for specific sequences in the external envelope protein of human immunodeficiency virus type 1 upon primary infection. *J Virol* 67:3345-56.

37. Zhang LQ, Simmonds P, Ludlam CA, Brown AJ. 1991. Detection, quantification and sequencing of HIV-1 from the plasma of seropositive individuals and from factor VIII concentrates. *Aids* 5:675-81.

## 联系方式

Email: zhanglinqi at tsinghua.edu.cn

Phone: +86-10-62788131

## 个人主页

无

[招聘信息](#)

[办事指南](#)

[论坛活动](#)

[友情链接](#)

[清华大学新闻网站](#)

Copyright © 2015 清华大学医学院 技术支持: 诺滨科技有限公司



用微信扫一扫添加关注