



## 人才队伍

· 院士

· 百人计划

· 杰出青年

· 研究生教育

➤ 学科介绍

➤ 招生信息

➤ 导师简介

➤ 研究生培养

➤ 研究生就业

➤ 博士后流动站

➤ 无微不至BBS

➤ 研究生会

您现在的位置: [首页](#) > [人才队伍](#) > [院士](#)

姓名:	田波	性 别:	男
职务:	/	职 称:	研究员
学历:	大学	通讯地址:	北京市朝阳区北辰西路1号院3号
电话:	86-10-64807482	邮政编码:	100101
传真:	/	电子邮件:	tienpo@sun.im.ac.cn



简历:

田 波 英文名 : Po Tien

研究员, 博士生导师

中国科学院院士

### 主要研究领域:

致力于分子病毒学和分子免疫学研究, 主要从事HBV T-细胞分子免疫及囊膜病毒融合机制和融合抑制剂的研究。

### 主要履历及经历:

1950-1954	北京农业大学, 植物保护专业,	学士
1954-1962	中国科学院微生物研究所,	研究实习员
1962-1979	中国科学院微生物研究所,	助理研究员
1979-1986	中国科学院微生物研究所,	副研究员
1981	澳大利亚阿德雷德大学,	访问学者
1986-至今	中国科学院微生物研究所,	研究员, 博士生导师
1986	德国杜赛尔多夫大学,	访问学者
1990	美国马里兰大学和维斯康辛大学,	访问学者
1993	英国苏格兰作物所和John Innes研究中心,	访问学者
1991-至今	中国科学院院士。	

### 获奖情况:

曾获国家自然科学与科技进步奖两次, 中国科学院自然科学和科技进步奖五次, 省部级科学与技术进步奖三次。1999年获何梁何利科学与技术进步奖。1999年被亚太生物技术双周刊(Asia-Pacific Biotech News)遴选为亚裔著名科学家。

### 学术兼职:

武汉大学生科院教授、病毒学国家重点实验室名誉主任, 美国病毒学会高级会员, 印度病毒学会终身会员, 曾任国际类病毒工作组成员。

### 主要论文:

[1] Palukaitis P., Randles J.W., Tian Y.T., Kang L.Y., and Tien P., 1981, Taxonomy of tobamoviruses by cDNA molecular hybridization. *Invervirology* 16: 136-141.

[2] Tien P., Davies C., Hatta T. and Francki R.I.B., 1981, Viroid-like RNA encapsidated in lucerne transient streak virus, *FEBS Letters* 132(2):353-356.

[3] Adrian Gibbs, **Tien Po**, Kang Liang-yi, Tian Ying-chun, John Randles, 1982, Classification of several tobamoviruses isolated in China on the basis of the amino acid composition of their virion proteins, *Intervirology* 18: 160-163.

[4] Kang L.Y., Yang X.C., and **Tien P.**, 1982, Double-stranded viral RNA content in tobacco leaves infected with virulent and avirulent isolates of TMV. *Virology* 118:324-328.

[5] **Tien Po**, A.L.N.Rao and T. Hatta, 1982, Cucumber mosaic virus from cornflower in China, *Plant Disease*, 66(4):337-339.

[6] **Tien P.**, 1982, Potato degeneration research in China, *American Potato J.* 59:46-50.

[7] **Tien P.** and Qiu B.S., 1982, Infection of barley protoplasts with BSMV detected by immunoperoxidase, *J.Gen.Virology* 58(2):223-227.

[8] **Tien P.** Zhang X., 1983, Control of two plant viruses by protection inoculation in China, *Seed Sci. & Technol.* 11: 969-972.

[9] **Tien P.**, 1985, Viroids and viroid diseases in China, in: *Subviral Pathogens of Plants and Animals: Viroids and Prions* (K.Maramorosch and J.J. McKelvey, eds.), pp.123-136, Academic Press, New York.

[10] Wu J.Q., Lu W.J., and **Tien P.**, 1986, Multiplication of velvet tobacco mottle virus in Nicotiana clevelandii protoplasts is resistant to a-Amanitin. *J. Gen Virol.* 67, 2757-2762.

[11] Gerhard S., **Tien P.**, Kaper J., and Riesner D., 1987, Double-stranded cucumovirus associated RNA 5: which sequence variations may be detected by optical melting and temperature-gradient gel electrophoresis? *Nucleic Acids Research* 15(13):5085-5103.

[12] **Tien P.**, Chen W., 1987, Burdock stunt viroid, in "The Viroid" ed. by T.O.Diner P.333-339, Plenum.

[13] **Tien P.**, Zhang X., Qiu B., and Wu G.S., 1987, Satellite RNA for the control of plant diseases caused by cucumber mosaic virus. *Ann. Appl. Biol.* 111:143-152.

[14] **Tien P.**, Steger G., Rosenbaum V., Kaper J. and Riesner D., 1987, Double-stranded cucumovirus associated RNA 5: experimental analysis of necrogenic and non-necrogenic variants by temperature-gradient gel electrophoresis. *Nucleic Acids Research*, 15: 5069-5083.

[15] Wu G.S., Kang L.Y. and **Tien P.**, 1989, The effect of satellite RNA on cross-protection among cucumber mosaic virus strains. *Ann. Appl. Biol.*, 114, 489-496.

[16] **Tien P.**, 1990, Satellite RNA for the Control of Plant Diseases, In *Risk Assessment in Agricultural Biotechnology: Proceedings of the International Conference*, Edited by J.J.Marais and G.Bruening, University of California, 29-37.

[17] **Tien P.**, 1991, Pear as a natural host of apple scar skin viroid. viroids: Pathogens at the Frontier of Life. ed by K. Maramorosch. CRC Press.

[18] **Tien P.**, and Wu G.S., 1991, Satellite RNA for the biocontrol of plant disease. *Advance in Virus Research*, 39:321-339.

[19] Qin B.Y., Zhang X.H., Wu G.S., **Tien P.**, 1992, Plant resistance to fungal diseases induced by the infection of cucumber mosaic virus attenuated by satellite RNA, *Ann. Appl. Biol.*, 120, 361-366.

[20] Bingyi Qin, Xiuhua Zhang, Gusui Wu and **Po Tien**, 1992, Plant resistance to fungal diseases induced by the infection of cucumber mosaic virus attenuated by satellite RNA, *Ann. Appl. Biol.* (printed in Great Britain) 120, 361-366.

[21] Yie Y., Zhao F., Zhao S., Liu Y.Z., Liu Y.L., and **Tien P.**, 1992, High resistance to cucumber mosaic virus conferred by satellite RNA and coat protein in transgenic commercial tobacco cultivar G-140, *Molecular Plant-Microbe Interactions*, 5(6):460-465.

[22] Yie Y., **Tien P.**, 1993, Plant virus satellite RNAs and their role in engineering resistance to virus diseases, *Seminars in Virology*, 4:363-368.

[23] Yie Y. and **Tien P.**, 1993, A simplified and reliable protocol for plasmid DNA sequencing: fast mini prep and denaturation. *Nucleic Acid Res.*, 21(2):361.

[24] Yie Y., Wu Z., Wang S., Zhao S., Zhang T., Yao G., and **Tien P.**, 1995, Rapid production and field

- [25] Tien P., 1996, Production, Use and Biosafety of Genetically Engineering Resistance to Plant Virus Diseases, Changing Nature's Course-The Ethical Challenge of Biotechnology, Edited by G.K. Becker and J.P. Buchanan, Hong Kong University Press, 17-26.
- [26] Yang W.D., Wang X.H., Wang S.Y., Yie Y., Tien P., 1996, Infection and replication of a planthopper transmitted virus-rice stripe virus in rice protoplast, J.of Virological Methods, 59:57-60.
- [27] Yang X.C., Kang L.Y., Tien P., 1997, Resistance of infected tomato with cucumber mosaic virus satellite RNA to potato spindle tuber viroid, Ann. Appl. Biol., 129.
- [28] Yang X.C., Yie Y., Zhu F., Liu Y.L., Kang L.Y., Wang X.F. and Po Tien, 1997, Ribozyme-mediated high resistance against potato spindle tuber viroid in transgenic potatoes, Proc. Natl. Acad. Sci., Vol. 94, 4861-4865.
- [29] Canhui Liu, Lun-Quan Sun, and Po Tien, 2000, Ribozyme-mediated suppression of platelet type 12 lipoxygenase in human erythroleukemia cells, Cancer Gene Therapy, 7(5): 671-675.
- [30] Bing Wang, Li-Hua Ke, Hong Jiang, Chuan-Zhao Li, Po Tien, 2000, Selection of a specific peptide from a nona-peptide library for in vitro inhibition of grass carp hemorrhage virus replication, Virus Research 67: 119-125.
- [31] Shengcheng Han, Zujian Wu, Huaiyi Yang, Rong Wang, Yin Yie, Lianhui Xie, Po Tien, 2000, Ribozyme-mediated resistance to rice dwarf virus and the transgene silencing in the progeny of transgenic rice plants, Transgenic Research, 9: 195-203.
- [32] Songdong Meng, Tong Gao, George F Gao, Po Tien. 2001, HBV-specific peptide associate with heat-shock protein gp96. The Lancet, 357(9255): 528.
- [33] Song-Dong Meng, Jian Song, Zihe Rao, Po Tien, George F. Gao, 2002, Three-step purification of gp96 from human liver tumor tissues suitable for isolation of gp96-bound peptides, Journal of Immunological Methods, 264: 29-35.
- [34] Ming Yu, Enxiu Wang, Youfang Liu, Dianjun Cao, Ningyi Jin, Catherine W.-H. Zhang, Mark Bartlam, Zihe Rao, Po Tien and George F. Gao, 2002, Six-helix bundle assembly and characterization of heptad repeat regions from the F protein of Newcastle disease virus. Journal of General Virology, 83, 623-629.
- [35] Jieqing Zhu, Catherine W.-H. Zhang, Yipeng Qi, Po Tien, George F. Gao, 2002, The fusion protein core of measles virus forms stable coiled-coil trimer, Biochemical and Biophysical Research Communications. 299, 897-902.
- [36] Enxiu Wang, Xiao'ou Sun, Yuan Qian, Linqing Zhao, Po Tien, and George F. Gao, 2003, Both heptad repeats of human respiratory syncytial virus fusion protein are potent inhibitors of viral fusion, Biochemical and Biophysical Research Communications, 302: 469-475.
- [37] Zhu, J., Ding, Y., Gao, F., Wu, T., Zhang, C. W.-H., Tien, P., Rao, Z. & Gao, G. F., 2003, Crystallization and preliminary X-ray crystallographic analysis of the trimer core from measles virus fusion protein. Acta Crystallographica Section D Biological Crystallography D59: 587-590.
- [38] Bo Su, Li Liu, Fusheng Wang, Xien Gui, Min Zhao, Po Tien, Linqi Zhang, Zhiwei Chen. 2003. HIV-1 subtype B' dictates the AIDS epidemic among paid blood donors in the Henan and Hubei provinces of China AIDS, 17: 2515-2520.
- [39] Ke Zhuang, Xien Gui, Bo Su, Po Tien, Zhiwei Chen, Linqi Zhang. 2003. High prevalence of HIV infection among women and their children in Henan province, China. JAIDS, 33: 649-657.
- [40] Jieqing Zhu, Gengfu Xiao, Yanhui Xu, Fang Yuan, Congyi Zheng, Yueyong Liu, Huimin Yan, David K. Cole, John I. Bell, Zihe Rao, Po Tien and George F. Gao. 2004, Following the rule: formation of the 6-Helix bundle of the fusion core from severe acute respiratory syndrome coronavirus spike protein and identification of potent peptide inhibitors. Biochemical and Biophysical Research Communications, 319(1): 283-288.
- [41] Yueyong Liu, Jieqing Zhu, Mingguang Feng, Po Tien, and George F. Gao. 2004, Six-helix bundle assembly and analysis of the central core of mumps virus fusion protein. Archives of Biochemistry and Biophysics, 421: 143-148.
- [42] Minghai Zhou, Yanhui Xu, Zhiyong Lou, David K. Cole, Xiaojuan Li, Yiwei Liu, Po Tien, Zihe Rao and George F. Gao. 2004, Complex assembly, crystallization and preliminary X-ray crystallographic studies of MHC H-2Kd complexed with an HBV-core nonapeptide. Acta Crystallographica Section D Biological Crystallography D59: 591-598.

[43] Xiao-Dong Zhu, Cheng-Lin Li, Zhen-Wei Lang, George F. Gao\*, Po Tien\*, 2004, Significant correlation between expression level of HSP gp96 and the progression of hepatitis B virus induced diseases. World Journal of Gastroenterology, 10(8):1141-1145.

[44] Xiao-Dong Zhu, Wei-Hua Zhang, Cheng-Lin Li, Yang Xu, Wei-Jiang Liang, Po Tien, 2004, New serum biomarkers for detection of HBV-induced liver cirrhosis using SELDI protein chip technology. World Journal of Gastroenterology, 10(16): 2327-2329.

[45] Minghai Zhou, Yanhui Xu, Zhiyong Lou, David K. Cole, Xiaojuan Li, Yiwei Liu, Po Tien, Zihe Rao and George F. Gao. 2004, Complex assembly, crystallization and preliminary X-ray crystallographic studies of MHC H-2Kd complexed with an HBV-core nonapeptide. Acta Crystallographica Section D Biological Crystallography. 60, 1473-1475.

[46] Shuwen Liu, Gengfu Xiao, Yibang Chen, Yuxian He, Jinkui Niu, Canos R Escalante, Huabao Xiong, James Farman, Asim K Debnath, Po Tien, Shibo Jiang. 2004. Interaction between heptad repeat 1 and 2 regions in spike protein of SARS-associated coronavirus: implications for virus fusogenic mechanism and identification of fusion inhibitors. Lancet, 363: 938-47.

[47] Shao-Man Yin, Man-Sun Sy, and Po Tien, 2004. An engineered PrPSC-like molecule from the chimera of mammalian prion protein and yeast ure2p prion-inducing domain. Acta Biochimica et Biophysica Sinica 36 (2): 42-46.

[48] Shao-Man Yin, Man-Sun Sy, Huai-Yi Yang, and Po Tien. 2004, Interaction of Doppel with the full-length laminin receptor precursor protein. Archives of Biochemistry and Biophysics 428: 165-169.

[49] Hongtao Li , Minghai Zhou , Jinle Han, Xiaodong Zhu, Tao Dong, George F. Gao , and Po Tien\*. 2005, Generation of murine CTL by a hepatitis B virus-specific peptide and evaluation of the adjuvant effect of heat shock protein glycoprotein 96 and its terminal fragments. The Journal of Immunology. 174(1):195-204.

[50] Ling Ni, George F. Gao, Po Tien. 2005, Rational design of highly potent HIV-1 fusion inhibitory proteins: Implication for developing anti viral therapeutics. Biochemical and Biophysical Research Communications 332: 831-836.

[51] Ling Ni, Jieqing Zhu, Junjie Zhang, Meng Yan, George F. Gao, Po Tien. 2005, Design of recombinant protein-based SARS-CoV entry inhibitors targeting the heptad-repeat regions of the spike protein S2 domain. Biochemical and Biophysical research communications, 330: 39-45.

[52] Ling Ni, Linqing Zhao, George F. Gao, Yuan Qian, Po Tien. 2005, The antibodies directed against N-terminal heptad-repeat peptide of hRSV fusion protein and its analog- 5-Helix inhibit virus infection in vitro. Biochemical and Biophysical research communications, 331:1358-1364.

[53] Ling Ni, Linqing Zhao, Yuan Qian, Jieqing Zhu, Zhibo Jin, Yu Wai Chen, Po Tien\*, George F Gao\*, 2005, Design and characterization of human respiratory syncytial virus entry inhibitors. Antiviral Therapy, 10: 833-840.

[54] Jieqing Zhu, Xiuli Jiang, Yueyong Liu, Po Tien, George F Gao. 2005. Design and characterization of viral polypeptide inhibitors targeting Newcastle disease virus fusion. Journal of Molecular Biology. 354: 601 - 613.

[55] Qing Fang, Lin Yang, Weijun Zhu, Li Liu, Haibo Wang, Wenbo Yu, Gengfu Xiao, Po Tien, Linqi Zhang, Zhiwei Chen. 2005. Host range, growth property, and virulence of the smallpox vaccine: vaccinia virus Tian Tan strain. Virology, 335: 242-251.

[56] Li Liu, Bo Su, Ke Zhuang, Po Tien, Zhiwei Chen, Linqi Zhang. 2005. Genetic characterization of full-length HIV type 1 genomes from 3 infected paid blood donors in Henan, China. JAIDS, 40(4): 501-504.

[57] Zhaoyang Li , Yong Xiong, Yu Peng, Ji ’ an Pan, Yu Chen, Xiaoyun Wu, Snawar Hussain, Po Tien, Deyin Guo. 2005. Specific inhibition of HIV-1 replication by short hairpin RNAs targeting human cyclin T1 without inducing apoptosis. FEBS Letters, 579: 3100-3106.

[58] Snawar Hussain, Ji ’ an Pan, Yu Chen, Yalin Yang, Jing Xu, Yu Peng, Ying Wu, Zhaoyang Li , Ying Zhu, Po Tien, Deyin Guo. 2005. Identification of novel subgenomic RNAs and noncanonical transcription initiation signals of severe acute respiratory syndrome coronavirus. Journal of virology, 5288-5295.

[59] Shu Li, Jieqing Zhu, Yu Peng, Shanshan Cui, Chunping Wang, George F. Gao, Po Tien. 2005. Characterization of BIV Env core: implication for mechanism of BIV-mediated cell fusion. Biochemical and Biophysical Research Communications, 329: 603-609.

[60] Rui Gong, Xiaoxue Peng, Shuli Kang, Hui xing Feng, Jianying Huang, Wentao Zhang, Donghai Lin, Po

Tien, Gengfu Xiao, 2005. Structural characterization of the fusion core in syncytin, envelop protein of human endogenous retrovirus family W. Biochemical and Biophysical Research Communications, 331: 1193-1200.

[61] Ying Zhu, Mo Liu, Weiguang Zhao, Jianlin Zhang, Xue Zhang, Ke Wang, Chunfang Gu, Kai Liang Wu, Yan Li, Congyi Zheng, Gengfu Xiao, Huiyan Yan, Jianmin Zhang, Deyin Guo, Po Tien, Jianguo Wu. 2005. Isolation of virus from a SARS patient and genome-wide analysis of genetic mutations related to pathogenesis and epidemiology from 47 SARS-CoV isolates. Virus Genes, 30(1): 93-102.

[62] Yuxia Zhang, Yanlu Zan, Ming Shan, Changmei Liu, Ming Shi, Wei Li, Zhixin Zhang, Na Liu, Fusheng Wang, Weidong Zhong, Fulian Liao, George F. Gao\*, Po Tien\*. 2006. Effects of heat shock protein gp96 on human dendritic cell maturation and CTL expansion. Biochemical and Biophysical Research Communications, 344: 581-587.

[63] Minghai Zhou, Dongping Xu, Xiaojuan Li, Hongtao Li, Ming Shan, Jiaren Tang, Min Wang, Fu-Sheng Wang, Xiaodong Zhu, Hua Tao, Wei He, Po Tien\*, and George F. Gao\*, 2006, Screening and Identification of Severe Acute Respiratory Syndrome-Associated Coronavirus-Specific CTL Epitopes, Journal of Immunology, 177(4): 2138-2145.

[64] Xiaoyan Gong, Xien Gui, Yuxia Zhang, Po Tien. 2006. Screening for CD8 cytotoxic T lymphocytes specific for Gag of human immunodeficiency virus type 1 subtype B' Henan isolate from China and identification of novel epitopes restricted by the HLA-A2 and HLA-A11 alleles. Journal of General Virology, 87: 151-158.

[65] Yueyong Liu, Yanhui Xu, Zhiyong Lou, Jieqing Zhu, Xuebo Hu, George F. Gao, Bingsheng Qiu, Zih Rao, Po Tien, 2006, Structural characterization of Mumps virus fusion protein core. Biochemical and Biophysical Research Communications, 348: 916-922.

[66] Xiaoxue Peng, Ji'an Pan, Rui Gong, Yang Liu, Shuli Kang, Huixing Feng, Gang Qiu, Deyin Guo, Po Tien, Gengfu Xiao. 2006. Functional characterization of syncytin-A, a newly murine endogenous virus envelope protein. Journal of Biological Chemistry, 282: 381-389.

[67] Yu S, Yin S, Li C, Wong P, Chang B, Xiao F, Kang SC, Yan H, Xiao G, Tien P, Sy MS. Aggregation of prion protein with insertion mutations is proportional to the number of inserts. Biochem J., 403(2):343-51 2006.

[68] Wenbin Yang, Huaiyi Yang\*, Po Tien\*. 2006. In Vitro Self-propagation of Recombinant PrPSc-like Conformation Generated in the Yeast Cytoplasm. FEBS Letters, 580: 4231-4235 (IF 3.415).

[69] Shuwen Wu, Junqiang Xu, Jiangxia Liu, Xuan Yan, Xiaodong Zhu, Gengfu Xiao, Lunquan Sun, Po Tien, 2007, An efficient RNA-cleaving DNA enzyme can specifically target the 5'-untranslated region of Severe Acute Respiratory Syndrome associated Coronavirus (SARS-CoV). Journal of Gene Medicine 9: 1080-1086.

[70] Chang-Mei Liu, Zuo Yang, Chao-Wu Liu, Rong Wang, Po Tien\*, Roderick Dale and Lun-Quan Sun\*. 2007. Effect of RNA oligonucleotide targeting Foxo-1 on muscle growth in normal and cancer cachexia mice .Cancer Gene Therapy 14 (12): 945-52.

[71] Jiaxin Yan, Xuqing Liu, Yao Wang, Xiaomo Jiang, Huayu Liu, Mingying Wang, Xiaodong Zhu, Min Wu and Po Tien, 2007. Enhancing the potency of HBV DNA vaccines using fusion genes of HBV specific antigens and the N-terminal fragment of gp96. Journal of Gene Medicine, 9: 107-121.

[72] Yuxia Zhang, Shu Li, Ming Shan, Xuwen Pan, Ke Zhuang, Lihua He, Keith Gould and Po Tien, 2007, HBV core antigen epitopes presented by HLA-A2 single chain trimers induce functional epitope-specific CD8+ T cell responses in HLA-A2.1/Kb transgenic mice, Immunology, 121(1): 105-12.

[73] Chang-Mei Liu, Zuo Yang, Chao-Wu Liu, Rong Wang, Po Tien, Roderick Dale and Lun-Quan Sun. 2007. Effect of RNA oligonucleotide targeting Foxo-1 on muscle growth in normal and cancer cachexia mice .Cancer Gene Therapy. 14(12) : 945-52.

[74] Heng-Gui Liu, Chen Wei-Wei, Fan Zhen-Ping, Yang Hui-Ying, Shi Ming, Zhang Zheng, Luan Shen-Shun, Zhang Hui, Lu Peng, Tien Po, Wang Fu-Sheng, 2007, The high prevalence of the 127 mutant HBsAg18-27 epitope in Chinese HBV-infected patients and its cross-reactivity with the V27 prototype epitope. Clinical Immunology, 125, 337-345.

[75] Shaoman Yin, Nancy Pham, Shuiliang Yu, Chaoyang Li, Poki Wong, Binggong Chang, Shin-Chung Kang, Emiliano Biasini, Po Tien, David A Harris, and Man-Sun Sy, 2007. Human Prion Proteins with Pathogenic Mutations Share Common Conformational Changes Resulting in Enhanced Binding to Glycosaminoglycans, PNAS (In press) (IF 9.643).

[76] Yan Su, Xiaodong Zhu, Yao Wang, Min Wu, Po Tien, Evaluation of the Glu11 and Gly8 of H5N1 influenza hemagglutinin fusion peptide for membrane fusion using reverse genetics, Archives of Virology, 2007

[77] Yan Su, Huaiyi Yang, Baojiang Zhang, Xiaoxuan Qi, Po Tian, Dual reporter gene based system to quantitate the cell fusion of avian influenza virus, Biotechnology letter, 2007 (Accepted, on line, 2007, 9) (IF 1.134).

[78] Chang-Mei Liu, Zhuo Yang, Chao-Wu Liu, Rong Wang, Po Tien\*, Roderick Dale and Lun-Quan Sun\*. 2008. Myostatin antisense RNA-mediated muscle growth in normal and cancer cachexia mice. Gene Therapy 15 (3): 155-60.

[79] Zhuo Yang, Jingwu Zhang, Haolong Cong, Zenghong Huang, Lunquan Sun, Changmei Liu, Po Tien, A retrovirus-based system to stably silence GDF-8 expression and enhance myogenic differentiation in human rhabdomyosarcoma cell. Journal of Gene Medicine, 10: 825 - 833, 2008.

[80] Pang W, Wang RR, Yang LM, Liu CM, Tien P, Zheng YT. Recombinant protein of heptad-repeat HR212, a stable fusion inhibitor with potent anti-HIV action in vitro. Virology, 2008, 377: 80-87.

[81] H.G. Liu, Z.P. Fan, W.W. Chen, H.Y. Yang, Q.F. Liu, H. Zhang, P. Tien and F.S. Wang, 2008, A mutant HBs antigen (HBsAg) 183-191 epitope elicits specific cytotoxic T lymphocytes in acute hepatitis B patients, Clinical and Experimental Immunology, 151: 441-447.

研究领域:

社会任职:

获奖及荣誉:

代表论著:

承担科研项目情况:

代表论著:

© 1996 - 2009 中国科学院微生物研究所 版权所有 备案序号: 京ICP备05064432号

地址: 北京市朝阳区北辰西路1号院3号 邮编: 100101 电话: 86-10-64807462 传真: 86-10-64807468 Email: office@im.ac.cn