**卢斌峰教授简介**



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**个人简介：**

免疫学博士，苏州大学特聘教授，美国匹兹堡大学医学院免疫学系终身副教授，肿瘤治疗学重点学科名誉主任。国家自然科学基金海外杰出青年获得者。

**研究方向：**

研究致力于运用遗传学、分子生物学技术手段以及动物模型，阐明T细胞在肿瘤免疫、自身免疫和免疫治疗中的作用和机制。主要研究T细胞Gadd45信号转导机制，T细胞自噬和代谢(Beclin 1)，肿瘤微环境调节T细胞失能的分子机制(TIM-3)，和抗肿瘤的分子机制(IL-33、IL-36)。深入理解T细胞在肿瘤和自身免疫过程中的分子和细胞机制为肿瘤和自身免疫疾病的治疗提供新靶点。

先后承担美国NIH项目、MS society课题、中国国家自然科学基金海外杰出青年基金与国家自然基金项目等科研项目，相关成果获得美国NIH 研究科学家发展奖、美国肿瘤研究所研究奖、中国自然科学基金委海外青年科学家合作奖与美国免疫学会发展奖(AAI travel award)。研究成果多次发表在国际权威期刊如Nature Immunology、Immunity、Science、Cancer Cell等有影响力的主流免疫学和肿瘤学期刊，受到国际免疫学界的关注。

**主持科研项目：**

1. R21, 01/01/2018-12/31/2019, Role: PI, Source: NIH, Targeting IL-33 to boost immunotherapy of cancer, ongoing

2. R21, 04/01/2016-03/31/2018, Role: PI, Source: NIH, Exploring IL-36gamma as a new tumor immune therapy, ongoing

3. R21, 04/01/2016-03/31/2018, Role: PI, Source: NIH, Dissecting the role of the ATF4 stress response in T cell-mediated inflammation, ongoing

4. R01, 03/04/2016-02/28/2021, Role: Co-PI, Source: NIH, Induction of therapeutic immunity in the tumor microenvironment, ongoing

5. R01, 06/04/2017-05/28/2022, Role: Co-PI, Source: NIH, Immunostimulatory Nanocarrier for Breast Cancer Immunochemotherapy, ongoing

6. R01, 01/01/2006-12/31/2012, Source: NIH/NIAID, Role: PI, Immune Regulation by Gadd45b and Gadd45g, completed

7. RPCI-UPCI Ovarian Cancer SPORE DRP, 7/01/2014-6/20/2016, Role: PI, Source: NIH, Immune Therapy Targeting Regulatory T cells Expressing Tim-3 and PD-1, completed

8. R21, 01/01/2013-12/31/2015, Role: PI, Source: NIH, Cellular and molecular mechanisms underlying IL-33-mediated anti-tumor immunity, completed

9. RG 3615-A-1, 10/1/2004-9/30/2007 (turned down on 12/31/2005 due to overlapping with NIH award starting 01/01/2006) , Role: PI, completed

10. P30-AR47372, 10/1/2004-2/28/2006, Source: NIH, Role: Co-PI, “Molecular mechanisms of anti-proliferation and apoptosis by members of the Gadd45 family in T cells” , completed

11. K01 AR048854, 07/01/2003-03/31/2008, Source: NIH/NIAMS, Role: PI, Regulation of the MAP kinase pathway in the CD4+ T cells, completed

12. Key International Collaboration Award, 10/01/2013-09/31/2017, Role: Co-PI, Source: NSF China, Study immune “check-point” genes in human colorectal cancer, ongoing

13. Investigator award, 07/01/2004-06/30/2008, Source: Cancer Research Institute, Role: PI, Immune Regulation by genes of the Gadd45 family, completed

14. International Collaboration Award 2nd phase, 01/01/2018-12/31/2021, Role: PI, Source: NSF China, Study danger signal IL-33 in promoting antitumor immunity, ongoing

15. International Collaboration Award, 10/01/2014-09/31/2016, Role: PI, Source: NSF China, Study danger signal IL-33 in promoting antitumor immunity, completed

16. Destiny Biotech, LLC., 09/18/2016-12/31/2017, Role: PI, Study of Mechanisms of Action of Immune Checkpoint Inhibitors, ongoing

17. Destiny Biotech, LLC., 03/01/2016-03/01/2017, Role: PI, Characterization of Novel Immune Checkpoint Inhibitors, completed

18. Head & Neck SPORE. Developmental Research Project, 05/01/2014-4/30/2015, Role: PI, Source: NIH, Intratumoral Regulatory T cells expressing Tim-3 and PD-1 as a target of immunotherapy for HNC, completed

19. CTSI pilot grant, 01/01/2013-12/31/2013, Role: PI, Source: NIH, Gene Expression Profiling of Thymic Epithelial Cells from Thymona, completed

20. Overseas Young Scientist Collaborative Research Funds, 11/01/2005-10/31/2008, Source: National Natural Science Foundation of China, Grant number: 30528008, Role: PI, Molecular mechanisms of reverse signaling, completed

21. Cancer and Aging Program (NIH grant #P20 CA103730), 11/01/2003-10/31/2009, Source: NIH, Role: Co-PI, completed

22. The Arthritis Foundation Postdoctoral Fellowship, 2001-2003, Source: Arthritis Foundation, Role: P.I., The role of gadd45g in the immune response and autoimmune diseases, completed

23. National Multiple Sclerosis Society, Role: PI, Immune regulation by a family of genes called Gadd45b and Gadd45g, completed

24. 国家自然科学基金海外及港澳学者合作研究基金延续资助项目，31729001，危险信号IL-33抗肿瘤免疫机制和临床应用，2018/01-2021/12，180万元

**近期代表性论著：**

1. Chen L, Xiong Y, Li J, Zheng X, Zhou Q, Turner A, Wu C, **Lu B\***, Jiang J\*. PD-L1Expression Promotes Epithelial to Mesenchymal Transition in Human Esophageal Cancer. Cell Physiol Biochem. 2017;42(6):2267-2280.

2. Chen Q, Xu B, Lan L, Yang D, Yang M, Jiang J, **Lu B\***, Shen Y\*. High mRNA expression level of IL-6R was associated with better prognosis for patients with ovarian cancer: a pooled meta-analysis. Sci Rep. 2017;18;7(1):8769.

3. Weinstein AM, Chen L, Brzana EA, Patil PR, Taylor JL, Fabian KL, Wallace CT, Jones SD, Watkins SC, **Lu B**, Stroncek DF, Denning TL, Fu YX, Cohen PA\*, Storkus WJ\*. Tbet and IL-36γ cooperate in therapeutic DC-mediated promotion of ectopic lymphoid organogenesis in the tumor microenvironment. Oncoimmunology. 2017;6(6):e1322238.

4. Sun J, Chen Y, Huang Y, Zhao W, Liu Y, Venkataramanan R, **Lu B\***, Li S\*. Programmable co-delivery of the immune checkpoint inhibitor NLG919 and chemotherapeutic doxorubicin via a redox-responsive immunostimulatory polymeric prodrug carrier. Acta Pharmacol Sin. 2017;38(6):823-834.

5. Yang Y, Liu H, Zhang H, Ye Q, Wang J, Yang B, Mao L, Zhu W, Leak RK, Xiao B, **Lu B**, Chen J, Hu X\*. ST2/IL-33-Dependent Microglial Response Limits Acute Ischemic Brain Injury. J Neurosci. 2017;37(18):4692-4704.

6. Xu Y, Chen L, Xu B, Xiong Y, Yang M, Rui X, Shi L, Wu C, Jiang J\*, **Lu B\***. Higher Numbers of T-bet+ Tumor-Infiltrating Lymphocytes Associate with BetterSurvival in Human Epithelial Ovarian Cancer. Cell Physiol Biochem. 2017;41(2):475-483.

7. Li J, Shayan G, Avery L, Jie H, Gildener-Leapman N, Schmitt N, **Lu B**, Kane LP, Ferris RL\*. Tumor-infiltrating Tim-3(+) T cells proliferate avidly except when PD-1 is co-expressed: Evidence for intracellular cross talk. Oncoimmunology. 2016;5(10):e1200778.

8. Chen Y, Xia R, Huang Y, Zhao W, Li J, Zhang X, Wang P, Venkataramanan R, Fan J, Xie W, Ma X, **Lu B**, Li S\*. An immunostimulatory dual-functional nanocarrier that improves cancer immunochemotherapy. Nat Commun. 2016;7:13443.

9. Stollings LM#, Jia LJ#, Tang P, Dou H, **Lu B**, Xu Y\*. Immune Modulation by Volatile Anesthetics. Anesthesiology. 2016;125(2):399-411.

10. **Lu B\***, Yang M, Wang Q. Interleukin-33 in tumorigenesis, tumor immune evasion, and cancer immunotherapy. J Mol Med (Berl). 2016;94(5):535-43.

11. Shi L, Chen L, Wu C\*, Zhu Y, Xu B, Zheng X, Sun M, Wen W, Dai X, Yang M, Lv Q, **Lu B**\*, Jiang J\*. PD-1 blockade boosts radiofrequency ablation-elicited adaptive immune responses against tumor. Clin Cancer Res. 2016;22(5):1173-1184.

12. Wang X, Zhao X, Feng C, Weinstein A, Xia R, Wen W, Lv Q, Zuo S, Tang P, Yang X, Chen X, Wang H, Zang S, Stollings L, Denning TL, Jiang J, Fan J, Zhang G, Zhang X, Zhu Y, Storkus W, **Lu B\*.** IL-36γ transforms the tumor microenvironment and promotes type 1 lymphocyte-mediated antitumor immune responses. Cancer Cell. 2015;28(3):296-306.

13. Gao X, Wang X, Yang Q, Zhao X, Wen W, Li G, Lu J, Qin W, Qi Y, Xie F, Jiang J, Wu C, Zhang X, Chen X, Turnquist H, Zhu Y\*, **Lu B\***. Tumoral Expression of IL-33 Inhibits Tumor Growth and Modifies the Tumor Microenvironment through CD8+ T and NK Cells. J Immunol. 2015;194(1):438-445.

14. Weksler B\*, **Lu B.** Alterations of the Immune System in Thymic Malignancies. J Thorac Oncol. 2014;9(9):137-142.

15. Ferris RL, **Lu B**, Kane LP\*. Too much of a good thing? Tim-3 and TCR signaling in T cell exhaustion. J Immunol. 2014;193(4):1525-1530.

16. Tang Y, Xu X, Guo S, Zhang C, Tang Y, Tian Y, Ni B\*, **Lu B\***, Wang H\*. PLoS One. 2014;9(3):e91551.

17. Zeng T, Wang Q, Fu J, Lin Q, Bi J, Ding W, Qiao Y, Zhang S, Zhao W, Lin H, Wang M, **Lu B**, Deng X, Zhou D, Yin Z\*, Wang H\*. Impeded Nedd4-1-Mediated Ras Degradation Underlies Ras-Driven Tumorigenesis. Cell Rep. 2014;7(3):871-882.

18. Li G, Yang Q, Zhu Y, Wang HR, Chen X, Zhang X, **Lu B\***. T-Bet and Eomes Regulate the Balance between the Effector/Central Memory T Cells versus Memory Stem Like T Cells. PLoS One. 2013;8(6):e67401.

19. Lin H, Lin Q, Liu M, Lin Y, Wang X, Chen H, Xia Z, **Lu B**, Ding F, Wu Q, Wang H\*. PKA/Smurf1 signaling-mediated stabilization of Nur77 is required for anticancer drug cisplatin-induced apoptosis. Oncogene. 2014;33(13):1629-1639.

20. Li P, Gan Y, Sun BL, Zhang F, **Lu B**, Gao Y, Liang W, Thomson AW, Chen J\*, Hu X\*. Adoptive regulatory T-cell therapy protects against cerebral ischemia. Ann Neurol*.* 2013;74(3):458-471.

21. Zhang L, Wu H, Lu D, Li G, Sun C, Song H, Li J, Zhai T, Huang L, Hou C, Wang W, Zhou B, Chen S, **Lu B**, Zhang X\*. The costimulatory molecule B7-H4 promote tumor progression and cell proliferation through translocating into nucleus. Oncogene. 2013;32(46):5347-5358.

22. Chen L, Zheng X, Shen Y, Zhu Y, Li Q, Chen J, Xia R, Zhou S, Wu C, Zhang X, **Lu B\***, Jiang J\*. Higher numbers of T-bet(+) intratumoral lymphoid cells correlate with better survival in gastric cancer. Cancer Immunol Immunother. 2013;62(3):553-561.