



赖玉平

研究员，博士生导师

生命科学学院
生物化学与分子生物学

联系电话： 021-54342908

办公时间：

传 真： 021-54342908

主页网址：

办公地点： 上海闵行东川路500号生命科学学院363

电子邮箱： yplai@bio.ecnu.edu.cn

通讯地址： 上海闵行东川路500号生命科学学院363

研究方向

皮肤免疫学

炎症对受损组织的正常修复至关重要。然而,持续的、过度的炎症反应会引起免疫损伤以及自身免疫性疾病。因此,本课题组以皮肤免疫炎症应答为研究对象,与美国、韩国等国家的科学家合作,研究重点包括: 1) 皮肤感染、损伤后炎症的发生机制; 2) 皮肤共生菌对伤口炎症应答的负调控机理; 3) Th17细胞因子调节伤口愈合的分子机理; 4) 糖尿病皮肤伤口难愈合导致皮肤溃烂的分子机制; 5) REG3A调节银屑病表皮层增生的分子机制。

社会兼职

Membership of Professional Societies

Member of Editorial board of ISRN Infectious Diseases

American Society for Microbiology

South California American Society for Microbiology Branch

Society for Investigative Dermatology

学术成果

主持的科研项目：

1. 中组部首批青年拔尖人才计划
2. 国家自然科学基金优秀青年基金, 项目负责人

3. 国家自然科学基金面上项目, 项目负责人
4. Johnson&Johnson Pte Ltd研发项目, 项目负责人
5. 教育部“新世纪优秀人才支持计划”
6. 上海市高校特聘教授(东方学者)
7. 上海市青年启明星项目, 项目负责人
8. 上海教委科研创新重点项目, 项目负责人
9. 华东师范大学“英才计划”

论文:

1. **Lai Y***, Li D, Li C, Muhleisen B, Radek KA, Park HJ, Jiang Z, Li Z, Lei H, Quan Y, Zhang T, Kotol P, Morizane S, Hata TR, Iwatsuki K, Tang C, Gallo RL. Activation of EXTL3-PI3K-Akt by REG3A regulates keratinocyte proliferation and differentiation after skin injury. *Immunity*. 2012, 37(1):74-84 (* Corresponding author)
2. **Lai Y**, Cogen AL, Radek KA, Park, HJ, Macleod DT, Leichtle A, Ryan AF, Di Nardo A, Gallo RL. Activation of TLR2 by a small molecule produced by *Staphylococcus epidermidis* increases antimicrobial defense against bacterial skin infections. *Journal of Investigative Dermatology*. 2010, 130(9):2211-2221.
3. **Lai Y**, Di Nardo A, Nakatsuji T, Leichtle A, Yang Y, Cogen AL, Wu Z-R, Hooper LV, Schmidt RR, von Aulock S, Radek KA, Huang C-M, Ryan AF, Gallo RL. Commensal bacteria regulate TLR3-dependent inflammation after skin injury. *Nature Medicine. Covey Story*. 2009, 15(12): 1377-1382.
4. Li M, **Lai Y**, Villaruz AE, Cha DJ, Sturdevant DE, Otto M. Gram-positive three-component antimicrobial peptide-sensing system. *Proc Natl Acad Sci U S A*. 2007, 104(22):9469-9474 (Co-first author).
5. **Lai Y**, Villaruz AE, Li M., Cha DJ, Sturdevant DE, Otto M. The human anionic antimicrobial peptide dermcidin induces proteolytic defence mechanisms in staphylococci. *Molecular Microbiology*. 2007, 63(2):497-506.
6. **Lai YP**, Peng YF, Zuo Y, Li J, Huang J, Wang LF, Wu ZR. Functional and structural characterization of recombinant dermcidin-1L, a human antimicrobial peptide. *Biochemical and Biophysical Research Communications*. 2005, 328(1):243-250.
7. **Lai YP**, Huang J, Wang LF, Li J, Wu ZR. A new approach to random mutagenesis *in vitro*. *Biotechnology and Bioengineering*. 2004, 86(6): 622-627.
8. Wu YL, Huang J, Xu J, Liu J, Feng Z, Wang Y, **Lai Y***, Wu ZR*. Addition of a cysteine to glucagon-like peptide-1 (GLP-1) conjugates GLP-1 to albumin in serum and prolongs GLP-1 action *in vivo*. *Regulatory Peptides*. 2010, 164(2-3):83-89. (*Co-corresponding author)
9. Wang Z, **Lai Y**, Bernard JJ, Macleod DT, Cogen AL, Moss B, Di Nardo A. Skin Mast Cells Protect Mice against Vaccinia Virus by Triggering Mast Cell Receptor S1PR2 and Releasing Antimicrobial Peptides. *J Immunol*. 2012, 188(1):345-357.
10. Feng Z, **Lai Y**, Ye H, Huang J, Xi XG, Wu Z. Poly (gamma, L-glutamic acid)-cisplatin bioconjugate exhibits potent antitumor activity with low toxicity: A comparative study with clinically used platinum derivatives. *Cancer Science*. 2010, 101(11): 2476-2482.
11. Leichtle A, Hernandez M, Ebmeyer J, Yamasaki K, **Lai Y**, Radek K, Choung YH, Euteneuer S, Pak K, Gallo R, Wasserman SI, Ryan AF. CC chemokine ligand 3 overcomes the bacteriocidal and phagocytic defect of macrophages and hastens recovery from experimental otitis media in TNF-/- mice. *J Immunology*. 2010, 184(6): 3087-3097.
12. Cogen AL, Yamasaki K, Muto J, Sanchez KM, Crotty Alexander L, Tanios J, **Lai Y**, Kim JE, Nizet V, Gallo RL. *Staphylococcus epidermidis* antimicrobial delta-toxin (phenol-soluble modulins-gamma) cooperates with host antimicrobial peptides to kill group A *Streptococcus*. *PLoS One*. 2010, 5(1): e8557.
13. Cogen AL, Yamasaki K, Sanchez KM, Dorschner RA, **Lai Y**, Macleod DT, Torpey JW, Otto M, Nizet V, Kim JE, Gallo RL. Selective antimicrobial action is provided by phenol-soluble modulins derived from *Staphylococcus epidermidis*, a normal resident of the skin. *Journal of Investigative Dermatology*. 2010, 130(1): 192-200.
14. Li M, Rigby K, **Lai Y**, Nair V, Peschel A, Schittek B, Otto M. *Staphylococcus aureus* mutant screen reveals the interaction of human antimicrobial peptide dermcidin with membrane phospholipids. *Antimicrobial Agents Chemotherapy*. 2009, 53(10):4200-4210.
15. Di Nardo A, Yamasaki K, Dorschner RA, **Lai Y**, Gallo RL. Mast cell cathelicidin antimicrobial peptide prevents invasive group A *Streptococcus* infection of the skin. *Journal of Immunology*. 2008, 180(11):7565-7573.
16. Li M, Cha DJ, **Lai Y**, Villaruz AE, Sturdevant DE, Otto M. The antimicrobial peptide-sensing system *aps* of *Staphylococcus aureus*. *Molecular Microbiology*. 2007, 66(5): 1136-1147.
17. Yao Y, Vuong C, Kocianva S, Villaruz AE, **Lai Y**, Sturdevant DE, Otto M. Characterization of the *Staphylococcus epidermidis* accessory gene regulator response: quorum-sensing regulation of resistance to innate host defense. *The Journal*

综述:

1. Leichtle A, **Lai Y**, Wollenberg B, Wasserman SI, Ryan AF. Innate signaling in otitis media: pathogenesis and recovery. *Curr Allergy Asthma Rep*. 2011, 11(1): 78-84.
2. **Lai Y**, Gallo RL. Commensal skin bacteria as the probiotic of the cutaneous immune response. *Expert Rev. Dermatol. Editorial*. 2010, 5(3): 251-253.
3. **Lai Y**, Gallo RL. AMPed up immunity: how antimicrobial peptides have multiple roles in immune defense. *Trends in Immunology. Feature Review*. 2009, 30(3): 131-141.
4. **Lai Y**, Gallo RL. Toll-like receptors in skin infections and inflammatory diseases. *Infectious Disorders Drug Targets (Formerly 'Current Drug Targets - Infectious Disorders')*. 2008, 8(3): 144-155.

专利:

1. **Lai Y**, Gallo RL. An Unique TNF alpha Inhibitor to Suppress Inflammation while Enhancing the Innate Immune System against Viral or Microbial Infections. U.S.A. patent. UCSD Ref. No. SD2008-129.
2. Gallo RL, Nizet V, Cogen A, **Lai Y**. Antimicrobial and anti-inflammatory therapies and compositions. U.S.A. Patent application No. 20100166708.
3. Otto M, Li M, **Lai Y**, Villaruz AE, Cha DJ, Sturdevant DE. Gram-positive three-component antimicrobial peptide-sensing system. U.S.A. patent. Application No.60/930,709.
4. **Lai Y-P**, Wu Z.-R. etc. Method for construction of Dermcidin-1L high expression plasmid and the applications of Dermcidin-1L. Chinese patent. Patent number: ZL200510023674.4.
5. 李冬青、雷虎、李红泉、赖玉平。一种脂肽及其衍生物、及其制备方法和应用。专利号及申请号: 201210138031.0。
6. 李冬青、王玥、李红泉、赖玉平。一种抗炎症的脂肽及其制备方法和应用。专利号及申请号: 201210254311.1。