



赖新生 博士

副研究员，硕士生导师

南昌大学“215 人才工程”赣江青年学者

- **教育和工作背景:**

2002/09-2006/07, 西北农林科技大学, 学士;

2006/09-2013/06, 西北农林科技大学, 硕博;

2011/02-2011/10 美国 Purdue University, 访问学者;

2013/07-2014/07, 浙江大学, 博士后;

2014/07-至今, 南昌大学, 生命科学研究院, 助理研究员、副研究员。

- **研究兴趣、领域:**

课题组主要致力于神经肌肉疾病分子机制的研究。近年来以第一作者或通讯作者在 *Human Molecular Genetics* 等领域较有影响力的 SCI 杂志上发表论文多篇, 主持国家自然科学基金项目 3 项、省杰青项目 1 项。

- **学术兼职:**

中国神经科学学会会员, 中国生理学会会员, 日本神经科学学会会员

- **主要科研项目:**

1. 国家自然科学基金地区项目“细胞外基质蛋白 Agrin 调控肌卫星细胞稳态及其参与老年肌少症发生的机制研究”(82260287), 2023.01-2026.12, 33 万, 主持, 在研
2. 江西省自然科学基金杰青项目(原创探索类)“神经肌肉接头形成与维持关键激酶 MuSK 的底物筛选及功能验证”(20224ACB216006), 2023.01-2025.12, 20 万, 主持, 在研
3. 国家自然科学基金青年项目“LRP4 在 DMD 肌肉再生障碍中的作用及分子机制”(81601092), 2017.01-2019.12, 17 万, 主持, 已结题

4. 国家自然科学基金地区项目“Col6 蛋白调控神经肌肉接头维持与老化的分子机制”（31660268），2017.01-2020.12，38 万，主持，已结题

● 代表性论文（共同第一作者#，通讯作者*）：

- 1 Lin D.#; Li L.#; Chen W. B.#; Chen J.; Ren D.; Zheng Z. H.; Zhao C.; Zhong Y.; Luo B.; Jing H.; Chen P.; Zou S.; **Lai X.**; Wang S.; Zhou T.; Ding N.; Li L.; Pan B. X.*; Fei E.* LHPP, a risk factor for major depressive disorder, regulates stress-induced depression-like behaviors through its histidine phosphatase activity. *Mol Psychiatry* 2023, 28(2): 908-918, doi: 10.1038/s41380-022-01893-0
- 2 Peng Chen, Ziyang Liu, Qian Zhang, Dong Lin, Lu Song, Jianghong Liu, Hui-Feng Jiao, **Xinsheng Lai**, Suqi Zou, Shunqi Wang, Tian Zhou, Bao-Ming Li, Li Zhu*, Bing-Xing Pan*, Erkang Fei*. DSCAM Deficiency Leads to Premature Spine Maturation and Autism-like Behaviors. *Journal of Neuroscience*. 2022 Jan 26;42(4):532-551
- 3 Hui Tiankun#, Jing Hongyang#, Zhou Tian#, Chen Peng, Liu Ziyang, Dong xia, Yan Min, Ren Dongyan, Zou suqi, Wang Shunqi, Fei Erkang, Hong Daojun, **Lai Xinsheng***. Increasing LRP4 diminishes neuromuscular deficits in a mouse model of Duchenne muscular dystrophy. *Human Molecular Genetics*, 2021,30, 1579-1590.
- 4 Dong xia#, Hui Tiankun#, Chen Jie, Yu Zheng, Ren Dongyan, Zou Suqi, Wang Shunqi, Fei Erkang, Jiao Huifeng, **Lai Xinsheng***. Metformin Increases Sarcolemma Integrity and Ameliorates Neuromuscular Deficits in a Murine Model of Duchenne Muscular Dystrophy. *Frontiers in Physiology*, 2021, 2:642908
- 5 Jing Hongyang#, Chen Peng#, Hui Tiankun, Yu Zheng, Zhou Jin, Fei Erkang, Wang Shunqi, Ren Dongyan, **Lai Xinsheng***, Li Baoming*. Synapse-specific Lrp4 mRNA enrichment requires Lrp4/MuSK signaling, muscle activity and Wnt non-canonical pathway. *Cell & Bioscience*, 2021,11, 81
- 6 Hui Tiankun, Jing Hongyang, **Lai Xinsheng***. Neuromuscular junction-specific genes screening by deep RNA-seq analysis. *Cell & Bioscience*, 2021,11, 105
- 7 Chen Jie, Lai Xinsheng*. C-X-C motif chemokine ligand 12: a potential therapeutic target in Duchenne muscular dystrophy. *Bioengineered*, 2021,12, 5428-5439
- 8 Tian-Kun Hui, **XinSheng Lai**, Xia Dong, Hongyang Jing, Ziyang Liu, Erkang

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- Fei, Wen-Bing Chen, Shunqi Wang, Dongyan Ren, Suqi Zou*, Hai-Tao Wu*, Bing-Xing Pan*. Ablation of Lrp4 in Schwann Cells Promotes Peripheral Nerve Regeneration in Mice. *Biology (Basel)*. 2021, 10(6):452
- 9 Huang, Yongzhen#; **Lai, Xinsheng**#; Hu, Linyong; Lei, Chuzhao; Lan, Xianyong; Zhang, Chunlei; Ma, Yun; Zheng, Li; Bai, Yue-Yu; Lin, Fengpeng; Chen, Hong*. Over-expression of DEC1 inhibits myogenic differentiation by modulating MyoG activity in bovine satellite cell. *Journal of Cellular Physiology*, 2018, 1-10.
(Co-first author)
- 10 Min Yan, Ziyang Liu, Erkang Fei, Wenbing Chen, **Xinsheng Lai**, Bin Luo, Peng Chen, Hongyang Jing, Jin-Xiu Pan, Michael H Rivner, Wen-Cheng Xiong, Lin Mei*. Induction of Anti-agrin Antibodies Causes Myasthenia Gravis in Mice. *Neuroscience*. 2018, 373:113-121
- 11 Liu, W., Wen, Y., Bi, P., **Lai, X.**, Liu, X.S., Liu, X. and Kuang, S*. Hypoxia promotes satellite cell self-renewal and enhances the efficiency of myoblast transplantation. *Development*. 2012, 139, 2857-2865.
- 12 Liu, W., Liu, Y., **Lai, X.** and Kuang, S* Intramuscular adipose is derived from a non-Pax3 lineage and required for efficient regeneration of skeletal muscles. *Developmental Biology*, 2012. 361, 27-38.

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