

杨东雷

教授，博士生导师，江苏省杰出青年基金获得者

办公室：理科楼 A220

电子邮箱：dlyang@njau.edu.cn

联系电话：025-84396559

研究经历：

长期以水稻和拟南芥为材料从事表观遗传学与植物免疫学研究。研究成果在 Nature Plants, PNAS, Cell Research, Cell Host & Microbe, Molecular Plant, Plant Physiology, New Phytologist 等杂志上发表 30 余篇。现在主要研究水稻抗病与生长发育之间的交叉对话、小 RNA 介导的 DNA 甲基化分子途径，表观遗传学调控水稻的抗病与产量性状发育等。

研究领域：作物免疫、激素信号、抗病与生长发育互作、DNA 甲基化、small RNA，表观遗传学

教育经历：

2003.08-2009.11：中国科学院，上海生命科学研究院，植物生理与生态研究所，
博士

1999.09-2003.06：山东大学，生命科学学院，生物科学专业，学士

工作经历：

2015.01-至今 南京农业大学，农学院 教授，博士生导师

2012. 01-2014.12 中国科学院，上海植物逆境生物学研究中心， 美国科学院院士
朱健康实验室担任副研究员

2011.01-2011.12：美国普渡大学，农学院 美国科学院院士朱健康实验室从事博
士后研究

2009.12-2010.12：美国康奈尔大学，农学院 华健教授实验室从事博士后研究

代表性文章：

1. Liu M^(#), Shi Z^(#), Zhang X, Wang M, Zhang L, Zheng K, Liu J, Hu X, Di C, Qian Q, He Z, **Yang DL^(*)**. Inducible overexpression of *Ideal Plant Architecture1* improves both yield and disease resistance in rice. **Nat. Plants**. 2019 (IF₂₀₁₇=11.471)
2. **Yang DL^{(#)(*)}**, Zhang G, Wang L, Li J, Xu D, Di C, Tang K, Yang L, Zeng L, Miki D, Duan CG, Zhang H, Zhu JK^(*). Four putative SWI2/SNF2 chromatin remodelers have dual roles in regulating DNA methylation in Arabidopsis. **Cell Discov**. 2018 Oct 16;4:55. doi: 10.1038/s41421-018-0056-8. (IF₂₀₁₇=4.462)
3. Li Y^(#), Guo J, Yang Z, **Yang DL^(*)**. Plasma Membrane-Localized Calcium Pumps and Copines Coordinately Regulate Pollen Germination and Fertility in Arabidopsis. (2018). **Int J Mol Sci**. 19(6). pii: E1774. doi: 10.3390/ijms19061774. (IF₂₀₁₇=3.687)
4. **Yang DL^{(#)(*)}**, Shi Z^(#), Bao Y^(#), Yan J^(#), Yang Z, Yu H, Li Y, Gou M, Wang S, Zou B, Xu D, Ma Z, Kim J, Hua J^(*). (2017). Calcium pumps and interacting BON1 protein modulate calcium signature, stomatal closure, and plant immunity. **Plant Physiol**. 175(1): 424-437. (IF₂₀₁₇=5.949)
5. Li X^(#), **Yang DL^(#)**, Sun L^(#), Li Q, Mao B, He Z^(*). (2016). The Systemic Acquired Resistance Regulator OsNPR1 Attenuates Growth by Repressing Auxin Signaling through Promoting IAA-Amido Synthase Expression. **Plant Physiol**. 172(1):546-558. (IF₂₀₁₇=5.949)
6. **Yang DL^(#)**, Zhang G^(#), Tang K, Li J, Yang L, Huang H, Zhang H, Zhu JK^(*). (2016). Dicer-independent RNA-directed DNA methylation in Arabidopsis. **Cell Res**. 26(1): 66-82. (IF₂₀₁₇=15.393)
7. Zou B^(#), **Yang DL^(#)**, Shi Z^(#), Dong H, Hua J^(*). (2014). Monoubiquitination of Histone 2B at the disease resistance gene locus regulates its expression and impacts immune responses in Arabidopsis. **Plant Physiol**. 165(1):309-318.(IF₂₀₁₇=5.949)
8. Sun L^(#), **Yang DL^(#)**, Kong Y, Chen Y, Li XZ, Zeng LJ, Li Q, Wang ET, He ZH^(*). (2014). Sugar homeostasis mediated by cell wall invertase GRAIN INCOMPLETE FILLING 1 (GIF1) plays a role in pre-existing and induced defence in rice. **Mol. Plant Pathol**. 15(2):161-173. (IF₂₀₁₇=4.188)
9. **Yang DL^(#)**, Yang Y, He Z^(*). (2013). Roles of plant hormones and their interplay in rice immunity. **Mol Plant**. 6(3):675-685. (IF₂₀₁₇=9.326)
10. **Yang DL^(#)**, Dong WX^(#), Zhang YY, He ZH^(*). (2013). Gibberellins modulate abiotic stress tolerance in plants. **Scientia Sinica**. 43(12): 1119-1126

11. **Yang DL**^(#), Yao J^(#), Mei CS^(#), Tong XH, Zeng LJ, Li Q, Xiao LT, Sun TP, Li J, Deng XW, Lee CM, Thomashow MF, Yang Y^(*), He Z^(*), He SY^(*). (2012). Plant hormone jasmonate prioritizes defense over growth by interfering with gibberellin signaling cascade. **Proc Natl Acad Sci USA**. 109(19):E1192-1200. (IF₂₀₁₇=9.504)
12. **Yang DL**^(#), Li Q, Deng YW, Lou YG, Wang MY, Zhou GX, Zhang YY, He ZH^(*). (2008). Altered disease development in the *eui* mutants and *Eui* overexpressors indicates that gibberellins negatively regulate rice basal disease resistance. **Molecular Plant**. 1:528-537. (IF₂₀₁₇=9.326)
13. Zhang Q, Liang Z, Cui X, Ji C, Li Y, Zhang P, Liu J, Riaz A, Yao P, Liu M, Wang Y, Lu T, Yu H, **Yang D**, Zheng H, Gu X. (2018). N6-Methyladenine DNA Methylation in Japonica and Indica Rice Genomes and Its Association with Gene Expression, Plant Development and Stress Responses. **Mol Plant**. 2018 Nov 15. pii: S1674-2052(18)30341-1. (IF₂₀₁₇=9.326)
14. Wang L, Yuan J, Ma Y, Jiao W, Ye W, **Yang DL**, Yi C, Chen ZJ. (2018). Rice Interploidy Crosses Disrupt Epigenetic Regulation, Gene Expression, and Seed Development. **Mol Plant**. 11: 300-314. (IF₂₀₁₇=9.326)
15. You Q^(#), Zhai K^(#), **Yang D**, Yang W, Wu J, Liu J, Pan W, Wang J, Zhu X, Jian Y, Liu J, Zhang Y, Deng Y, Li Q, Lou Y, Xie Q, He Z^(*). (2016). An E3 Ubiquitin Ligase-BAG Protein Module Controls Plant Innate Immunity and Broad-Spectrum Disease Resistance. **Cell Host & Microbe**. 20(6):758-769. (IF₂₀₁₇=17.872)
16. Yuan J^(#), Chen S^(#), Jiao W^(#), Wang L, Wang L, Ye W, Lu J, Hong D, You S, Cheng Z, **Yang DL**, Chen ZJ. (2017). Both maternally and paternally imprinted genes regulate seed development in rice. **New Phytol**. 216(2):373-387. (IF₂₀₁₇=7.433)
17. Xu J^(#), Zhang L, **Yang DL**, Li Q, He Z^(*). (2015). Thymidine kinases share a conserved function for nucleotide salvage and play an essential role in Arabidopsis thaliana growth and development. **New Phytol**. 208(4): 1089-1103. (IF₂₀₁₇=7.433)
18. Feng Z^(#), Zhang B^(#), Ding W, Liu X, **Yang DL**, Wei P, Cao F, Zhu S, Zhang F, Mao Y, Zhu JK^(*). (2013). Efficient genome editing in plants using a CRISPR/Cas system. **Cell Res**. 23(10):1229-1232. (IF₂₀₁₇=15.393)
19. Feng Z^(#), Mao Y, Xu N, Zhang B, Wei P, **Yang DL**, Wang Z, Zhang Z, Zheng R, Yang L, Zeng L, Liu X, Zhu JK^(*). (2014). Multigeneration analysis reveals the inheritance, specificity, and patterns of CRISPR/Cas-induced gene modifications in Arabidopsis. **Proc Natl Acad Sci USA**. 111(12):4632-4637. (IF₂₀₁₇=9.504)

20. Yuan Y^(#), Zhong S, Li Q, Zhu Z, Lou Y, Wang L, Wang J, Wang M, Li Q, **Yang DL**, He Z^(*). (2007). Functional analysis of rice NPR1-like genes reveals that OsNPR1/NH1 is the rice orthologue conferring disease resistance with enhanced herbivore susceptibility. **Plant Biotechnol J.** 5(2):313-324. (IF₂₀₁₇=6.305)

专著：

何祖华，王牧阳，**杨东雷** 第八章：水杨酸，218 页—230 页《植物激素作用的分子机理》许智宏 薛红卫 主编，上海科学技术出版社出版，2012 年 10 月

主持的科研项目：

- 1.江苏省自然科学基金—杰出青年基金，SBK2017010093，激素互作调控水稻抗病—产量性状平衡的机制，2017/07-2020/06，**100 万**，主持
- 2.国家重点研发计划 “七大作物育种”，2016YFD0100603-9，主要农作物抗病虫抗逆性状形成的分子基础，2016/07-2020/12，**140 万**，子课题负责人
- 3.转基因专项，2016ZX08001002，抗病转基因水稻新品种培育，在研，2016/01-2020/12，在研，**62 万**，子课题负责人
- 4.国家自然科学基金面上项目，31671340，一个新的 RdRP 基因调控水稻 DNA 甲基化与基因表达的机制研究，2017/01-2020/12，**62 万**，主持
- 5.南京农业大学高层次人才启动费，2015/01-2019/12，**100 万**，主持
- 6.江苏省自然基金委—青年基金，BK20150659，miR156-OsSPL14 调控水稻抗白叶枯病的分子机理解析，2015/07-2018/06，**20 万**，主持
- 7.中央高校基本业务费，2015/01-2020/12，**50 万**，主持
- 8.作物遗传与种质创新国家重点实验室自主课题，**20 万**，主持
- 9.江苏省作物学优势学科，**40 万**，主持