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教育经历:

1985.9-1989.4: 博士(Ph.D.), 美国, 加州大学伯克利分校, 植物生物学
1982.9-1985.7: 硕士(MS), 中国, 北京大学, 植物生理学
1978.9-1982.7: 学士(BS), 中国, 北京大学, 生物学

工作经历:

2021.1-至今: 院长、首席科学家, 中国, 北京大学现代农业研究院
2018.1-至今: 教授、学术委员会主任, 中国, 北京大学现代农学院
2014.10-2018.12: 筹备院长, 中国, 北京大学现代农学院(筹)
2014.7-至今: 讲席教授(University Endowed Professor), 中国, 北京大学
2003.5-2014.6: 冠名终身教授(Daniel C. Eaton Professor), 美国, 耶鲁大学分子细胞和发育生物学系
2003.1-2008.12: 共同所长(兼职) (Director), 中国, 北京生命科学研究所
2001.7-2014.6: 终身教授(Full Professor), 美国, 耶鲁大学分子细胞和发育生物学系
2000.10-2014.6: 主任(兼职) (Director), 中国, 北大-耶鲁植物遗传学和农业生物技术联合研究中心
2000.7-2014.6: 长江讲座教授(兼职) (Cheung Kong Chair Professor), 中国, 北京大学生命科学学院
1998.7-2001.6: 终身职副教授(Associate Professor with tenure), 美国, 耶鲁大学分子细胞和发育生物学系
1995.7-1998.6: 副教授(Associate Professor with term), 美国, 耶鲁大学分子细胞和发育生物学系
1992.1-1995.6: 助理教授(Assistant Professor), 美国, 耶鲁大学分子细胞和发育生物学系

1989.5-1991.12: 博士后(Postdoc), 美国, 加州大学伯克利分校、美国农业部植物基因研究中心, 植物分子生物学

研究方向: 植物光形态建成、作物遗传发育、农业生物技术

开设课程: 《舌尖上的植物学》、《植物发育及分子生物学》、《农业生物技术课题设计和论文写作》、《植物学进展》

社会职务:

美国植物生理学家协会(American Society of Plant Physiologists)会员

美国科学促进会 (American Association for the Advancement of Science)会士

学术组织兼职:

2018 年农业生物科学国际会议(The Agricultural Bioscience International Conference 2018) 共同主席

2011 年植物光生物学国际研讨会(The 2011 International Symposium on Plant Photobiology) 组织者

第 18 届国际拟南芥研究大会(The 18th International Conference on Arabidopsis Research)组织者、主席(2007 年)

The Arabidopsis Information Research (TAIR) 顾问委员会成员(2006-2008 年)

Multinational Arabidopsis Research Committee 主席(2007-2008 年)

Multinational Arabidopsis Research Committee 共同主席(2006-2007 年)

North American Arabidopsis Research Steering Committee 主席(2007-2008 年)

North American Arabidopsis Research Steering Committee 成员(2004-2008 年)

Ohio State Arabidopsis Stock Center 科学顾问委员会成员(2003-2006 年)

MPI(德国马普研究院)for Plant Breeding Research 科学顾问委员会成员(2003-2008 年)

Scientific Review Group Member for Samsbury Laboratory 成员(2003 年)

“Plant Cell” 期刊编委(2008 年至 2014 年)

“Annual Review of Plant Biology” 期刊编委(2010-2012 年)

“Plant Journal” 期刊编委(2000-2005 年)

“Molecular Plant” 期刊顾问委员会成员(2006 年至今)

“Journal of Integrated Plant Biology” 期刊编委(2004 年至今)

“Plant Molecular Biology” 期刊编委(1998 年至今)

“Genes to Cell” 期刊编委(2000 年至今)

荣誉奖励:

- 2013 年: 当选为“美国科学院院士”(Elected member of US National Academy of Sciences)
- 2013 年: 当选为“美国科学促进协会会员”(Elected fellow of American Association for Advancement of Science)
- 2013 年: 获“北京市有突出贡献的科学、技术、管理人才”
- 2009 年: 获“北京市海外高层次人才”, 同时被聘为“北京市特聘专家”
- 2009 年: 中组部“千人计划”引进高层次人才
- 2003 年: 获国际植物分子生物学学会 (ISPMB) 最重要奖项“The Kumho Science International Award”(2003)
- 1995 年: 获“美国总统青年教师奖”(Presidential Faculty Fellow Award)

学术发表:

(I) Books in Chinese:

3. 邓兴旺(主编) (2020). 《植物的身体》. 商务出版社.
2. 邓兴旺(主编) (2020). 《植物私生活》. 商务出版社.
1. 邓兴旺(主编) (2020). 《植物与食物》. 商务出版社.

(II) Books in English:

1. Karplus, V. J., and **Deng, X.W.** (2007). *Agricultural Biotechnology in China: Origins and Prospects* (a book with 10 chapters). Forwarded by Norman E. Borlaug. Published December 7, 2007 by Springer.

(III) Book Chapters in English:

13. He, G., and **Deng X. W.** (2013). Chromatin and gene expression mechanisms in hybrids. Chapter 20 in *Hybrid and Polyploid Genomics*. John Wiley & Sons, Inc.: 323-333.
12. Li, J., Li, G., Wang, H., and **Deng, X.W.** (2011). Phytochrome signaling mechanisms. *Arabidopsis Book* 9: e0148.
11. Yanagawa, Y., Feng, S., and **Deng, X.W.** (2005). Light control of plant development: a role of the ubiquitin/proteasome-mediated proteolysis. Chapter 29 in *Light Sensing in Plants*, pp. 253-260. Eds: Wada, M., Shimazaki, K., and Lino, M. Springer.
10. Li, L., Wang, X., Li, X., Su, N., Stolc, V., Han, B., Li, J., Xue, Y., Wang, J., and **Deng, X.W.** (2004). Toward genome-wide transcriptional analysis in rice using MAS oligonucleotide tiling-path microarrays. In *Rice Is Life: Scientific Perspectives For The 21st Century*. Eds: Toriyama K., Heong, K. L. and Hardy, B. *Proceedings of the World Rice Research Conference*.
9. Wang, H., and **Deng, X.W.** (2002). Phytochrome signaling mechanisms. In *The Arabidopsis Book*, Eds. Somerville, C. R., and Meyerowitz, E. M., American Society of Plant Biologists.
8. Schwechheimer, C., and **Deng, X.W.** (2002). FPLC Gel Filtration. In *Arabidopsis-A Laboratory Manual* pp. 226-228, Eds: Weigel, D., and Glazebrook, J. Cold Spring Harbor Laboratory Press.

7. Schwechheimer, C., and **Deng, X.W.** (2002). Studying protein-protein interactions with the yeast two-hybrid system. Chapter 9 in *Molecular Plant Biology: A practical Approach*, volume II, pp. 173-198. Eds: Philip M. G. and Chris B. *Oxford University Press*.
6. Habashi, J., and **Deng, X.W.** (2002). Nondenaturing Gel Electrophoresis of Proteins. In *Arabidopsis-A Laboratory Manual*.pp. 228-233, Eds: Weigel, D., and Glazebrook, J. *Cold Spring Harbor Laboratory Press*.
5. Chamovitz, D.A., and **Deng, X.W.** (1998). Molecular approaches to biochemical purification: the COP9 complex paradigm. *NATO ASI series*, vol. H104, 83-91.
4. Kwok, S. F., and **Deng, X.W.** (1996). The role of the pleiotropic *Arabidopsis* COP/DET/FUS genes in repression of photomorphogenic development in darkness. In *Current Topics in Plant Physiology: an american Society of Plant Physiologists Series on [regulation of plant growth and development by light]* vol. 17 pg.134-143
3. **Deng, X.W.**, and Gruissem, W. (1994). Chloroplast run-on transcription: determination of the transcription activity of chloroplast genes. A chapter on a published laboratory manual based on a *COLD SPRING HARBOR COURSE*.
2. Melis, A., and **Deng, X.W.** (1987). The physiological significance of thylakoid membrane protein phosphorylation. In *Progress in Photosynthesis Research*, Eds: Biggins, J. Vol. II (2):257 260. *Springer*.
1. Gruissem, W., **Deng, X.W.**, Jones, H., Stern, D, Tonkyn, J., and Zurawski, G. (1987). Transcriptional and post transcriptional regulation of chloroplast gene expression. In *Structure and Function of Plant Genome*, pp.135 148, Eds: Von Wettstein D., Chua, N. H. *Plenum Press*, New York.

(IV) Books Translated into Chinese

2. Published in Chinese in June 2006. *Mechanisms in Plant Development*. Eds: Ottoline Leyser, and Stephen Day. *Wiley-Blackwell*, Oxford. 2002 version.
Ottoline Leyser, Stephen Day (著), 瞿礼嘉, 邓兴旺(译) (2006). 植物发育的机制. 高等教育出版社.
1. Published in Chinese in February 2004. *Biochemistry & Molecular Biology of Plants*. Eds: Bob Buchanan, Wilhelm Gruissem, and Russell Jones. *American Society of Plant Physiologists*, Rockville, MD, USA. 2002 version.
B.B. 布坎南, W. 格鲁依森姆, R.L. 琼斯(主编), 瞿礼嘉, 顾红雅, 白书农, 赵进东, 陈章良(主译), 陈章良, 邓兴旺(主校) (2004). 植物生物化学与分子生物学. 科学出版社.

(V) Articles in Chinese

- 21 邓兴旺 (2022). 道阻且长,行则将至;行而不辍,未来可期——杂交小麦的发展和展望. *科学通报* 67, 3097-3099.
- 20 李健,周宽基,王峥,周君莉, 邓兴旺 (2022). 基于隐性核雄性不育系的杂交小麦制种技术研究进展、问题与展望. *科学通报* 67, 3140-3151.

- 19 邓兴旺, 李磊 (2022). 袁隆平和我国杂交水稻研究简史. 杂交水稻 37, 21-25.
- 18 张兴平, 钱前, 张嘉楠, 邓兴旺, 万建民, 徐云碧 (2021). 分子植物育种助推南繁种业转型升级. 中国农业科学 54, 3789-3804.
- 17 衡燕芳, 李健, 王峥, 陈卓, 何航, 邓兴旺, 马力耕 (2020). 十倍体长穗偃麦草雄性育性基因 ThMs1 的克隆、表达及功能分析. 中国农业科学 53, 4727-4742.
- 16 邓兴旺 (2019). 一座照亮植物科学和人类的灯塔——怀念 Winslow Briggs 教授. 自然杂志 41, 231-234.
- 15 严维, 周涵, 何航, 邓兴旺 (2019). 基于全基因组多态性的安农 S-1 与株 1S 亲缘关系分析. 杂交水稻 34, 57-61.
- 14 邓兴旺 (2018). 植物的“眼睛”在哪里? 自然杂志 40, 391-399.
- 13 何光明, 邓兴旺 (2018). 死亡信号传递:叶绿体与线粒体间信号交流调控植物程序性细胞死亡. 植物学报 53, 441-444.
- 12 何光明, 何航, 邓兴旺 (2016). 水稻杂种优势的转录组基础. 科学通报 61, 3850-3857.
- 11 何光明, 邓兴旺 (2016). 植物杂种优势分子机理研究:机遇和挑战. 中国基础科学 18, 28-34+64.
- 10 王玉秋, 樊德, 邓兴旺, 朱丹萌 (2016). 高等植物中的较长非编码 RNA:从序列、功能到分子机理. 生命科学 28, 630-639.
- 9 邓兴旺 (2014). 怀念我的北大硕士生导师梅镇安先生. 植物学报 49, 751-752.
- 8 陈少霞, 何航, 邓兴旺 (2013). 利用拟南芥杂交组合研究 siRNA 与等位基因 DNA 甲基化调控中的联系. 中国科学:生命科学 43, 897-904.
- 7 邓兴旺, 王海洋, 唐晓艳, 周君莉, 陈浩东, 何光明, 陈良碧, 许智宏 (2013). 杂交水稻育种将迎来新时代. 中国科学:生命科学 43, 864-868.
- 6 肖景华, 吴昌银, 韩斌, 薛勇彪, 邓兴旺, 张启发 (2009). 中国水稻功能基因组研究进展. 中国科学:生命科学 39, 909-924.
- 5 康定明, 瞿礼嘉, 邓兴旺, 陈章良 (2001). 拟南芥 DNA 全序列测定与分析完成. 植物学通报 18, 124-125.
- 4 邓兴旺 (2007). 水稻:从基因组水平研究到产量及品质的改进. 生命世界 6, 46-51.
- 3 邓兴旺, 梅镇安 (1987). 高等植物类囊体膜中色素蛋白复合体的迁移及光能在光系统间的分配. 中国科学:B辑 4, 377-386.
- 2 朱广廉, 邓兴旺, 左卫能, 曹宗巽 (1984). 太谷核不育小麦花药内游离脯氨酸和总氨基酸含量的变化及其与育性的关系. 植物学报 26, 616-622.
- 1 朱广廉, 邓兴旺, 左卫能 (1983). 植物体内游离脯氨酸的测定. 植物生理学通讯 1, 35-37.

(VI) Articles in English

- 399 Liu, W., He, G., and Deng, X.W. (2024). Toward understanding and utilizing crop heterosis in the age of biotechnology. iScience 27, 108901.

- 398 Gao, Z., Su, Y., Chang, L., Jiao, G., Ou, Y., Yang, M., Xu, C., Liu, P., Wang, Z., Qi, Z., Liu, W., Sun, L., He, G., **Deng, X.W.**, and He, H. (2024). Increased long-distance and homo-trans interactions related to H3K27me3 in Arabidopsis hybrids. *J Integr Plant Biol* 66, 208-227.
- 397 Wang, X., Yuan, S., Wang, C., Yan, W., Xie, G., Wang, C., Qiu, S., Wu, J., **Deng, X.W.**, Xu, C., and Tang, X. (2024). Construction of a Female Sterility Maintaining System Based on a Novel Mutation of the MEL2 Gene. *Rice (N Y)* 17, 12.
- 396 Sun, L., Zhou, J., Xu, X., Liu, Y., Ma, N., Liu, Y., Nie, W., Zou, L., **Deng, X.W.**, and He, H. (2024). Mapping nucleosome-resolution chromatin organization and enhancer-promoter loops in plants using Micro-C-XL. *Nat Commun* 15, 35.
- 395 Ren, Z., Gou, R., Zhuo, W., Chen, Z., Yin, X., Cao, Y., Wang, Y., Mi, Y., Liu, Y., Wang, Y., Fan, L.M., **Deng, X.W.**, and Qian, W. (2024). The MBD-ACD DNA methylation reader complex recruits MICRORCHIDIA6 to regulate ribosomal RNA gene expression in Arabidopsis. *Plant Cell* 36, 1098-1118.
- 394 Cai, Y., Liu, Y., Fan, Y., Li, X., Yang, M., Xu, D., Wang, H., **Deng, X.W.**, and Li, J. (2023). MYB112 connects light and circadian clock signals to promote hypocotyl elongation in Arabidopsis. *Plant Cell* 35, 3485-3503.
- 393 Chen, J., Yu, R., Li, N., Deng, Z., Zhang, X., Zhao, Y., Qu, C., Yuan, Y., Pan, Z., Zhou, Y., Li, K., Wang, J., Chen, Z., Wang, X., Wang, X., He, S.N., Dong, J., **Deng, X.W.**, and Chen, H. (2023). Amyloplast sedimentation repolarizes LAZYS to achieve gravity sensing in plants. *Cell* 186, 4788-4802.e4715.
- 392 Chen, Z., Wu, J., **Deng, X.W.**, and Tang, X. (2023). Establishment and Advances of Third-Generation Hybrid Rice Technology: A Review. *Rice (N Y)* 16, 56.
- 391 Han, X., Zhang, Y., Lou, Z., Li, J., Wang, Z., Gao, C., Liu, Y., Ren, Z., Liu, W., Li, B., Pan, W., Zhang, H., Sang, Q., Wan, M., He, H., and **Deng, X.W.** (2023). Time series single-cell transcriptional atlases reveal cell fate differentiation driven by light in Arabidopsis seedlings. *Nat Plants* 9, 2095-2109.
- 390 Li, H., Hua, L., Zhao, S., Hao, M., Song, R., Pang, S., Liu, Y., Chen, H., Zhang, W., Shen, T., Gou, J.Y., Mao, H., Wang, G., Hao, X., Li, J., Song, B., Lan, C., Li, Z., **Deng, X.W.**, Dubcovsky, J., Wang, X., and Chen, S. (2023). Cloning of the wheat leaf rust resistance gene Lr47 introgressed from Aegilops speltoides. *Nat Commun* 14, 6072.
- 389 Li, H., Zhou, Y., Qin, X., Peng, J., Han, R., Lv, Y., Li, C., Qi, L., Qu, G.P., Yang, L., Li, Y., Terzaghi, W., Li, Z., Qin, F., Gong, Z., **Deng, X.W.**, and Li, J. (2023). Reconstitution of phytochrome A-mediated light modulation of the ABA signaling pathways in yeast. *Proc Natl Acad Sci U S A* 120, e2302901120.
- 388 Liu, W., Ren, D., Yang, W., Xu, M., Zhang, Y., Wang, X., He, G., and **Deng, X.W.** (2023). Genetic and molecular regulation of increased photosynthetic cell number contributes to leaf size heterosis in Arabidopsis. *iScience* 26, 107366.

- 387 Song, X., Guo, P., Xia, K., Wang, M., Liu, Y., Chen, L., Zhang, J., Xu, M., Liu, N., Yue, Z., Xu, X., Gu, Y., Li, G., Liu, M., Fang, L., **Deng, X.W.**, and Li, B. (2023). Spatial transcriptomics reveals light-induced chlorenchyma cells involved in promoting shoot regeneration in tomato callus. *Proc Natl Acad Sci U S A* 120, e2310163120.
- 386 Wang, J., Zhou, C., Guan, Z., Wang, Q., Zhao, J., Wang, L., Zhang, L., Zhang, D., **Deng, X.W.**, Ma, L., and Yin, P. (2023). Plant phytochrome A in the Pr state assembles as an asymmetric dimer. *Cell Res* 33, 802-805.
- 385 Zhang, Y., Lin, X., Ma, C., Zhao, J., Shang, X., Wang, Z., Xu, B., Gao, N., **Deng, X.W.**, and Wang, J. (2023). Structural insights into plant phytochrome A as a highly sensitized photoreceptor. *Cell Res* 33, 806-809.
- 384 Zhou, H., **Deng, X.W.**, and He, H. (2023). Gene expression variations and allele-specific expression of two rice and their hybrid in caryopses at single-nucleus resolution. *Front Plant Sci* 14, 1171474.
- 383 Sun, L., Cao, Y., Li, Z., Liu, Y., Yin, X., **Deng, X.W.**, He, H., and Qian, W. (2023). Conserved H3K27me3-associated chromatin looping mediates physical interactions of gene clusters in plants. *J Integr Plant Biol* 65, 1966-1982.
- 382 Yan, W., Yuan, S., Zu, Y., Chang, Z., Li, Y., Chen, Z., Xie, G., Chen, L., Lu, C., **Deng, X.W.**, Yang, C., Xu, C., and Tang, X. (2023). Ornithine δ -aminotransferase OsOAT is critical for male fertility and cold tolerance during rice plant development. *Plant J* 114, 1301-1318.
- 381 Zhao, Y., Shi, H., Pan, Y., Lyu, M., Yang, Z., Kou, X., **Deng, X.W.**, and Zhong, S. (2023). Sensory circuitry controls cytosolic calcium-mediated phytochrome B phototransduction. *Cell* 186, 1230-1243 e1214.
- 380 Li, J., Wang, C., Liang, W., Zhang, J., Jiang, C.K., Liu, Y., Ren, Z., Ci, D., Chang, J., Han, S., **Deng, X.W.**, Wang, Y., and Qian, W. (2023). Functional importance and divergence of plant apurinic/apyrimidinic endonucleases in somatic and meiotic DNA repair. *Plant Cell* 35, 2316-2331.
- 379 Han, X., Zhang, Y., Zhang, Q., Ma, N., Liu, X., Tao, W., Lou, Z., Zhong, C., **Deng, X.W.**, Li, D., and He, H. (2023). Two haplotype-resolved, gap-free genome assemblies for *Actinidia latifolia* and *Actinidia chinensis* shed light on the regulatory mechanisms of vitamin C and sucrose metabolism in kiwifruit. *Mol Plant* 16, 452-470.
- 378 Wang, Y., Fan, Y., Fan, D., Zhou, X., Jiao, Y., **Deng, X.W.**, and Zhu, D. (2023). The noncoding RNA HIDDEN TREASURE 1 promotes phytochrome B-dependent seed germination by repressing abscisic acid biosynthesis. *Plant Cell* 35, 700-716.
- 377 Wang, J., Sun, N., Zheng, L., Zhang, F., Xiang, M., Chen, H., **Deng, X.W.**, and Wei, N. (2023). Brassinosteroids promote etiolated apical structures in darkness by amplifying the ethylene response via the EBF-EIN3/PIF3 circuit. *Plant Cell* 35, 390-408.
- 376 Wang, Y., **Deng, X.W.**, and Zhu, D. (2022). From molecular basics to agronomic benefits: Insights into noncoding RNA-mediated gene regulation in plants. *J Integr Plant Biol* 64, 2290-2308.
- 375 Cao, Y., Wang, J., Wu, S., Yin, X., Shu, J., Dai, X., Liu, Y., Sun, L., Zhu, D., **Deng, X.W.**, Ye, K.,

- and Qian, W. (2022). The small nucleolar RNA SnoR28 regulates plant growth and development by directing rRNA maturation. *Plant Cell* 34, 4173-4190.
- 374 Lan, H., Heng, Y., Li, J., Zhang, M., Bian, Y., Chu, L., Jiang, Y., Wang, X., Xu, D., and **Deng, X.W.** (2022). COP1 SUPPRESSOR 6 represses the PIF4 and PIF5 action to promote light-inhibited hypocotyl growth. *J Integr Plant Biol* 64, 2097-2110.
- 373 Liu, H., Wang, H., Liao, X.L., Gao, B., Lu, X., Sun, D., Gong, W., Zhong, J., Zhu, H., Pan, X., Guo, L., **Deng, X.W.**, and Zhou, Q. (2022). Mycoviral gene integration converts a plant pathogenic fungus into a biocontrol agent. *Proc Natl Acad Sci U S A* 119, e2214096119.
- 372 Xu, M., Wang, X., Liu, J., Jia, A., Xu, C., **Deng, X.W.**, and He, G. (2022). Natural variation in the transcription factor Replumless contributes to both disease resistance and plant growth in Arabidopsis. *Plant Commun*, 100351.
- 371 Wang, Y., Fan, Y., Fan, D., Zhang, Y., Zhou, X., Zhang, R., Wang, Y., Sun, Y., Zhang, W., He, Y., **Deng, X.W.**, and Zhu, D. (2022). The Arabidopsis DREAM complex antagonizes WDR5A to modulate histone H3K4me2/3 deposition for a subset of genome repression. *Proc Natl Acad Sci U S A* 119, e2206075119.
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