学院首页　　学院概况　　师资队伍　　人才培养　　学科平台　　团学工作　　科学研究　　教务信息　　园艺文化　　学院信箱

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　　胡大刚，1986年出生，博士，园艺科学与工程学院副教授，教育部"长江学者和创新团队发展计划"创新团队成员，山东农业大学"杰出青年"基金获得者。自博士毕业以来，一直在山东农业大学园艺科学与工程学院从事教学和科研工作；在此期间，曾赴各农业名校参观学习，并到各地（包括河南郑州和西南大学柑桔研究所等）作技术指导，现被聘为"泰安市科普志愿者专家服务团成员"；"中国细胞生物学学会专业分会成员"；在国际及国内重要学术会议上作学术报告10余次；讲授《园艺最新研究进展》和《园艺植物分子生物学实验》等课程；主持国家重点研发子课题1项；国家和山东省自然基金各1项；山东农业大学杰出青年基金和科技创新基金各1项；作物遗传与种质创新国家重点实验室开放基金课题1项；近5年发表学术论著30余篇，发表期刊包括SCI和国内核心期刊，累积影响因子70左右。其中第一作者论文8篇（JCR一区4篇，二区2篇，三区2篇），主要发表在PLOS Genetics、New Phytologist、Plant Physiology和Plant Journal等国外著名植物学期刊上；通讯作者论文18篇（JCR一区1篇，二区4篇，三区2篇），主要发表在Horticulture Research、Plant Science、BMC Plant Biology和Frontiers in Plant Science等国外著名植物学期刊上。所发表第一和通讯作者论文自2014年以后被SCI论文他引共计238次，参编教材4部，授权发明专利1项；担任Journal of Agricultural and Food Chemistry（JCR一区），planta（JCR二区）及DNA and Cell Biology（JCR三区）等期刊的审稿人。

研究方向简介：

1、苹果果实品质的形成与调控。从苹果果实的糖酸代谢和运输入手，研究了它们的合成、运输和液泡贮存；然后，从糖酸积累相关基因的环境和内部信号响应切入，揭示了适度胁迫等促进糖酸积累、改善果实品质的机理。

2、苹果果实品质保持的机理与调控。研究采后苹果果实果肉软化和风味保持的调控机理，并研发配套的苹果果实保鲜新技术；同时揭示采后苹果果实病害发生的分子机理，寻求降低采后果实病害的调控措施，最终减少采后苹果果实的腐烂率。

近3年发表论文：

1. **Hu DG[1]**, Yu JQ, Han PL, Xie XB, Sun CH, Zhang QY, Wang JH, Hao YJ[*]. The regulatory module MdPUB29-MdbHLH3 connects ethylene biosynthesis with fruit quality in apple. New Phytologist, DOI.org/10.1111/nph.15511.

2. Sun MH[1], Ma QJ[1], **Hu DG[1]**, Zhu XP, You CX, Shu HR, Hao YJ[*] (2018) The glucose sensor MdHXK1 phosphorylates a tonoplast Na^+/H^+ exchanger to improve salt tolerance. Plant Physiology, 176(4): 2977-2990. (Cite: 2)

3. Sun CH, Yu JQ, Duan Xi, Wang JH, Zhang QY, Gu KD, **Hu DG[*]**, Zheng CS[*]. (2018) The MADS transcription factor CmANR1 positively modulates root system development by directly regulating *CmPIN2* in chrysanthemum. Horticulture Research, 5, 52. (Cite: 0)

4. Yu JQ, Wang JH, Sun CH, Zhang QY, **Hu DG**[*], Hao YJ[*] (2018) Ectopic expression of the apple nucleus-encoded thylakoid protein MdY3IP1 triggers early-flowering and enhanced salt-tolerance in *Arabidopsis thaliana*. BMC Plant Biology, 18, 18. (Cite: 1)

5. Sun CH, Yu JQ, Wen LZ, Guo YH, Sun X, Hao YJ, **Hu DG**[*], Zheng CS[*]. (2018) Chrysanthemum MADS-box transcription factor *CmANR1* modulates lateral root development via homo-/heterodimerization to influence auxin accumulation in *Arabidopsis*. Plant Science, 266, 27-36. (Cite: 2)

6. Qi CH, Zhao XY, Jiang H, Liu HT, Wang YX, **Hu DG**[*], Hao YJ[*] (2018) Molecular cloning and functional identification of an apple flagellin receptor *MdFLS2* gene. Journal of Integrative Agriculture, 17(0): 60345-7. (Cite: 0)

7. **Hu DG**, Li YY, Zhang QY, Li M, Sun CH, Yu JQ, Hao YJ[*] (2017) R2R3-MYB transcription factor MdMYB73 is involved in malate accumulation and vacuolar acidification in apple. The Plant Journal, 91, 443-454. (Cite: 6)

8. Sun CH, Yu JQ, **Hu DG**[*]. (2017) Nitrate: A Crucial Signal during Lateral Roots Development. Frontiers in Plant Science, 8, 485. (Cite: 15)

9. Sun MH, Ma QJ, Liu X, Zhu XP, **Hu DG**[*]. Hao YJ[*]. (2017) Molecular cloning and functional characterization of *MdNHX1* reveals its involvement in salt tolerance in apple calli and *Arabidopsis*. Scientia Horticulturae, 215(2017), 126-133. (Cite: 2)

10. Zhang QY, Yu JQ, Wang JH, **Hu DG**[*], Hao YJ[*]. (2017) Functional characterization of *MdMYB73* reveals its involvement in cold stress response in apple calli and *Arabidopsis*. Journal of Integrative Agriculture, 16(10), 2215–2221. (Cite: 0)

11. Zhang QY, Liu XJ, Liu X, Wang JH, Yu JQ, **Hu DG**[*], Hao YJ[*]. (2017) Genome-Wide Identification, Characterization, and Expression Analysis of Calmodulin-Like Proteins (CMLs) in Apple. Horticultural Plant Journal, DOI:https://doi.org/10.1016/j.hpj.2017.12.002. (Cite: 0)

12. Sun CH, Zhang QY, Ming Li, Yu JQ, **Hu DG**[*]. (2017) A Universal Method of Protoplast Isolation and Transient Expression in Plants. Asian Journal of Life Sciences, 2017, AJLS-105.

13. Liu XJ, An XH, Liu X, **Hu DG**, Wang XF, You CX, Hao YJ[*]. (2017) MdSnRK1.1 interacts with MdJAZ18 to regulate sucrose-induced anthocyanin and proanthocyanidin accumulation in apple. Journal of Experimental Botany, 68(11), 2977-2990.

14. Ma QJ, Sun MH, Lu J, Liu YJ, **Hu DG**, Hao YJ[*]. (2017) Transcription factor AREB2 is involved in soluble sugar accumulation by activating sugar transporter and amylase genes. Plant Physiology, 174(4), 2348-2362.

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16. **Hu DG**, Sun CH, Zhang QY, An JP, You CX, Hao YJ[*] (2016) Glucose sensor MdHXK1 phosphorylates and stabilizes MdbHLH3 to promote anthocyanin biosynthesis in apple. PLOS Genetics, 12(8), e1006273. (Cite: 24)

17. **Hu DG**, Ma QJ, Sun CH, Sun MH, You CX, Hao YJ[*]. (2016) Overexpression of *MdSOS2L1*, a CIPK protein kinase, increases the antioxidant metabolites to enhance salt tolerance in apple and tomato. Physiologia Plantarum, 156(2), 201-214. (Cite: 32)

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19. Ma QJ, Sun MH, Liu YJ, Lu J, **Hu DG***, Hao YJ*. (2016) Molecular cloning and functional characterization of the apple sucrose transporter gene *MdSUT2*. Plant Physiology and Biochemistry, 109, 442-451. (Cite: 5)

20. Sun CH, Zhang QY, Sun MH, **Hu DG**[*]. (2016) MdSOS2L1 forms a complex with MdMYB1 to control vacuolar pH by transcriptionally regulating MdVHA-B1 in apples. Plant Signaling & Behavior, 11(3), e1146846.

21. Zhao J, Sun MH, **Hu DG**[*], Hao YJ[*]. (2016) Molecular cloning and expression analysis of a hexokinase gene, *MdHXK1* in apple. Horticultural Plant Journal. 42(8), 1437-1447. (Cite: 4)

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