

# 简 历

个人信息			
姓名	阮孟斌	性别	男
职称	研究员		
研究所	中国热带农业科学院热带生物技术研究所		
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地址	海南省海口市龙华区学院路4号		
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研究方向			
木薯环境适应重要性状形成的分子基础			
学习&工作经历			
学习经历： 2005/09 -2008/06，海南大学，植物分子遗传专业，博士 2002/09 -2005/06，华南热带农业大学，生物化学与分子生物学专业，硕士 1998/09 -2002/06，华南热带农业大学，植物保护专业，学士			
科研工作经历： 2023/10-今，热带作物生物育种全国重点实验室，PI（创新团队负责人） 2022/01 -今，中国热带农业科学院热带生物技术研究所，研究员 2015/10-2015/12，美国罗格斯（Rutgers）大学，访问学者 2012/01 -2021/12，中国热带农业科学院热带生物技术研究所，副研究员 2011/05 -2011/12，中国热带农业科学院热带生物技术研究所，助理研究员 2010/06 -2011/03，中国科学院上海植物生理生态研究所，助理研究员 2008/07 -2010/06，中国科学院遗传与发育生物学研究所，博士后			

## 代表性成果

论文、专著、专利、品种、标准、承担项目、获奖成果等（每种代表性成果限 5 项）。

### 论文：

- 1) Kunxin Wu#, Yan Fu#, Yanli Ren, Linyu Liu, Xiuchun Zhang#\*, **Mengbin Ruan\***. Turnip crinkle virus-encoded suppressor of RNA silencing suppresses mRNA decay by interacting with Arabidopsis XRN4. *Plant Journal*, 2023, 116(3): 744-755.
- 2) Xiaoling Yu, Xin Guo, Pingjuan Zhao, Shuxia Li, Liangping Zou, Wenbin Li, Ziyin Xu, Ming Peng, **Mengbin Ruan\***. A homeodomain-leucine zipper I transcription factor, MeHDZ14, regulates internode elongation and leaf rolling in cassava (*Manihot esculenta* Crantz). *The Crop Journal*, 2023, 11(5): 1419-1430.
- 3) Xin Guo, Xiaohui Yu, Chenyu Lin, Pingjuan Zhao, Bin Wang, Liangping Zou, Shuxia Li, Xiaoling Yu, Yinhua Chen, Peng Zhang, Ming Peng\*, **Mengbin Ruan\***. Down-regulation of MeMYB2 leads to anthocyanin accumulation and increases chilling tolerance in cassava (*Manihot esculenta* Crantz). *The Crop Journal*, 2023, 11(4): 1181-1191.
- 4) Xin Guo, Xiaoling Yu, Ziyin Xu, Pingjuan Zhao, Liangping Zou, Wenbin Li, Mengting Geng, Peng Zhang, Ming Peng, **Mengbin Ruan\***. CC-type glutaredoxin, MeGRXC3, associates with catalases and negatively regulates drought tolerance in cassava (*Manihot esculenta* Crantz). *Plant Biotechnology Journal*, 2022, 20: 2389-2405.
- 5) **Mengbin Ruan\***, Xiaoling Yu, Xin Guo, Pingjuan Zhao, Ming Peng. Role of cassava CC-type glutaredoxin MeGRXC3 in regulating sensitivity to mannitol-induced osmotic stress dependent on its nuclear activity. *BMC Plant Biology*, 2022, 22: 41.

### 专利：

- 1) 国家发明专利“一种提高抗性的木薯 *MeGRXC3* 基因及其应用”，专利号：ZL 2022 1 1009155.2，2024 年，发明人：阮孟斌，于晓玲，赵平娟，邹良平，彭明。
- 2) 国家发明专利“木薯 *MeMLP423* 基因及其应用”，专利号：ZL 2024 1 0565041.9，2024 年，发明人：赵平娟，郭鑫，于晓惠，邹良平，李淑霞，阮孟斌。
- 3) 国家发明专利“一种抗寒 LncRNA 及其应用”，专利号：ZL202411308279.X，2024 年，发明人：李淑霞，李智博，赵平娟，于晓玲，阮孟斌。
- 4) 国家发明专利“一种负调控木薯内源水杨酸合成的基因及其应用”，专利号：ZL2022 1 0488495.1，2023 年，发明人：于晓玲，阮孟斌，李淑霞，彭明。
- 5) 国家发明专利“一种低温响应转录因子及其应用”，专利号：ZL2023 1 1174134.0，2023 年，发明人：于晓玲，阮孟斌，李淑霞，胡伟，彭明。

### 承担项目：

- 1) 热带作物生物育种全国重点实验室创新团队，木薯重要性状形成的分子基础，NKLTCBCXTD29，2024/07-2029/06，250 万元，主持。
- 2) 海南省种业实验室项目，木薯高产宜机新种质创制及其应用，B23E10003，2024/01-2026/12，200 万元，主持。
- 3) 热带作物生物育种全国重点实验室项目，木薯株型调控关键基因挖掘，NKLTCB202315，2023/09-2024/12，25 万元，主持。
- 4) 国家自然科学基金面上项目，32272037，MeGRXC4 调控木薯苗期抗旱的功能及分子机制，2023/01-2026/12，53 万元，主持。
- 5) 海南省自然科学基金高层次人才项目，322RC798，木薯 MeMYB2 介导 MeTT8 调控低温诱导花青素合成的分子机制，2022/04-2025/03，10 万元，主持。

# CURRICULUM VITAE

Personal Information			
Name	Mengbin Ruan	Gender	Male
Position Title	Research fellow		
Institute	Institute of Bioscience and Biotechnology, CATAS		
Email	ruanmengbin@itbb.org.cn		
Address	No. 4, West Xueyuan Road, Haikou, Hainan, China		
Tel	13379838302	Fax	
Research Interest			
Molecular basis for the formation of important traits in cassava adaptation to environmental conditions			
Education & Working Experience			
<b>Education experience:</b> 2005/09-2008/06, Ph.D. in Plant Molecular Genetics, Hainan University. 2002/09-2005/06, Master's degree in Biochemistry and Molecular Biology, South China University of Tropical Agriculture. 1998/09-2002/06, South China University of Tropical Agriculture, Bachelor's degree in Plant Protection.			
<b>Research working experience:</b> 2023/10 to present, National Key Laboratory of Tropical Crop Biological Breeding, PI (Innovation Team Leader). 2022/01 to present, Research fellow, Institute of Tropical Bioscience and Biotechnology, Chinese Academy of Tropical Agricultural Sciences. 2015/10-2015/12, Visiting Scholar at Rutgers University in the United States. 2012/01-2021/12, Associate Researcher, Institute of Tropical Biotechnology, Chinese Academy of Tropical Agricultural Sciences. 2011/05-2011/12, Assistant Researcher, Institute of Tropical Biotechnology, Chinese Academy of Tropical Agricultural Sciences. 2010/06-2011/03, Assistant Researcher, Shanghai Institute of Plant Physiology and Ecology, Chinese Academy of Sciences. 2008/07-2010/06, Post doctor, Institute of Genetics and Developmental Biology, Chinese Academy of Sciences.			



## Representative Result

### Papers:

- 1) Xiaoling Yu, Xin Guo, Pingjuan Zhao, Shuxia Li, Liangping Zou, Wenbin Li, Ziyin Xu, Ming Peng, Mengbin Ruan\*. A homeodomain-leucine zipper I transcription factor, MeHDZ14, regulates internode elongation and leaf rolling in cassava (*Manihot esculenta* Crantz). *The Crop Journal*, 2023, 11(5): 1419-1430.
- 2) Xin Guo, Xiaohui Yu, Chenyu Lin, Pingjuan Zhao, Bin Wang, Liangping Zou, Shuxia Li, Xiaoling Yu, Yinhua Chen, Peng Zhang, Ming Peng\*, Mengbin Ruan\*. Down-regulation of *MeMYB2* leads to anthocyanin accumulation and increases chilling tolerance in cassava (*Manihot esculenta* Crantz). *The Crop Journal*, 2023, 11(4): 1181-1191.
- 3) Kunxin Wu#, Yan Fu#, Yanli Ren, Linyu Liu, Xiuchun Zhang#\*, Mengbin Ruan\*. Turnip crinkle virus-encoded suppressor of RNA silencing suppresses mRNA decay by interacting with Arabidopsis XRN4. *Plant Journal*, 2023, 116(3): 744-755.
- 4) Xin Guo, Xiaoling Yu, Ziyin Xu, Pingjuan Zhao, Liangping Zou, Wenbin Li, Mengting Geng, Peng Zhang, Ming Peng, Mengbin Ruan\*. CC-type glutaredoxin, MeGRXC3, associates with catalases and negatively regulates drought tolerance in cassava (*Manihot esculenta* Crantz). *Plant Biotechnology Journal*, 2022, 20: 2389-2405.
- 5) Mengbin Ruan\*, Xiaoling Yu, Xin Guo, Pingjuan Zhao, Ming Peng. Role of cassava CC-type glutaredoxin MeGRXC3 in regulating sensitivity to mannitol-induced osmotic stress dependent on its nuclear activity. *BMC Plant Biology*, 2022, 22: 41.

### Patents:

- 1) National invention patent "MeGRXC3 gene for improving resistance in cassava and its application", patent number: ZL 2022 1 1009155.2, In 2024, inventors: Mengbin Ruan, Xiaoling Yu, Pingjuan Zhao, Liangping Zou, Ming Peng.
- 2) National invention patent "Cassava MeMLP423 gene and its application", patent number: ZL 2024 1 0565041.9, In 2024, inventors: Pingjuan Zhao, Xin Guo, Xiaohui Yu, Liangping Zou, Shuxia Li, Mengbin Ruan.
- 3) National invention patent "A cold resistant LncRNA and its application", patent number: ZL202411308279.X, In 2024, inventors: Shuxia Li, Zhibo Li, Pingjuan Zhao, Xiaoling Yu, Mengbin Ruan.
- 4) National invention patent "A gene for negative regulation of endogenous salicylic acid synthesis in cassava and its application", patent number: ZL2022 1 0488495.1, In 2023, inventors: Xiaoling Yu, Mengbin Ruan, Shuxia Li, Ming Peng.
- 5) National invention patent "A low-temperature responsive transcription factor and its application", patent number: ZL2023 1 1174134.0, In 2023, inventors: Xiaoling Yu, Mengbin Ruan, Shuxia Li, Wei Hu, Ming Peng.

### Projects:

- 1) Innovative team of National Key Laboratory of Tropical Crop Breeding, Molecular basis for the formation of important traits in cassava, no. NKLTBCBXTD29, 2024/07-2029/06, 2.5 million, Principal investigator.
- 2) Hainan Provincial Seed Industry Laboratory Project, Creation and application of high yield and mechanized new cassava germplasm, no. B23E10003, 2024/01-2026/12, 2.0 million, Principal investigator.
- 3) National Key Laboratory Project of Tropical Crop Biological Breeding, Key gene mining for cassava plant architecture regulation, NKLTBCB202315, 2023/09-2024/12, 0.25million,

Principal investigator.

- 4) National Natural Science Foundation of China General Project, MeGRXC4 regulates the drought resistance function and molecular mechanism of cassava seedlings, no. 32272037, 0.53million, 2023/01-2026/12, Principal investigator.
- 5) Hainan Provincial Natural Science Foundation High level Talent Project, Molecular mechanism of memyb2 mediated mett8 regulation of low temperature induced anthocyanin synthesis in cassava, 322RC798, 2022/04-2025/03, 0.1million, Principal investigator.