

# 简 历

个人信息			
姓名	黄天带	性别	女
职称	教授		
研究所	中国热带农业科学院橡胶研究所		
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研究方向			
<ol style="list-style-type: none"><li>1、橡胶树体胚苗规模化繁育;</li><li>2、橡胶树体胚发生分子机制;</li><li>3、橡胶树高效遗传转化、基因编辑体系建立;</li><li>4、利用高效生物育种技术改良橡胶树。</li></ol>			
学习&工作经历			
<p>教育经历</p> <p>1996.09-2000.06 华中农业大学，农学系，学士</p> <p>2000.09-2003.06 华中农业大学，植物科学技术学院，硕士</p> <p>2007.09-2010.06 海南大学，农学院，博士</p> <p>工作经历</p> <p>2003.07-2006.04 中国热带农业科学院橡胶研究所，研究实习员</p> <p>2006.05-2012.12 中国热带农业科学院橡胶研究所，助理研究员</p> <p>2013.01-2021.12 中国热带农业科学院橡胶研究所，副研究员</p> <p>2015.08-2016.08 美国肯塔基大学，访问学者</p> <p>2022.01 至今 中国热带农业科学院橡胶研究所，研究员</p>			



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## 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）。

### 一、代表性论文

1. Shichao Xin; Jinu Udayabhanu; Xuemei Dai; Yuwei Hua; Yueting Fan; Huasun Huang; **Tiandai Huang\***. Identification and Functional Evaluation of Three Polyubiquitin Promoters from *Hevea brasiliensis*, *Forests*, 2022. (三区, IF=3.282)
2. **Tiandai Huang**, Shichao Xin, Yongjun Fang, Tao Chen, Jiao Chang, Nay Chi Ko Ko, Huasun Huang\*, Yuwei Hua\*. Use of a novel R2R3-MYB transcriptional activator of anthocyanin biosynthesis as visual selection marker for rubber tree (*Hevea brasiliensis*) transformation, *Industrial Crops & Products*. 2021. (一区, IF=6.449)
3. Shichao Xin; Yuwei Hua; Ji Li; Xuemei Dai; Xianfeng Yang; Jinu Udayabhanu; Huasun Huang\*; **Tiandai Huang\***. Comparative analysis of latex transcriptomes reveals the potential mechanisms underlying rubber molecular weight variations between the *Hevea brasiliensis* clones RRIM600 and Reyan7-33 - 97, *BMC Plant Biology*. 2021. (二区, IF=4.215)
4. **Tiandai Huang**, Ji Li, Yuting Li, Huasun Huang, Yuwei Hua\*. Somatic Embryo, an Alternative Target Tissue for Agrobacterium-Mediated Transformation in *Hevea brasiliensis*, *Journal of Rubber Research* 2015, (四区, IF=0.125)
5. 范璟璋, 华玉伟, 范月婷, 辛士超, 戴雪梅, 黄天带\*, 黄华孙\*, 李季. GDS-80 手持基因枪在橡胶树遗传转化上应用的参数优化与配件改进, *热带作物学报*. 2021

### 二、代表性专著

澜湄合作机制下天然橡胶科技合作与协同发展, 中国林业出版社, 第一副主编

### 三、代表性专利

1. 黄天带, 彭素娜, 顾晓川, 黄华孙, 徐正伟, 吴日智, 蔡海滨, 廖子荣. 一种香露兜组培种苗快速繁育方法, ZL202110615682.7, 发明专利, 2022 授权
2. 黄天带, 华玉伟, 方永军, 畅姣, 陈涛, 辛士超, 黄华孙. 调控橡胶树花青素合成的转录因子及其编码基因与应用, ZL201710500935.X, 发明专利, 2019 授权
3. 黄天带, 华玉伟, 黄华孙, 孙爱花, 周权男, 戴雪梅. 一种花药愈伤组织继代培养获得橡胶树胚状体的方法, ZL201210355132.7; 2013 授权
4. 黄天带, 华玉伟, 范璟璋, 范月婷, 顾晓川, 彭素娜, 杨先锋, 辛士超, 邓玉婷, 黄华孙. 适用于基因枪轰击的装置, ZL202023100717.3, 实用新型, 2021 授权
5. 黄天带, 李季, 华玉伟, 黄华孙, 戴雪梅, 周权男, 孙爱花. 透气灭菌包装装置, ZL201320641640.1; 2013 授权

### 四、承担项目

1. 国家自然科学基金面上项目, 以低温保存胚性培养物为受体建立橡胶树 CRISPR-Cas9 基因组编辑体系研究, 2023.1-2026.12, 54 万元
2. 国家自然科学基金面上项目, 橡胶树胚状体花青素合成调控因子的发掘及转基因可视化筛选系统的构建, 2018.1-2021.12, 58 万元
3. 农业农村部, 海南天然橡胶产业集群种苗繁育中心建设项目, 2020.10-2022.9, 500 万元

### 五、获奖成果

1. 橡胶树速生高产新型种苗育苗技术, 中国农业农村重大新技术, 2021 (1/10)
2. 橡胶树实现种源自主可控, 这十年农业科技标志性成就, 2022 (核心成员)

# CURRICULUM VITAE

Personal Information			
Name	Tiandai Huang	Gender	Female
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Research Interest			
<ol style="list-style-type: none"><li>1. Large-scale propagation of <i>Hevea brasiliensis</i> somatic embryo seedlings;</li><li>2. Molecular mechanism of somatic embryogenesis in <i>Hevea brasiliensis</i>;</li><li>3. Efficient genetic transformation and gene editing system of <i>Hevea brasiliensis</i>;</li><li>4. Improve rubber tree by efficient biological breeding technology</li></ol>			
Education & Working Experience			
<b>Educational experience</b> 1996.09-2000.06 Huazhong Agricultural University, Department of Agriculture, Bachelor 2000.09-2003.06 Huazhong Agricultural University, College of Plant Science and Technology, Master 2007.09-2010.06, Hainan University, College of Agriculture, PhD			
<b>work experience</b> 2003.07-2006.04 Research intern, Rubber Research Institute, Chinese Academy of Tropical Agricultural Sciences 2006.05-2012.12 Assistant Researcher, Rubber Institute, Chinese Academy of Tropical Agricultural Sciences 2013.01-2021.12 Associate Researcher, Rubber Research Institute, Chinese Academy of Tropical Agricultural Sciences 2015.08-2016.08 Visiting Scholar, University of Kentucky, USA 2022.01 to present: Researcher, Rubber Research Institute, Chinese Academy of Tropical Agricultural Sciences			



## Representative Result

### 1、 Representative Papers

- ① Shichao Xin; Jinu Udayabhanu; Xuemei Dai; Yuwei Hua; Yueting Fan; Huasun Huang; **Tiandai Huang\***. Identification and Functional Evaluation of Three Polyubiquitin Promoters from *Hevea brasiliensis*, *Forests*, 2022. (Zone 3, IF=3.282)
- ② **Tiandai Huang**, Shichao Xin, Yongjun Fang, Tao Chen, Jiao Chang, Nay Chi Ko Ko, Huasun Huang\*, Yuwei Hua\*. Use of a novel R2R3-MYB transcriptional activator of anthocyanin biosynthesis as visual selection marker for rubber tree (*Hevea brasiliensis*) transformation, *Industrial Crops & Products*. 2021. (Zone I, IF=6.449)
- ③ Shichao Xin; Yuwei Hua; Ji Li; Xuemei Dai; Xianfeng Yang; Jinu Udayabhanu; Huasun Huang\*; **Tiandai Huang\***. Comparative analysis of late translators reserves the potential mechanisms underlying rubber molecular weight variations between the *Hevea brasiliensis* clones RRIM600 and Reyan7-33 – 97, *BMC Plant Biology*. 2021 (Zone II, IF=4.215)
- ④ **Tiandai Huang**, Ji Li, Yuting Li, Huasun Huang, Yuwei Hua \*. Somatic Embryo, an Alternative Target Tissue for Agrobacterium Mediated Transformation in *Hevea brasiliensis*, *Journal of Rubber Research* 2015, (Zone 4, IF=0.125)
- ⑤ Fan Jingzhang, Hua Yuwei, Fan Yueting, Xin Shichao, Dai Xuemei, **Huang Tiandai\***, Huang Huasun\*, Li Ji. Parameter Optimization and Parts Improvement of GDS-80 Hand held Gene Gun in Rubber Tree Genetic Transformation, *Journal of Tropical Crops*, 2021(in Chinese)

### 2、 Representative monograph

Scientific and technological cooperation and coordinated development of natural rubber under the Lancang Mekong cooperation mechanism, China Forestry Press, the first deputy editor in chief

### 3、 Representative patents

- ① Huang Tiandai, Peng Suna, Gu Xiaochuan, Huang Huasun, Xu Zhengwei, Wu Rizhi, Cai Haibin, Liao Zirong. A rapid propagation method for tissue culture seedlings of *Aristolochia odorata*, ZL202110615682.7, invention patent, authorized in 2022
- ② Huang Tiandai, Hua Yuwei, Fang Yongjun, Chang Jiao, Chen Tao, Xin Shichao, Huang Huasun. Transcription factors regulating the synthesis of anthocyanins in rubber trees and their coding genes and applications, ZL201710500935. X, invention patent, authorized in 2019
- ③ Huang Tiandai, Hua Yuwei, Huang Huasun, Sun Aihua, Zhou Quannan, Dai Xuemei. A method of obtaining rubber tree embryoids from anther callus subculture, ZL201210355132.7; 2013 Authorization
- ④ **Huang Tiandai**, Hua Yuwei, Fan Jingzhang, Fan Yueting, Gu Xiaochuan, Peng Suna, Yang Xianfeng, Xin Shichao, Deng Yuting, Huang Huasun. Device suitable for gene gun bombardment, ZL20223100717.3, utility model, 2021 authorization

### 4、 Undertake projects

- ① General program of National Natural Science Foundation of China, research on establishing rubber tree CRISPR-Cas9 genome editing system with low temperature preserved embryogenic culture as receptor, 2023.1-2026.12, 540000RMB
- ② General program of National Natural Science Foundation of China, excavation of anthocyanin synthesis regulation factors of rubber tree embryos and construction of transgenic visual screening system, 2018.1-2021.12, 580,000RMB
- ③ Ministry of Agriculture and Rural Affairs, Hainan Natural Rubber Industry Cluster Seed and Seedling Breeding Center Construction Project, 2020.10-2022.9, 5million RMB

### 5、 Award winning achievements

- ① New seedling breeding technology of rubber tree with fast growth and high yield, major new technology in China's agricultural and rural areas, 2021 (1/10)
- ② Rubber tree achieves independent and controllable provenance. This decade's landmark achievements in agricultural science and technology, 2022 (core member)

