



半夏组培苗从枝菌根感染过程研究

投稿时间: 2010-05-24 责任编辑: 吕冬梅 [点此下载全文](#)

引用本文: 沈雪莲,郭巧生,刘作易,朱国胜,刘永翔.半夏组培苗从枝菌根感染过程研究[J].中国中药杂志,2011,36(2):93.

DOI: 10.4268/cjcm20110201

摘要点击次数: 922

全文下载次数: 506

广告合作



作者中文名	作者英文名	单位中文名	单位英文名	E-Mail
沈雪莲	SHEN Xuelian	南京农业大学 中药材研究所, 江苏 南京 210095	Institute of Chinese Medicinal Materials, Nanjing Agricultural University, Nanjing 210095, China	
郭巧生	GUO Qiaosheng	南京农业大学 中药材研究所, 江苏 南京 210095	Institute of Chinese Medicinal Materials, Nanjing Agricultural University, Nanjing 210095, China	gqs@njau.edu.cn
刘作易	LIU Zuoyi	贵州省现代中药材研究所, 贵州 贵阳 550006	Institute of modernizational Chinese Traditional Medical Materials, Guizhou Academy of Agricultural Sciences, Guiyang 550006, China	liuzuoyi@yahoo.com.cn
朱国胜	ZHU Guosheng	贵州省现代中药材研究所, 贵州 贵阳 550006	Institute of modernizational Chinese Traditional Medical Materials, Guizhou Academy of Agricultural Sciences, Guiyang 550006, China	
刘永翔	LIU Yongxiang	贵州省现代中药材研究所, 贵州 贵阳 550006	Institute of modernizational Chinese Traditional Medical Materials, Guizhou Academy of Agricultural Sciences, Guiyang 550006, China	

基金项目: 国家自然科学基金项目(30070922); 国家科技支撑计划项目(2009BA174B01-1)

中文摘要:目的: 探索半夏组培苗从枝菌根感染过程与特点。方法: 将摩西球囊霉接种于半夏无菌组培苗, 于不同时间取样, 通过染色镜检法观察从枝菌根形成过程。结果与结论: 接种10 d时菌丝开始侵入半夏根表皮; 15 d时大量胞内菌丝形成, 也出现少量的胞间菌丝; 20 d后菌丝开始形成从枝, 并出现少量根上菌丝; 接种25 d后大量菌丝分叉为从枝, 以Arum型从枝为主; 30 d时一些从枝开始溶解, 有孢囊的产生; 35 d后半夏根部出现大量根外孢子; 接种后40 d, 串生孢囊形成, 且部分孢囊开始收缩衰老。半夏切片结果表明, AM真菌菌丝逐渐生长在根部细胞间隙生长, 然后在皮层细胞内进行分叉发育, 最终形成从枝充满整个细胞腔。整个实验表明半夏能迅速与从枝菌根相互识别, 形成共生体。

中文关键词: 半夏 组培苗 摩西球囊霉 感染 从枝菌根形成

Infection progress of arbuscular mycorrhizae on tissue-cultured plantlets of *Pinellia ternata*

Abstract: Objective: To study the Arbuscular mycorrhizal (AM) formation progress and infection characteristics between tissue culture plantlets of *Pinellia ternata* and *Glomus mosseae*. Method: The tissue culture plantlets of *P. ternata* were inoculated with *G. mosseae*, the formation of AM were sampled and observed with microscopy by staining. Result and Conclusion: The hyphae of *G. mosseae* began to penetrate the root epidermis after 10 days of inoculation. Lots of intracellular hyphae formed in cortex cells at the 15th day. Arbuscules started to form and there were some hyphae on the root at the 20th day. At the 25th day, many arbuscules formed and most as Arum type. Some arbuscules started to disintegrate at the 30th day, and a few of vesicles occurred. Lots of spores formed after 35 days. At the 40th day, some vesicles began to decline. The hand section showed that the intercellular hyphae gradually formed in intercellular space, and the hyphae branched in cortex cells and occupied most cell lumen finally. It is expounded that *P. ternata* and *G. mosseae* could recognize each other quickly and form a symbiont system.

keywords: *Pinellia ternata* tissue-cultured plantlets *Glomus mosseae* infection formation progress of AM

[查看全文](#) [查看/发表评论](#) [下载PDF阅读器](#)