



## 不同膨大状态地黄根部内生真菌的分离及鉴定

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**中文摘要:**目的:以野生地黄为对象,分离和鉴定地黄内生真菌,并探讨其内生真菌与地黄连作状态之间的关系。方法:将野生地黄进行不同的移植处理,获得根部膨大状态不同的地黄根系,分离其内生真菌,分别通过棉兰染色法和18S rDNA及ITS序列分析对内生真菌进行形态学和分子鉴定,比较内生真菌的差异;并建立地黄块根膨大的水培实验系统,将地黄无茵苗和内生真菌进行共培养,观察内生真菌对地黄生长的影响。结果与结论:共分离到4种内生真菌,从未膨大根系中分离出3种优势菌株 I、II、III,从膨大的地黄根中分离到III和IV,经鉴定这4种真菌分别为I轮生菌*Verticillium* spp. II尖孢镰刀菌*Fusarium oxysporum*, III芳香镰孢菌 *F. redolens*, IV角担菌属真菌 *Ceratobasidium* spp.。共培养结果表明内生真菌 I、II、III的过量生长不利于地黄根膨大,而IV则不影响地黄根部的膨大。

中文关键词:地黄 连作 内生真菌 18S rDNA ITS

Isolation and identification of endophytic fungi from different swollenroot of *Rehmannia glutinosa*

**Abstract:**The swollen root of *Rehmannia glutinosa* is used as one kind of important Chinese traditional medicine. The root of *R. glutinosa* usually swelled in rotational cropping but not in continuous cropping. The rhizosphere microorganisms of *R. glutinosa* under different farming condition were thought related to that. In this study, the endophytic fungi in the root of *R. glutinosa* growing in various soil conditions were isolated for the study of the relationship between the microorganisms and the root enlargement of their host plants. The dominant endophytes, *Verticillium* spp., *Fusarium oxysporum*, *F. redolens* and *Ceratobasidium* spp. were identified by morphological observation and 18S rDNA and ITS sequence analysis. The preliminary investigation showed that the excessive growth of *Verticillium* and *Fusarium* genus fungi is unfavorable for the *R. glutinosa* root swelling, but *Ceratobasidium* fungi has no effects on the root enlargement.

keywords:*Rehmannia glutinosa* continuous cropping endophyte 18S rDNA ITS[查看全文](#) [查看/发表评论](#) [下载PDF阅读器](#)