

### 论文 金钱白花蛇及其伪品的Cyt *b*基因片段序列分析和PCR鉴别研究

王义权;周开亚;徐珞珊;徐国钧

中国药科大学生药学研究室,南京210009;南京师范大学生物多样性与分子进化研究室,南京210097

摘要:

对金钱白花蛇及其伪、混品药材和原动物的Cyt *b*基因片段的序列分析发现,该基因片段在金钱白花蛇及其伪品间的差异远远大于金钱白花蛇种内个体间的差异,是理想的用于鉴别金钱白花蛇及其伪混品的分子遗传标记。在对Cyt *b*基因片段序列分析的基础上,设计了金钱白花蛇PCR鉴别的一对高度特异性引物BuL-1和BuH-1。结果表明,该对引物在对金钱白花蛇的PCR鉴别中,用60℃~65℃的复性温度,可以100%检出金钱白花蛇,误检率和漏检率为0,并能在混合的药材粉末中检测出被检样品中是否含有金钱白花蛇组份。本研究还表明PCR鉴别将有可能成为中成药复方组分鉴别的一种新手段。

关键词: Cyt *b*基因 DNA序列 Polymerase chain reaction(PCR)鉴别 金钱白花蛇

### SEQUENCING OF CYT *B* GENE FRAGMENTS AND PCR IDENTIFICATION OF "JINQIAN BAIHUASHE" (*BUNGARUS PARVUS*) AND ITS ADULTERANTS

Wang Yiquan; Zhou Kaiya ; Xu Luoshan and Xu Guojun

Abstract:

DNAs extracted from both "Jinqian Baihuashe" (*Bungarus parvus*) and its adulterants and original animals of the crude snake drugs were used as templates for Cyt *b* gene fragment amplification. The sequence data of the fragments showed that the differences of the sequence between *Bungarus parvus* and its adulterants were far greater than that between intraspecific variations of *Bungarus parvus*. Therefore, the Cyt *b* gene fragment was a good molecular genetic marker for the authentication of *Bungarus parvus*. On the basis of the sequence data, a pair of specialized primers, BuL-1 and BuH-1 was designed for the PCR identification of *Bungarus parvus*. The effectiveness of the primers were examined at a series of anneal temperatures. The results showed that *Bungarus parvus* samples could be absolutely distinguished when the anneal temperatures were 60℃~65℃, whereas no incorrect or missing discrimination was found at these temperatures. The results also showed that the powder of *Bungarus parvus* which was mixed with powders of three other crude snake drugs may be detected by the PCR identification. This indicates that PCR identification may be a new method for examining the compositions of Chinese patent medicine.

Keywords: DNA sequence Polymerase chain reaction (PCR) identification *Bungarus parvus* Cyt *b* gene

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