中国中药杂志
China Journal of Chinese Materia Medica

贵州头花蓼遗传多样性的ISSR分析

投稿时间： 2009-12-08 责任编辑：吕冬梅 点此下载全文

引用本文：周涛,金艳蕾,吴钰,江维克,魏升华,王尚华,郭培果.贵州头花蓼遗传多样性的ISSR分析[J].中国中药杂志,2010,35(12):1511.

DOI：10.4268/cjcmm20101201

作者中文名	作者英文名	单位中文名	单位英文名	E-Mail
周涛	ZHOU Tao	贵阳中医学院, 贵州 贵阳 550002	Guiyang college of Traditional Chinese Medicine, Guiyang 550002, China	taozhou88@163.com
金艳蕾	JIN Yanlei	贵阳中医学院, 贵州 贵阳 550002	Guiyang college of Traditional Chinese Medicine, Guiyang 550002, China	
吴钰	WU Yu	贵阳中医学院, 贵州 贵阳 550002	Guiyang college of Traditional Chinese Medicine, Guiyang 550002, China	
江维克	JIANG Weike	贵阳中医学院, 贵州 贵阳 550002	Guiyang college of Traditional Chinese Medicine, Guiyang 550002, China	
魏升华	WEI Shenghua	贵阳中医学院, 贵州 贵阳 550002	Guiyang college of Traditional Chinese Medicine, Guiyang 550002, China	
王尚华	WANG Shanghua	贵州威门药业股份有限公司, 贵州 贵阳 550018	Cuizhou Weimen Pharmaceutical Co., Ltd., Guiyang 550018, China	
郭培果	GUO Peiguo	贵阳中医学院, 贵州 贵阳 550002	Guiyang college of Traditional Chinese Medicine, Guiyang 550002, China	

基金项目:国家环保局全国重点物种资源调查项目(物种07-二-5);贵州省科技重大专项计划项目(黔科合重大专项字 20080620);贵州省教育厅自然科学研究项目(黔教科2008026)

中文摘要:目的: 对贵州头花蓼48个居群的遗传多样性进行分析。 方法 :采用ISSR分子标记技术研究贵州省48个居群240个个体的遗传多样性。 结果 :11条引物共检测到8 293个位点,其中7 962个为多态位点。在居群水平上,头花蓼各居群的多态位点百分率(PPB)差异较大(69.78%~93.13%),平均值为 79.09%,Nei's基因多样性指数(H_e)为0.245 8,Shannon多样性指数(I)为0.396 2,基因分化系数(G_{st})为0.722 3,居群内Nei's基因多样性(H_s)为0.080 4,Shannon's多样性基因遗传分化系数(I_{st})为0.044 2。UPGMA聚类分析显示48个居群可分为3大类,贵州境内西部、西南部与东南部的头花蓼表现为交叉聚类,Meantel检测居群间的遗传距离与地理距离之间无显著的正相关关系(r=0.262 9)。 结论 :头花蓼种群遗传变异多存在于居群间,居群内的遗传分化较小,居群间存在基因流(N_m)受阻,聚类显示部分迁徙居群没有出现随地理变化的遗传变异趋势。

中文关键词:头花蓼 居群 遗传多样性 遗传结构 ISSR

Genetic diversity of *Polygonum capitatum* fromGuizhou populations by ISSR markers

Abstract: Objective: To detect genetic diversity of 48 population of *Polygonum capitatum* in Guizhou province. Method : The genetic diversity of 48 representational populations of *P. capitatum* including 240 individuals had been investigated by ISSR marker technique. Result : The genetic diversity had been revealed as follow: A total of 8 293 bands were produced in 240 individuals, of which 7 962 bands were common in the 48 population. The value of the average percentage of polymorphic bands (PPB) was 79.09%, Nei's genetic diversity index (H_e) was 0.245 8, Shannon's information index (I)was 0.396 2, and genetic differentiation index (G_{st}) was 0.238 0 at population level, respectively. The genetic differentiation index (G_{st}) was 0.072 2, genetic differentiation coefficient by Shannon's diversity (I_{st}) was 0.044 2 within the population levels. Groups cluster analysis based on the UPGMA method indicated that although the 48 populations could be divided into 3 groups and the *P. capitatum* seed sources. The groups cluster showed that a cross clustering of *P. capitatum* between the southwest and southeast populations in Guizhou province, and no significant correlation was found between geographical and genetic distance among them. Conclusion : The genetic diversity of *P. capitatum* is relatively high at the population levels, while low within the population levels, a significant degree of genetic differentiation occurs among the populations. The groups cluster analysis indicated they has not apparent genetic variation in regional pattern between the place of origin populations and the migrate populations.

keywords:*Polygonum capitatum* population genetic diversity genetic structure ISSR

查看全文 查看/发表评论 下载PDF阅读器