

综合评述

## ISSR分子标记在入侵植物研究中的应用

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**摘要** 外来生物入侵是对全球生物多样性最为严重的威胁之一, 对经济安全、生态安全、社会安全、国际利益和国际贸易都具有重要影响. 入侵种群的分子标记分析是外来入侵生物研究的重要途径. 其中, 简单序列重复区间标记 (inter-simple sequence repeat, ISSR) 是一种基于微卫星序列发展起来的新型分子标记, 具有简便、快捷、结果稳定和DNA多态性高等优点. 本文系统地介绍了ISSR分子标记的原理、技术特征及其实验操作, 并简要地阐述了ISSR分子标记在外来入侵植物的群体遗传结构分析、遗传多样性检测、入侵来源推测、入侵植物的分布模式及其亲缘关系分析、入侵植物的繁育特性检测等方面的应用及其研究进展.

**关键词** [ISSR](#) [外来入侵植物](#) [遗传多样性检测](#) [亲缘关系分析](#)

分类号

## Application of ISSR molecular marker in invasive plant species study.

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### Abstract

Alien species invasion is one of the most important drivers of worldwide environmental change, which may result in environmental degradation, biodiversity loss, and food and water shortage. It may also increase the possibility and severity of natural disasters, and damage international trade and benefits. In last two decades, DNA-based molecular markers were widely used to detect the genetic diversity of invaded alien species. Inter-simple sequence repeat (ISSR) is a microsatellite-based technique, with the superiorities of simple, quick, reliable, and generating higher levels of DNA polymorphism, and being used as a new molecular marker for genetic study. This paper introduced the principles, characteristics and procedures of ISSR, and summarized its applications in studying the genetic structure, genetic diversity, origin, distribution mode, phylogenesis, and breeding features of invasive plants.

**Key words** [inter-simple sequence repeat \(ISSR\)](#) [invasive plant](#) [genetic diversity detection](#) [phylogenetic analysis](#)

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