

研究报告

## 激光捕获显微切割技术在植物基因组研究中的应用

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**摘要** 植物的生长和发育在很大程度上取决于组织和(或)器官特异表达的基因, 但要获取某一发育阶段的特异细胞类群来进行基因表达分析又是相当困难的。近年发展起来的激光捕获显微切割技术可以在显微镜下快速准确地获取单一的细胞类群, 甚至单个细胞, 成功地解决了组织中细胞的异质性问题。介绍了该技术的原理, 并对其在植物中的应用进展情况做了综述, 同时指出了该技术在植物中应用的可能发展方向。

**关键词** [激光捕获显微切割](#) [基因表达分析](#) [蛋白组](#) [植物-微生物互作](#)

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## Application of Laser Capture Microdissection in Plant Genomic Research

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### Abstract

To a large degree, the growth and development of plants depend on the organ and/or cell type-specific expression of genes. However, it can be difficult to obtain sufficient number of specific cells from any developmental stage to analyze expression of genes. Laser capture microdissection (LCM) is a novel technique that allows us to collect pure targeted cell subgroup or even a single cell quickly and precisely, thus the problem of tissue heterogeneity in molecular analysis can be resolved successfully. In this paper, the principles of LCM were introduced and the application of LCM in plant was summarized in gene expression analysis, proteomics and plant-microbe interaction. Meanwhile, possible directions of LCM in plant were put forward.

**Key words** [laser capture microdissection \(LCM\)](#) [gene expression analysis](#) [proteomics](#) [plant-microbe interaction](#)

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