

专论与综述

拟南芥中MATE基因家族的研究进展

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摘要 多药和有毒化合物排出家族 (Multidrug and Toxic Compound Extrusion, MATE) 是一个新的次级转运蛋白家族, 此类转运蛋白对氨基葡萄糖、阳离子染料、多种抗生素和药物有转运作用。拟南芥中的MATE基因家族是一个多基因家族, 大概由56个成员构成, 本文综述了拟南芥中MATE家族基因的研究进展, 包括3个方面: 第一是拟南芥中MATE家族成员的构成及主要特征; 第二描述了转运蛋白的主要功能; 第三分析了其功能多样的大致原因。此外, 还展望了此家族研究的一些前景。

关键词 [拟南芥, 突变体, MATE家族](#)

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MATE Genes Family Research Development in Arabidopsis

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Abstract

A new family of secondary transporters, which was referred to as the MATE (multidrug and toxic compound extrusion) family. These proteins mediate resistance to a wide range of cationic dyes, aminoglycosides and other structurally diverse antibiotics and drugs. MATE represents a large multigene family in Arabidopsis. At least 56 distinct genes were identified. This paper reviewed the research development in Arabidopsis in three aspects. The first is the constitutes and the characteristics of this family in Arabidopsis. The second describes the major transport function. The third is about the explanation why the different members of the family may function diversely. The prospects of the research on this family are also viewed in this article.

Key words [Arabidopsis](#) [mutant](#) [MATE family](#)

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