

喜马牡丹花粉二型性及其病毒侵染

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摘要 栽培芍药及牡丹的成熟花药中有大量的异常花粉。在电子显微镜下发现喜马牡丹的异常花粉中有大量长约190 nm的管状病毒,从叶片提取病毒后对其进行了形态学和免疫学研究表明,喜马牡丹中的病毒是烟草皱曲病毒(TRV, Tobacco Rattle Virus)。喜马牡丹成熟花药中有80%以上的空瘪花粉,其它存活花粉中绝大部分为异常花粉,植株雄性不育。植株中和花粉中病毒的存在很可能是造成雄性不育和大量异常花粉的原因。在喜马牡丹中,TRV可在生殖器官分化过程中由体细胞组织传入花粉母细胞及花粉。

关键词

分类号

Pollen Dimorphism and Virus Infection in *Paeonia Emodi*

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Abstract

Mature anthers of cultivated peonies (*Paeonia*) contain numerous anomalous pollen grains. Large amount of tubular viruses were discovered in anomalous pollen of *P. emodi*. Morphological and immunological characteristics of the viruses indicated that the viruses were tobacco rattle virus (TRV). Over 80% of the pollen in mature anthers of *P. emodi* were empty. The remaining alive pollen grains were mostly anomalous. The plant was male sterile. The presence of viruses in *P. emodi* may be the cause of anomalous pollen grains and male sterility. TRV can be transmitted to PMC and pollen during flower differentiation in *P. emodi*.

Key words

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