

RNA干扰机制研究进展Progress of RNA Interference Mechanism

燕飞, 成卓敏YAN Fei, CHENG Zhuo-Min

中国农业科学院植物保护研究所植物病虫害生物学国家重点实验室, 北京 100094 State key laboratory for biology of plant diseases and insect pests, Institute of Plant Protection, Chinese Academy of Agricultural Science, Beijing 100094, China)

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摘要 RNAi是多种生物体内由dsRNA介导的同源mRNA降解现象。这是一个高度特异化的过程, 涉及多种蛋白质的共同参与。在这一过程中, siRNA的结构影响其两条链装配到RISC中去的能力。除了与RISC结合外, siRNA还引导了RITS复合物结合到同源染色质, 介导异染色质化过程。干扰效应的扩散, 即系统性沉默可能依赖于跨膜蛋白的转运, 并且很可能是在多因素调控下完成的。Abstract: RNA interference (RNAi) is a phenomenon that the double-stranded RNA (dsRNA) intermediates the degradation of complementary mRNA found in many organisms. This is a specifically mechanism involved in kinds of proteins to complete the interference function. Structure of siRNA affects which strand will be assembled into RISC. Another role of siRNA is directing RITS complex to bind with homologue chromosome, and then induces heterochromatinization. Although systemic silence induced by dsRNA is observed in Caenorhabditis elegans and plants, this progress is probably transmembrane protein-dependent, and mostly, the systemic silencing is controlled by multi-factors.

关键词 [RNA干扰](#) [小干扰RNA](#) [RNA诱导沉默复合物](#) [Agronaute蛋白](#) **Key words** [RNA interference](#) [Small interfering RNA](#) [RNA-induced silence complex](#) [Agronaute protein](#)

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