

植物激素对体细胞胚胎发生的诱导与调节 The Induced and Regulatory Effects of Plant Hormones in Somatic Embryogenesis

崔凯荣¹, 邢更生², 周功克², 刘新民¹, 王亚馥² CUI Kai-rong¹, XING Geng-sheng², ZHOU Gong-ke², LIU Xin-min¹, WANG Ya-fu²

1.中国科学院兰州沙漠研究所 兰州 730000; 2.兰州大学 干旱农业生态国家重点实验室, 兰州 730000 1.Lanzhou Institute of Desert Research, Academia Sinica, Lanzhou 730000; 2.The State Key Laboratory of Arid Agroecology, Lanzhou University, Lanzhou 730000, China

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摘要 以作者自己的工作为背景, 结合国内外近几年的有关报道, 综述了几种外源和内源激素对植物体细胞胚胎发生的诱导与调节作用。外源生长素和细胞分裂素是诱导离体培养细胞分化与增殖所必需的, 2, 4-D是诱导胚性愈伤组织的重要激素。在体细胞胚胎发生中内源激素含量和代谢的平衡起着关键的作用, 而且外源和内源激素对诱导体细胞胚胎发生起相互调节作用。ABA在提高体细胞胚胎发生频率和质量上具有重要作用, 同时, 外源与内源ABA对体细胞胚胎发生起相互促进作用。本文还较为深入地讨论了这些激素诱导体细胞胚胎发生的可能作用机制。

Abstract: The paper summarizes the induced and regulatory effects of a few exogenous and endogenous hormones in plant somatic embryogenesis by our studies and related international reports. The exogenous auxin and cytokinin are necessary to induced differentiation and proliferation of cells of culture in vitro. 2, 4-D is an important hormone of induced embryogenic calluses. The contents and the metabolic balances of endogenous hormones have key effects for somatic embryogenesis. In addition, the exogenous and endogenous hormones have mutual regulatory effects for somatic embryogenesis. ABA has an important effect to improving the frequency and quality of somatic embryogenesis. Meanwhile, the exogenous and endogenous ABA have mutual promoted effects for somatic embryogenesis. The paper discusses possible mechanism of hormones-induced somatic embryogenesis in a deep-going way.

关键词 [植物](#) [外源激素](#) [内源激素](#) [体细胞胚胎发生](#) **Key words** [plant](#) [exogenous hormone](#) [endogenous hormone](#) [somatic embryogenesis](#)

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