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Plant Embryogenesis

Edited by
Minako Ueda and Daisuke Kurihara

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Preface to "Plant Embryogenesis"

Embryogenesis is a fundamental process in plant ontogeny. The fusion of a paternal sperm and a maternal egg generates a zygote and initiates the series of developmental events to set the basic body plan of the future plant. Therefore, embryogenesis is a dynamic procedure, involving a shift from the haploid gametophytic to the diploid sporophytic generation, metabolic activation, pattern formation, and dormancy in seed maturation. Furthermore, successful embryogenesis is essential for plant fertility and reproductive fitness. Thus, embryonic regulations are important not only for understanding both plant evolution and the diverse survival strategies of various plant species but also for bioengineering to increase plant productivity in agriculture.

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