

アドバンス生命理学特論

Topics in Advanced Biological Science

Role of DNA methylation in reproductive success



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ITbM Lecture room (101),
Institute of Transformative Bio-Molecules,
Nagoya University

DNA methylation is a key epigenetic mark that controls gene expression and genome stability in many eukaryotes. Whereas DNA methylation seems to be largely stable post-embryonically in plants as well as in mammals, it is subject to reprogramming in the reproductive phase, both on the maternal and the paternal side. The functional consequences of these reprogramming defaults remain poorly characterized. By manipulating DNA demethylase activity, we have altered methylome reprogramming in Arabidopsis and thereby revealed the functional importance of this process in reproductive success and uncovered a novel form of intergenerational epigenetic inheritance.

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