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Concerted expression of a cell cycle regulator and a metabolic enzyme from a bicistronic transcript in plants

Bacteria coordinate expression of several genes by organizing them in ‘operons’, which represent gene clusters driven by a single promoter. Multiple genes are transcribed together into a single mRNA and then this mRNA instructs ribosomes to produce several different proteins at the same time. In contrast, in the nuclear genomes of higher organisms, each gene has its own promoter. In animals, operons are a rare exception, and they were thought to be absent in plants.

The Hothorn lab from the Department of Botany and Plant Biology now reports the identification of an operon-like transcript in plants that allows for the concerted expression of a previously unknown cell-cycle regulator and a metabolic enzyme. This highly unusual transcript is conserved across the entire plant kingdom and is required for plant embryo development and growth. The work, which appeared in *Nature Plants* has been funded by an starting grant from the European Research Council (ERC) and by the Howard Hughes Medical Institute (HHMI).

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