P028 Unravelling the role of PLT transcription factors during early embryogenesis

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The initial asymmetric division of the plant zygote to give different apical and basal daughter cells has been linked with differential auxin distribution but the underlying mechanism for this generation of cell fate diversity has remained unknown. Expression of the *PLETHORA* genes, encoding AP2 domain containing transcription factors, is detectable from the earliest stages of embryogenesis onward. Overlapping functions of two *PLT* genes promote the asymmetric division of the zygote and trigger development of the apical cell lineage. We will describe two direct upstream regulators of one of these *PLT* genes during the first step of plant embryo development, which both have critical roles in early embryo development.