



# Live imaging of DORNRÖSCHEN and DORNRÖSCHEN-LIKE promoter activity reveals dynamic changes in cell identity at the microcallus surface of Arabidopsis embryonic suspensions

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Titre	Live imaging of DORNRÖSCHEN and DORNRÖSCHEN-LIKE promoter activity reveals dynamic changes in cell identity at the microcallus surface of Arabidopsis embryonic suspensions
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Auteur	Cole, M. [1], Jacobs, B. [2], Soubigou-Taconnat, Ludivine [3], Balzergue, Sandrine [4], Renou, Jean-Pierre [5], Chandler, J. W [6], Werr, W. [7]
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Résumé en anglais	<p>Key message Transgenic DRN::erGFP and DRNL::erGFP reporters access the window from explanting Arabidopsis embryos to callus formation and provide evidence for the acquisition of shoot meristem cell fates at the microcalli surface. Abstract The DORNRÖSCHEN (DRN) and DORNRÖSCHEN-LIKE (DRNL) genes encode AP2-type transcription factors, which are activated shortly after fertilisation in the zygotic Arabidopsis embryo. We have monitored established transgenic DRN::erGFP and DRNL::erGFP reporter lines using live imaging, for expression in embryonic suspension cultures and our data show that transgenic fluorophore markers are suitable to resolve dynamic changes of cellular identity at the surface of microcalli and enable fluorescence-activated cell sorting. Although DRN::erGFP and DRNL::erGFP are both activated in surface cells, their promoter activity marks different cell identities based on real-time PCR experiments and whole transcriptome microarray data. These transcriptome analyses provide no evidence for the maintenance of embryogenic identity under callus-inducing high-auxin tissue culture conditions but are compatible with the acquisition of shoot meristem cell fates at the surface of suspension calli.</p>
URL de la notice	<a href="http://okina.univ-angers.fr/publications/ua7801">http://okina.univ-angers.fr/publications/ua7801</a> [18]

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### **Liens**

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