# Participación del transporte simplástico de las auxinas durante el desarrollo de las plantas [

2024

text (article)

Analítica

The appropriate organogenesis of plants during their life cycle promotes their development and adaptation to different environmental conditions. Various phytohormones regulate plant development but auxin, called Indole-3-Acetic Acid (IAA), is one of the most important. IAA is synthesized in the aerial part of plant and is mobilized to the demanding tissues by a rapid transport using the phloem and by the polar auxin transport (PAT). Recently, it has been shown that auxins also are mobilized by a symplastic transport (ST) through plasmodesmata (PD), which opening or closing is regulated by the callose degradation or deposition respectively. The objective of the present work was to deepen the analysis on the participation of symplastic transport of auxins during plant development, as well in the callose degradation or deposition, in the closing or opening of the PD, that regulates the development of some organs of Arabidopsis thaliana . The intervention of PDLP5 proteins is decisive for the callose deposition in the PD, which regulates the auxin distribution and impacts root formation, especially at the lateral roots. The participation of TS is important to develop the auxin activity, which favors root formation, necessary for the improvement plant nutrient ab- sorption. This knowledge can be used to improve development plants of agronomic interest
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**Título:** Participación del transporte simplástico de las auxinas durante el desarrollo de las plantas electronic resource].]

**Editorial:** 2024

**Tipo Audiovisual:** auxinas callosa desarrollo vegetal plasmodesmos transporte simplástico auxins callose plant development plasmodesmata symplastic transport

**Documento fuente:** CienciaUAT, ISSN 2007-7521, Vol. 18, Nº. 2, 2024 (Ejemplar dedicado a: Latin Food 2022), pags. 6-18

**Nota general:** application/pdf

**Restricciones de acceso:** Open access content. Open access content star



**Lengua:** Spanish

**Enlace a fuente de información:** CienciaUAT, ISSN 2007-7521, Vol. 18, Nº. 2, 2024 (Ejemplar dedicado a: Latin Food 2022), pags. 6-18

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