



Cover: Root hairs are tip-growing cells that emerge from the surface of plant roots. By increasing the surface area of the root, root hairs play crucial roles in the uptake of water and nutrients from the soil. Phosphatidylinositol 4-phosphate (blue) is enriched at the apical-most dome of elongating root hairs and was found to recruit the ARF-GAP protein AGD1 to specific plasma membrane domains of root epidermal cells where new root hairs form. See article by Yoo et al. (jcs203828).

EDITORIAL

Have plant cells been forgotten?
Russinova, E. (Guest Editor)
jcs214981

FIRST PERSON

First person – Yoko Ito
jcs214338

First person – Magdalena Woloszynska
jcs214312

First person – Klaus Herburger
jcs214296

CELL SCIENTISTS TO WATCH

Interview with the Guest Editor – Jenny Russinova
jcs215202

Cell scientist to watch – Steven Spoel
jcs215046

CELL SCIENCE AT A GLANCE

Building a plant cell wall at a glance
Lampugnani, E. R., Khan, G. A., Somssich, M. and Persson, S.
jcs207373

Chemical signaling for pollen tube guidance at a glance
Mizuta, Y. and Higashiyama, T.
jcs208447

HYPOTHESIS

Emerging role of the plant ERF transcription factors in coordinating wound defense responses and repair
Heyman, J., Canher, B., Bisht, A., Christiaens, F. and De Veylder, L.
jcs208215

REVIEWS

The retromer, sorting nexins and the plant endomembrane protein trafficking
Heucken, N. and Ivanov, R.
jcs203695

Peroxisomal plant metabolism – an update on nitric oxide, Ca²⁺ and the NADPH recycling network
Corpas, F. J. and Barroso, J. B.
jcs202978

The monoplastidic bottleneck in algae and plant evolution
de Vries, J. and Gould, S. B.
jcs203414

Phragmoplast microtubule dynamics – a game of zones
Smertenko, A., Hewitt, S. L., Jacques, C. N., Kacprzyk, R., Liu, Y., Marcec, M. J., Moyo, L., Ogden, A., Oung, H. M., Schmidt, S. and Serrano-Romero, E. A.
jcs203331

Plant cell surface receptor-mediated signaling – a common theme amid diversity
He, Y., Zhou, J., Shan, L. and Meng, X.
jcs209353

Actin-mediated movement of chloroplasts
Wada, M. and Kong, S.-G.
jcs210310

Green light for quantitative live-cell imaging in plants
Grossmann, G., Krebs, M., Maizel, A., Stahl, Y., Vermeer, J. E. M. and Ott, T.
jcs209270

SHORT REPORTS

The plant *i*-AAA protease controls the turnover of an essential mitochondrial protein import component
Opalińska, M., Parys, K., Murcha, M. W. and Jańska, H.
jcs200733

Insights into cortical microtubule nucleation and dynamics in *Arabidopsis* leaf cells
Yagi, N., Matsunaga, S. and Hashimoto, T.
jcs203778

A pharmacological study of *Arabidopsis* cell fusion between the persistent synergid and endosperm
Motomura, K., Kawashima, T., Berger, F., Kinoshita, T., Higashiyama, T. and Maruyama, D.
jcs204123

RESEARCH ARTICLES

Calmodulin antagonist affects peroxisomal functionality by disrupting both peroxisomal Ca²⁺ and protein import
Corpas, F. J. and Barroso, J. B.
jcs201467

Chloroplast behaviour and interactions with other organelles in *Arabidopsis thaliana* pavement cells
Barton, K. A., Wozny, M. R., Mathur, N., Jaipargas, E.-A. and Mathur, J.
jcs202275

Replication of ribosomal DNA in *Arabidopsis* occurs both inside and outside the nucleolus during S phase progression
Dvořáčková, M., Raposo, B., Matula, P., Fuchs, J., Schubert, V., Peška, V., Desvoves, B., Gutierrez, C. and Fajkus, J.
jcs202416

Signal motif-dependent ER export of the Qc-SNARE BET12 interacts with MEMB12 and affects PR1 trafficking in *Arabidopsis*

Chung, K. P., Zeng, Y., Li, Y., Ji, C., Xia, Y. and Jiang, L.
jcs202838

Deletion analysis of AGD1 reveals domains crucial for plasma membrane recruitment and function in root hair polarity

Yoo, C.-M., Naramoto, S., Sparks, J. A., Khan, B. R., Nakashima, J., Fukuda, H. and Blancaflor, E. B.
jcs203828

PATELLINS are regulators of auxin-mediated PIN1 relocation and plant development in *Arabidopsis thaliana*

Tejos, R., Rodriguez-Furlán, C., Adamowski, M., Sauer, M., Norambuena, L. and Friml, J.
jcs204198

The Elongator complex regulates hypocotyl growth in darkness and during photomorphogenesis

Wolozynska, M., Gagliardi, O., Vandenbussche, F., De Groeve, S., Alonso Baez, L., Neyt, P., Le Gall, S., Fung, J., Mas, P., Van Der Straeten, D. and Van Lijsebettens, M.
jcs203927

Arabidopsis thaliana ACS8 plays a crucial role in the early biosynthesis of ethylene elicited by Cu²⁺ ions

Zhang, B., Liu, H., Ding, X., Qiu, J., Zhang, M. and Chu, Z.
jcs202424

Localisation and substrate specificities of transglycanases in charophyte algae relate to development and morphology

Herburger, K., Ryan, L. M., Popper, Z. A. and Holzinger, A.
jcs203208

The Golgi entry core compartment functions as a COPII-independent scaffold for ER-to-Golgi transport in plant cells

Ito, Y., Uemura, T. and Nakano, A.
jcs203893

Loss of *Arabidopsis* p24 function affects ERD2 trafficking and Golgi structure, and activates the unfolded protein response

Pastor-Cantizano, N., Bernat-Silvestre, C., Marcote, M. J. and Añiento, F.
jcs203802

Paracrine brassinosteroid signaling at the stem cell niche controls cellular regeneration

Lozano-Elena, F., Planas-Riverola, A., Vilarrasa-Blasi, J., Schwab, R. and Caño-Delgado, A. I.
jcs204065