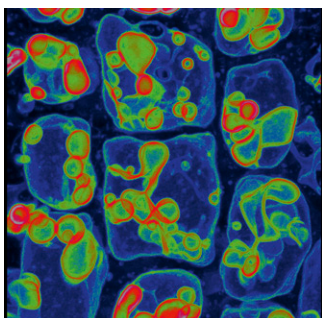


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ON THE COVER



A number of essential processes in plant cell growth, storage, and detoxification take place in vacuoles, yet knowledge about mechanisms underlying their biogenesis and associated protein trafficking pathways remains limited. Viotti et al. (pages 3434–3449) provide evidence for a Golgi-independent route of vacuolar biogenesis in plant cells. The cover shows the maximum projection of a Z-stack acquired from an *Arabidopsis pat2-2* mutant seedling expressing the tonoplast marker protein VHA- α 3-GFP. This mutant of the β -subunit of the AP3 complex harbors abnormal multi-layered tonoplast invaginations that are significantly higher in fluorescence intensity than those of the wild type. The contrast to single-layered vacuolar membranes is emphasized by application of the “Rainbow RGB” look-up-table (LUT) in Image J. Low intensities are depicted in blue and light green, and high intensities in red.

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