



ABSTRACT

“Sterol Function during Cytokinesis and Establishment of Cell Polarity in Arabidopsis”

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The correct composition of membrane sterols is necessary both for the establishment of cell polarity and the precise execution of cytokinesis in diverse organisms. However, little is known about the specific processes and mechanisms which are impacted by incorrect membrane sterol composition, especially in plants. Here, I will discuss the requirement of membrane sterols for post-cytokinetic establishment of apical polarity of the *Arabidopsis* PIN2 auxin efflux carrier protein at the plasma membrane of root epidermal cells (Men et al. 2008. *Nature Cell Biol.* 10, 237-244). In the second part of my talk, I will report on our more recent results on the subcellular distribution of sterols in cytokinetic cells. Moreover, I will address how sterols influence the correct placement of the KNOLLE syntaxin, a major mediator of cytokinetic vesicle docking/fusion, at the cell plate during late stages of cytokinesis.