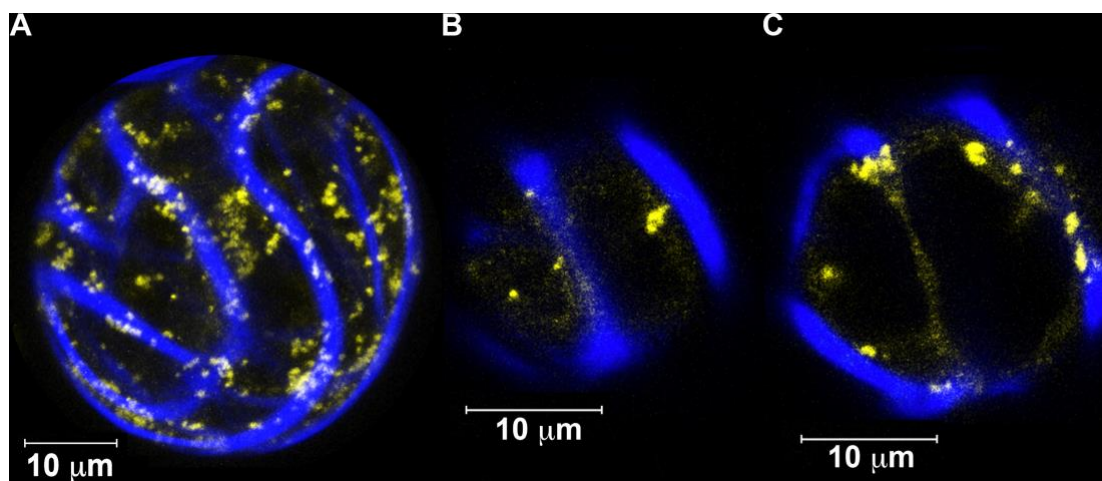
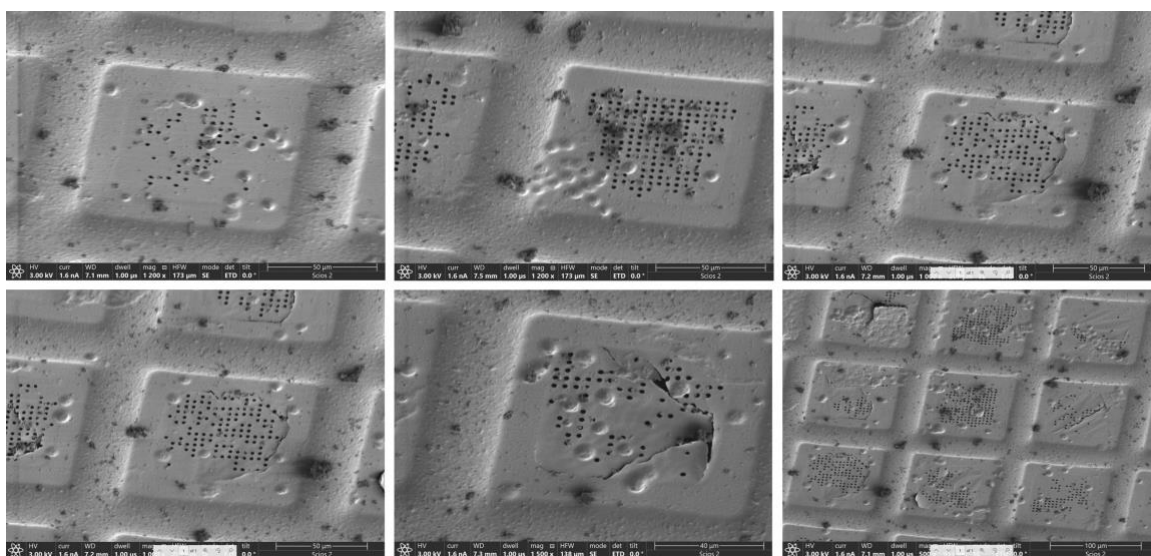


**Figure 1. CESA7-dependent Induction of Secondary Walls in Protoplasts of *Arabidopsis thaliana*.** **A)** Maximum Z projection of a protoplast synthesizing a banded SCW, imaged 24 hours after induction. Protoplasts were isolated from *Arabidopsis* plants expressing VND7-GR (inducible secondary wall regeneration) and YFP-CESA7 in a *cesa7* knockout background (seeds from Lacey Samuel's lab). Cellulose stained with calcofluor white (blue color), and YFP-CESA7 fluorescence (yellow). **B)** Individual frame of z-stack at the top of the cell and **C)** ~3 microns below that show YFP-CESA7 at the plasma membrane under the localized cellulose bands.



**Figure 2. Collage of scanning EM micrographs of vitrified differentiating protoplasts.** The panel of images show the quality of thin ice and cell size that one can expect to encounter when using the Aquilos2 integrated cryoFLM/cryoFIB milling device. Cells range from 5 to 15 microns in size.



## References

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