Localized growth drives pore space patterning in mesophyll development

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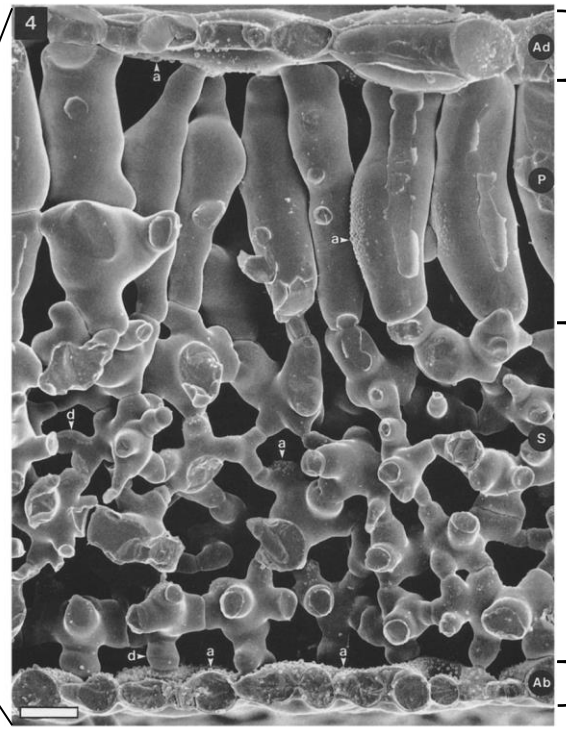
Leaf mesophyll

Spongy mesophyll: Interior tissue between leaf epidermis layers. Creates energy through photosynthesis (light + CO_2), provides scaffolding

C.E. Jeffree, N.D. Read, J.A.C. Smith & J.E. Dale *Planta.* (1987)

Phaseolus vulgaris



20 μm

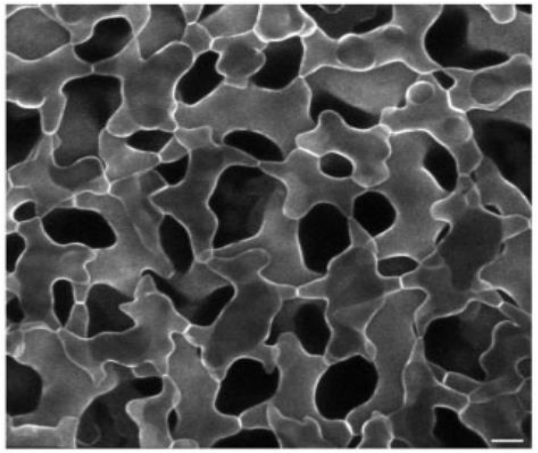
Upper epidermis

"Palisade" mesophyll

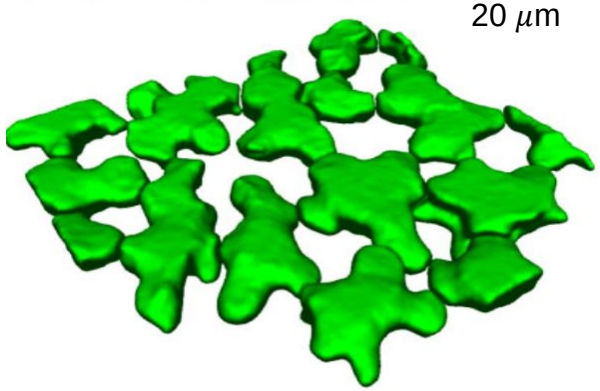
"Spongy" mesophyll

Lower epidermis

Zhang et. al. *The Plant Cell* (2021)

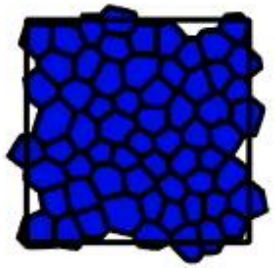


20 μm

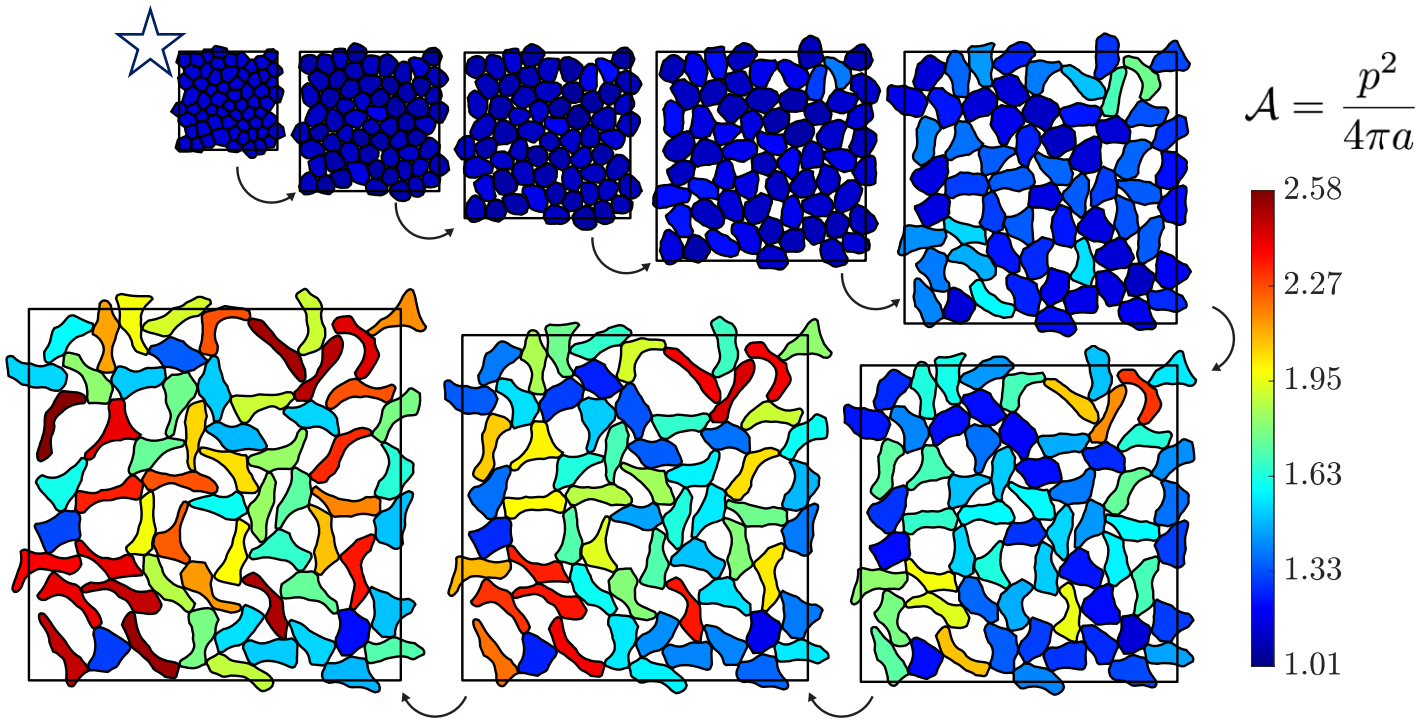


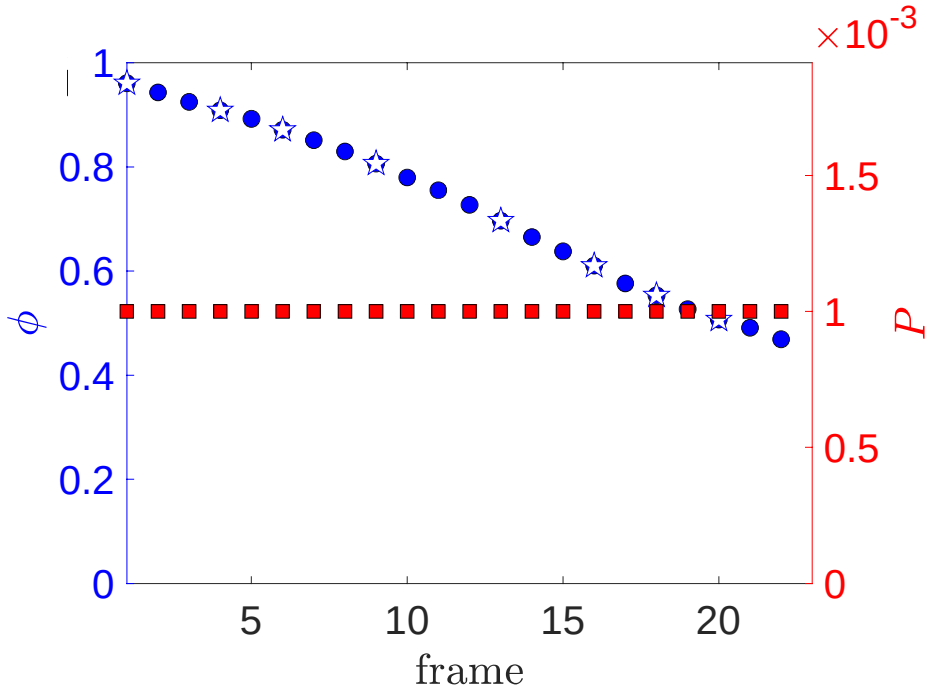
Arabidopsis thaliana

How does is this porous tissue assembled during development?

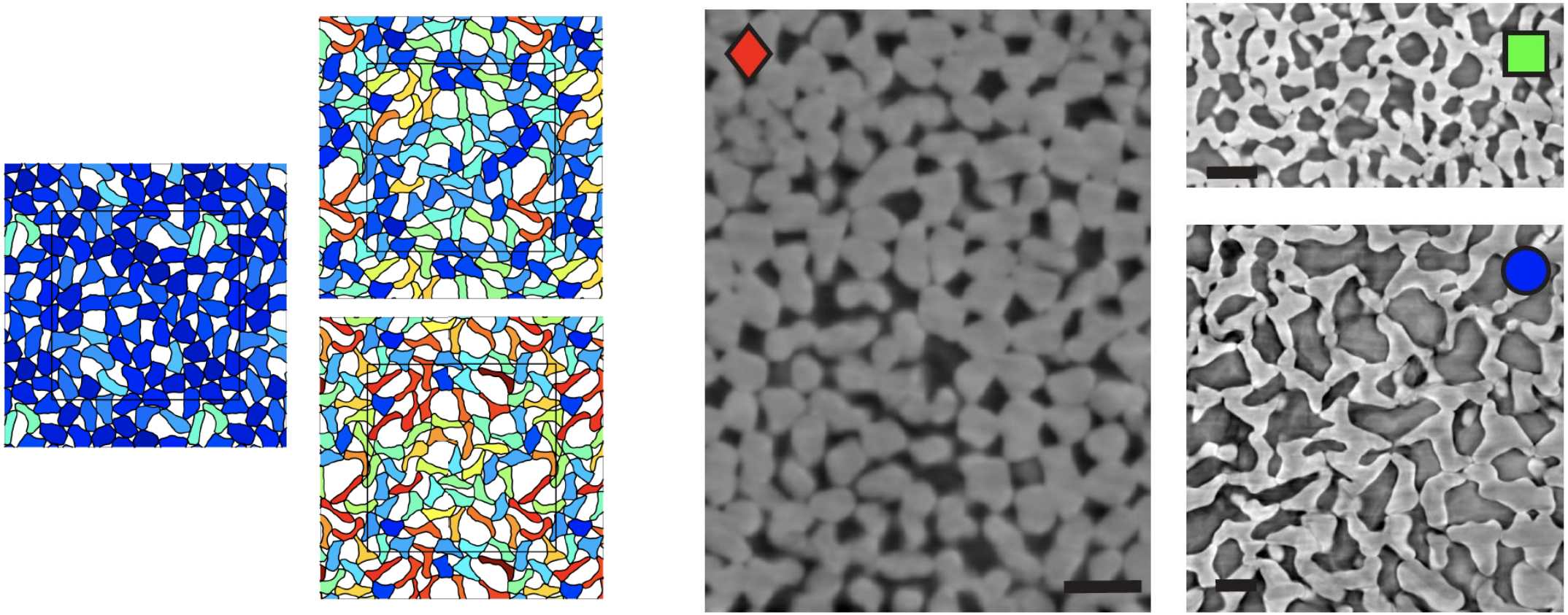


Boundary *responds* to internal stresses





Cell shape *evolves* during development



* Stop by my poster to see how our model compares to cell shapes observed in leaves!