

# Twenty years with plant formins

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Despite the enormous structural diversity of their cells, eukaryotes of all lineages of life utilize evolutionarily conserved molecular mechanisms traceable to the last universal common ancestor – LECA – to manage the complex, orchestrated interplay of cytoskeletal and membrane structures involved in cellular morphogenesis. While seeking for evidence of such conserved mechanisms in the growing thesaurus of genomic data, I came across a family of plant homologs of metazoan and yeast formins – proteins then believed to act as signaling hubs modulating cytoskeletal function - more than 20 years ago. In this seminar, I will provide an overview of the two decades of ongoing plant formin research in our lab, including recent novel insights into epidermal cell shaping, root development, and pollen tube growth.