

Mon, 27 Mar 2023 | 10 am | DBS Conference Room 1

Hosted by Prof Prakash Kumar

# Environmental Control of Stomatal Formation



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How does the environment affect cell fate? My research group employs stomatal development in plants as a model system to explore the influence of external signals on cell fate decisions at the molecular and cell lineage level. The development of stomata—the surface pores on plants critical for gas and water vapour exchange—represents an excellent model because stomatal production is highly responsive to diverse environmental stimuli and its regulation has strong implications to agricultural production. In my talk, I will discuss our recent efforts in addressing how external signals, such as light and drought, modulate stomatal formation. By focusing on the stem cell-like stomatal precursor cells, we elucidated the mechanism underlying these responses and identified key nodes in the plasticity of stomatal production. Our works highlight how the production of a specific cell type can be controlled and coordinated, and how the insights can be applied to improve plant fitness.