‘Smart plants’? Newly discovered genetic ‘messaging system’ could get us there

University of British Columbia researchers have discovered an internal messaging system that plants use to manage the growth and division of their cells …. Plants use this messaging system to survive under harsh conditions or to compete successfully when conditions are favorable. It tells them when to grow, when to stagnate, when to flower, and when to store resources — all based on the prevailing conditions. Understanding how it all works could enable innovations in agriculture, forestry and conservation as climate change takes hold.

UBC botany professor Geoffrey Wasteneys and his colleagues discovered that the system is driven by a protein called CLASP. The protein, found in plants, animals and fungi, plays an essential role in cell growth and division by coordinating the assembly of filaments within cells.

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These new insights are of particular interest to agriculture as the industry looks for new ways manage the effects of climate change, Wasteneys said.

“One of the aims of the future is to be able to have smart plants that can sense their environment and adjust their development, so that they will reliably produce crops under increasingly adverse conditions. This mechanism is pivotal to that.”

Read full, original article: UBC researchers unlock secrets of plant development