Colloquium

Thinking without a brain: Feedback and Feedforward in the bud activation switch

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Animals adjust to the environment in which they are living by modifying their behavior, a process co-ordinated centrally in the brain. Plants are equally environmentally responsive, with many of these responses involve adjustments in growth and development. Because of this, two genetically identical plants growing in different environments can look very different from one another. The regulation and co-ordination of environmental responses in plants happens without a brain and indeed without any co-ordinating centre. Instead, mounting evidence suggests a role for an elegant system of interacting long range chemical signals that move throughout the plant, balancing growth between the root and shoot, and across the root and shoot systems, through self-organising competition, with reinforcement, between growing tips. Understanding how this system works has important implications for predicting plant responses to the environment, and particularly for breeding plants adapted to agricultural environments.

Monday, April 24, 2017 10:00am - 11:00am
Raiffeisen Lecture Hall, Central Building

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