BIG seminar 2011-2012

Biology and integrative genomics

Monday, 2 April 17h

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"Hormonal control of shoot branching ."

Plants continuously adjust their body plan to suit the environmental conditions in which they are growing. A good example of this is in the regulation of shoot branching. The decision whether or not to produce a branch involves assessment of a wide range of environmental, physiological and developmental factors. Much of this information is transmitted via a network of interacting hormonal signals that can integrate multiple inputs to generate a rich source of systemically transmitted information, which is locally interpreted to regulate branching. We are interested in understanding how the component parts of the system are able to deliver environmentally responsive shoot branching patterns For example, we have discovered that the phytohormone, strigolactone can modulate the number of branches in the shoot system by systemic modulation of the auxin transport network. The mechanism we propose allows the total number of branches to be adjusted, without specifying which branches should grow, supporting integration of local and systemic factors.

BIG is an initiative of the Faculty of Biology and Medicine, University of Lausanne, and is organized by Uta Paszkowski, Laurent Keller, Henrik Kaessmann and Jan Roelof van der Meer.
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