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# Linking The Clock To Metabolism



# www.timing-metabolism.eu

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**TiMet assembles world leaders in experimental** and theoretical plant systems biology to advance understanding of the regulatory interactions between the circadian clock and plant metabolism, and their emergent effects on whole-plant growth and productivity.

Andrew Millar	SynthSys, University of Edinburgh, UK
Alison Smith	John Innes Centre, UK
Mark Stitt	Max Planck Institute of Molecular Plant Physiology, Golm, Germany
Wilhelm Gruissen	Swiss Federal Institute of Technology, Zurich, Switzerland
Manuel Rodriguez-Concepcion	Centre for Research on Agricultural Genomics, Barcelona, Spain
Dirk Husmeier	University of Glasgow, UK
Oliver Ebenhoeh	University of Aberdeen, UK

Understanding the factors controlling **key traits** will enhance plant breeding and crop management resources to optimise performance, yield and quality in changing environments.



GI

(TOC1)

PRR7

NI

LHY/ CCA1

LUX ELF4 ELF3

COP1

EC

JNOVATION POTENTIAL

New **knowledge** inspires collaboration, prioritises experimental effort, provides new hypotheses, and informs experimental designs

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Integrating mathematical models of biochemical and gene networks can link cell-level regulation to an emergent property (plant growth) at whole organism level. Such multi-scale modelling is a major goal for plant systems biology.



We combine high throughput experimental technologies to address the interactions between the **clock** gene network, starch and isoprenoid metabolism, and plant growth

