Presentation

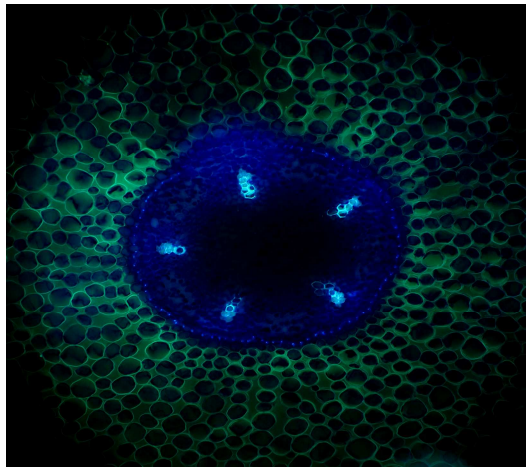
In plants, the root apparatus is responsible for many essential functions including uptake and transport of water and mineral elements.

Root structure and metabolism as well as root responses to the environmental perturbations are very interesting research subjects but are also a difficult issue for plant biologists.

The integration between root anatomy, physiology and omics approaches can help plant biologists to understand the role of the ‘hidden half’ of plants.

The aim of the present workshop is to highlight some recent results on root response to environmental constrains such as anoxia, mechanical and heavy metal pollution.

Pisa, October 2012



Information

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ISTITUTO DI SCIENZE DELLA VITA

Scuola Superiore Sant’Anna

Workshop

Structure and Function of Root in Constrain Environments

Aula Magna
Scuola Superiore Sant'Anna
Piazza Martiri della Liberta, 33
Pisa

15th October 2012

Programme

9:15÷9:30 Welcome Address

9:30÷10:00 **Keynote lecture** - Defense reactions to abiotic stress in the root apoplast/apoplasm - structural aspects

Speaker: Alexander Lux - Department of Plant Physiology, Faculty of Natural Sciences Comenius University – Bratislava

10:00÷10:20 - A biogenic opal - the gemstone in plants

Speaker: Michal Martinka - Department of Plant Physiology, Faculty of Natural Sciences Comenius University - Bratislava

10:20÷10:40 - Modulation of poplar root proteome in response to stress conditions.

Speaker: Dalila Trupiano - Dipartimento di Bioscienze e Territorio, University of Molise - Pesche

10:40 ÷11:00 – Coffee Break

11:00÷11:30 **Keynote lecture** – Water stress and fire disturbance in Mediterranean forests: role played by roots in the response to these two abiotic stresses.

Speaker: Donato Chiatante - Dipartimento di Biotecnologie e Scienze della Vita, Università degli Studi dell'Insubria - Varese

11:30÷11:50 - Flooding tolerance mechanisms in roots

Speaker: Chiara Pucciariello - PlantLab, Institute of Life Sciences, Scuola Superiore Sant'Anna – Pisa.

11:50÷12:10 - Interactions between rhizospheric microrganisms and plant root systems, and their consequences on plant tolerance to metal and non metal stress

Speaker: Graziella Berta - Dipartimento di Scienze e Innovazione Tecnologica - Università degli Studi del Piemonte Orientale - Alessandria

12:10÷12:30 - Effects of high zinc concentration on poplar roots: an anatomical, physiological and molecular study

Speaker: Luca Sebastiani - BioLabs, Institute of Life Sciences, Scuola Superiore Sant'Anna – Pisa.

12:30÷12:50 - Imaging of poplar proteins involved in zinc stress

Speaker: Andrea Andreucci – Dipartimento di Biologia, University of Pisa – Pisa.

12:50÷13:30 – Discussion and Conclusions

Organized within the "Significant bilateral projects between Italy and Slovak" Supported by – Ministero degli Affari Esteri, Direzione Generale per la promozione e la Cooperazione Culturale"

Ministero degli Affari Esteri