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EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY

COST Action CA18111 "Genome Editing in Plants"

Online lecture series

Date: **March 29, 2023 – 4 PM CEST**
(Upcoming lectures: April 26, May 31, June 28, 2023; 4 PM CEST)

Speaker 1

Dr. Juan Debernardi – UC Davis, California, USA

Title: Improving plant regeneration accelerates wheat improvement with genome editing technologies

Speaker 2

Dr. Pierre-François Perroud –INRAE Versailles, France

Title: Exploring Prime Editing in the model plant *Physcomitrium patens*

About Dr. Juan Debernardi

Dr. Debernardi is a plant developmental and molecular biologist with a strong interest in crop improvement for sustainable agriculture. He graduated from the National University of Rosario (UNR), Argentina with a degree in Biotechnology, and later with a PhD in Biological Sciences. In 2014 Dr. Debernardi joined the laboratory of Prof. Dubcovsky at UC Davis, California, initially as a Human Frontier Science Program (HFSP) Postdoctoral Fellow, and later as a Research Specialist of the Howard Hughes Medical Institute (HHMI). In Prof. Dubcovsky's lab, he led a group focused on understanding the genetic networks that control wheat plant architecture and flowering time, and their effect on yield. Currently, he is a Project Scientist at in the Plant Transformation Unit at UC Davis, where he leads projects focused on developing technologies that improve gene editing and crop transformation.

About Dr. Pierre-François Perroud

Dr. Perroud started working in the plant science field during his PhD by analyzing GTP binding proteins of spinach and their relationship with flowering processes. Subsequently he turned his interest to the moss *Physcomitrium* (formerly *Physcomitrella*) *patens*, a good plant model organism to perform reverse genetic studies already since long before the rise of the CRISPR-Cas9 techniques. Additionally, it is an attractive simple plant model to study different cell and developmental biological mechanisms. Two projects frame the experience of Dr. Perroud with the moss *P. patens*. In the first project, in context of protonema tip growth, he focused on the Arp2/3 complex and its direct activator the WASP/WAVE complex, involved into actin polymerization in plant and animal cells. The second project focuses on the implication of the protein DEK1 in the three-dimensional growth establishment, a mechanism conserved in land plants.

In parallel to the purely experimental approach, Dr. Perroud had the chance to be closely associated to the development of the two -omic tools hallmark of *P. patens* as a plant model: its genome and its transcriptome. Most recently Dr. Perroud got involved in the use and the improvement of the CRISPR-Cas9 gene editing technology, more particularly the Prime Editing approach.

How to join the lecture session?

You can register for this online lecture session by submitting your name and email here: https://forms.gle/tBH4fhT6MrWyDgdA6

A link to join the session will be sent to you later in March.

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Program of upcoming online lecture series

April 26, 2023 – 4 PM CEST

Dr. Ortrun Mittelsten Scheid, Austrian Academy of sciences, Gregor Mendel Institute of Molecular Plant Biology (GMI), Austria

Dr. Christian Lorenzo, VIB, Ugent Center for Plant Systems Biology, Belgium – BREEDIT: a multiplex gene editing pipeline to generate high order mutant populations in Zea mays

May 31, 2023 – 4 PM CEST

Dr. Mark Smedley, John Innes Centre, Norwich, UK

Dr. Oliver March, Tropic Bioscience, Norwich, UK – From technology to product: considerations of implementing cutting edge genome editing technologies for product development in crops

June 28, 2023 – 4 PM CEST

Dr. Petra Jorash, Euroseeds, Belgium

Prof. Alain Tissier, IPB, Leibniz Institute of Plant Biochemistry, Halle, Germany