



ΤΕΧΝΟΛΟΓΙΚΟ ΕΚΠΑΙΔΕΥΤΙΚΟ ΙΔΡΥΜΑ ΚΡΗΤΗΣ

ΣΧΟΛΗ ΤΕΧΝΟΛΟΓΙΑΣ ΓΕΩΠΟΝΙΑΣ & ΤΕΧΝΟΛΟΓΙΑΣ ΤΡΟΦΙΜΩΝ
(ΣΤΕΓ-ΤΕΤ)

Τμήμα Τεχνολόγων Γεωπόνων



Ηράκλειο 18-05-2017

ERASMUS TALK

**"An Update on Plant Physiology/ Cell Biology and Plant
Molecular Biology studies on Root hair development in Arabidopsis"**

&

"Opportunities for practical training at the University of Antwerp"

Friday 19th May, 2017, at 12.30 noon

AGRO Auditorium

Prof. Kris Vissenberg

Vice-chair and Secretary of the Section Plant Growth and Development, Department of Biology,
Univ. Antwerp, Belgium.

Biology education and Erasmus-internships at the University of Antwerp will be discussed at first, then the research topics of the lab will be presented with a focus on root hair-related research.

To further unravel the pathway that controls tip growth, two microarray datasets on root hair elongation mutants (wild type vs *rhd2* and *wer myb* vs *cpc try*) identified 151 genes that are positively correlated with root hair growth. A reverse genetics approach identified *maia* and *perseus*, mutants in two receptor-like kinases that show a reduction in root hair length by 78% and 34% respectively. Additionally, *maia* has a reduced fertilization efficiency but no pollen defects and *perseus* exhibits a defect in *in vitro* pollen germination and a reduction in pollen tube length, but no effects on fertilization efficiency. Analysis of transgenic plants revealed that both kinases are solely expressed in tip growing cells (root hairs and pollen (tubes)) and that their overexpression does not increase root hair growth. Addition of IAA to growing roots indicated that both are auxin-inducible and depend on the presence of Auxin Response Factors 7 and 19. Chromatin ImmunoPrecipitation followed by PCR (ChIP-PCR) confirmed that they are direct targets of ARF19.

Further info on the following website // Για περισσότερες πληροφορίες δείτε τον σχετικό ιστότοπο:

<http://www.uantwerp.be/en/rg/pgd>

Prof. Filippou Ververidis // Φίλιππος Βερβερίδης, Καθηγητής
(Host, Υπεύθυνος Οργάνωσης), ververidis@teicrete.gr