7th International Symposium on Plant Apoplastic Diffusion Barriers (PADiBa)

August 31st – September 3rd 2026
University of Lausanne (UNIL), Synathlon Auditorium 1216

PRELIMINARY PROGRAM

Monday August 31st

15:30 | Registration/Poster set up

16:30 | Welcome/Keynote: Christiane Nawrath – University of Lausanne, Switzerland

Session 1: Evolution of diffusion barriers

17:00 | Tom Beeckman – VIB Ghent, Belgium
Independent Evolution and Diverse Manifestations of Diffusion Barriers in Plant Roots

17:35 | Kaisa Kajala – Utrecht University, the Netherlands
Apoplastic barriers in legumes are diverse yet share conserved regulators
17:50 | Dwiti Mistry – The University of British Columbia, Canada
Comparison of cuticular plant wax secondary alcohols in angiosperms
18:05 | Marius Malai – University of Neuchâtel, Switzerland
Building a lateral root through differentiated barriers in *Brachypodium distachyon*

18:10 | Welcome Reception with apero and Poster session

Tuesday September 1st

Session 2: Development of diffusion barriers

9:00 | Yuree Lee – Seoul National University, South Korea
Epidermal plasticity in plants: organizing and remodeling protective surface barriers

9:35 | Stéphanie Robert – Umeå Plant Science Centre, Sweden
Mechanical coordination of counter-gradient growth maintains organ curvature in the apical hook

9:50 | David Molina – University of Freiburg, Germany
Periderm lignification: multiple steps, multiple controllers for building an effective barrier

10:05 | Alice Berhin – UC Louvain, Belgium
Connecting epidermal differentiation and cuticular wax biosynthesis

10:10 | André Mendes – University of Lisbon, Portougal
Dissecting the roles of WOX9 and ANT in periderm development

10:15 | Coffee break

Session 3: Formation of diffusion barriers

10:45 | **Robertas Ursache** – CRAG, Barcelona, Spain
From hidden enzymes to plant barriers: uncovering the role of GELPs

11:20 | Bénédikte Bakan – INRAE Nantes, France
Diving in the biodiversity of tomato mechanical properties: chemical heterogeneity and diversity of composites, key factors for functional cuticle

11:35 | Yifat Quan – University of Lausanne, Switzerland
Characterization of *slabcg36/42* double mutants reveals a link between cutin and phenolics deposition in the tomato fruit cuticle

11:50 | Jeon Woo-Taek – Seoul National University, South Korea
Humidity shapes reproductive development in *Arabidopsis thaliana* by modulating epidermal identity and cell wall dynamics

11:55 | Lunch

Session 4: Specialized functions of hydrophobic polymers

13:25 | **Aurélia Emonet** – University of Bern, Switzerland
To be or not to be explosive: tuning cell identity for seed dispersal

14:00 | **Takehiro Kamiya** – University of Tokyo, Japan
Apoplastic Barriers in Aerial Tissues

14:35 | Steffen Vanneste – Ghent University, Belgium
Cuticle integrity is required for the shoot-selective activity of the pro-auxin HYSPARIN

14:50 | Coffee break

Session 5: Regulation of diffusion barrier formation

15:20 | **Charlotte Miller** – Salk Institute, CA, USA
A WRKY transcription factor maintains an ethylene-responsive transition state to prevent premature phellem differentiation

15:55 | Michael Hothorn – University of Geneva, Switzerland
CIF peptides-specific assembly of GSO1/GSO2 signaling complexes monitoring extracellular barrier integrity

16:10 | Soazig Guyomarch – University of Montpellier, France
A PUCHI and MYB-dependent network controls the formation of the root cap cuticle of developing lateral roots

16:25 | Wei Xuan – Nanjing Agricultural University, China
A novel regulator of plant root diffusion barrier and root branching

16:30 | Ines Hadj Bachir – University of Geneva, Switzerland
New regulators of suberin plasticity in the endodermis

16:35 | Poster Session

18:30 | Dinner on Campus

Wednesday September 2nd

Session 6: Role of diffusion barriers in biotic interactions

9:00 | **Macarena Marín** – University of Lausanne, Switzerland
Shaping the nodule microenvironment through diffusion barriers

9:35 | Pascal Krohn – University of Zurich, Switzerland
Periderm integrity gates spatial chemical defense and fungal community assembly in roots

9:50 | Lucrezia Pinto – Polytechnic University of Madrid, Spain
Fusarium infection strategies to elude host suberin barrier to enter the root vasculature

10:05 | Swati Mahival – Max Planck Institute for Plant Breeding Research Cologne, Germany
Passage cells revisted: a developmental and symbiotic perspective in *Lotus japonicus*

10:10 | Julia Mars – Utrecht University, the Netherlands
How do microbes shape suberin patterns in sorghum roots?

10:15 | Coffee break

Session 7: Role of diffusion barriers in abiotic stresses

10:45 | **Shiyou Lü** – Hubei University, Wuhan, China
Genetic base and eco-physiological functions of site-specific enrichment of branched-chain wax constituents at the stomatal pore

11:20 | Yi-Qun Gao – Shenzhen University, China
Lignin barrier seals bundle sheath for efficient carbon flux in C4 plants
11:35 | Jennifer López-Ortiz – University of Helsinki, Finland
Mechanical cues instruct phellem differentiation during barrier transition
11:50 | Tino Kreszies – Wageningen University, the Netherlands
Potassium efficiency reinforces the endodermal but not the exodermal suberized barrier in maize seminal roots
11:55 | Tonni Andersen – University of Zurich, Switzerland
A tunable receptor decodes ligand perception to separate barrier formation from nutrient signaling

12:00 | Lunch

Session 8: Beyond apolpastic barriers

13:30 | **Joris Sprakel** – Wageningen University, Netherlands
Battle at the wall: how do (plant) cells know where they are being touched?
14:05 | Announcements

14:10 | Excursion with GALA Dinner

Thursday September 3rd

Session 9: Method developments for the characterization of diffusion barriers

9:30 | **Julian Moger** – University of Exeter, United Kingdom
Shedding New Light on Plant Diffusion Barriers with Nonlinear Optical Imaging and Spectroscopy

10:05 | Corentin Maslard – University of Neuchâtel, Switzerland
Decoding root apoplastic barrier formation and plasticity from single-cell identities to whole root architecture
10:20 | Eric Skaliks – Max Planck Institute for Plant Breeding Research Cologne, Germany
Toward a quantitative model of endodermal suberization patterning
10:35 | Suvajit Mukherjee – INRAE Nantes, France
Diving into the in-depth architecture of fruit cuticle: are there generic patterns?
10:40 | Vanessa Reyes Loaiza – CRAG, Barcelona, Spain
Suber-Looplines: a feedback-loop control of suberin biosynthesis

10:45 | Poster Session and Coffee break

12:00 | Prizes, announces, closing remarks