



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

August 31st – September 3rd 2026

University of Lausanne (UNIL), [Synathlon Auditorium 1216](#)

PROGRAM

Monday August 31st

15:30 | Registration/Poster set up

16:20 | Welcome and practical announcements

16h30 | Introduction: **Christiane Nawrath** – University of Lausanne, Switzerland (Chair: Niko Geldner)

Session 1: Evolution of diffusion barriers (Chair: Niko Geldner)

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 General Poster session

Tuesday September 1st

Session 2: Development of diffusion barriers (Chair: Marie Barberon)

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, Portugal

Dissecting the roles of WOX9 and ANT in periderm development

10:15 | Coffee break

Session 3: Formation of diffusion barriers (Chair: Joop Vermeer)

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 (Chair: Luis Lopez-Molina)

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 HYS PARIN

14:50 | Coffee break

Session 5: Regulation of diffusion barrier formation (Chair: Kaisa Kajala)

15:20 | **Charlotte Miller** – Salk Institute, CA, USA

A WRKY transcription factor maintains an ethylene-responsive transition state to prevent premature phellogen 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

16:35-17:35: even poster numbers

17:35-18:30: uneven poster numbers

18:30 | Dinner on Campus

Wednesday September 2nd

Session 6: Role of diffusion barriers in biotic interactions (Chair: Shrihari Negi)

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 revisited: 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 (Chair: Ines Hadj Bachir)

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 | Tonni Andersen – University of Zurich, Switzerland

A tunable receptor decodes ligand perception to separate barrier formation from nutrient signaling

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 | Reinhard Jetter – University of British Columbia, Canada

How does composition of cuticular waxes determine transpiration barrier properties?

12:00 | Lunch

Session 8: Beyond apoplastic barriers (Chair: Jade Nicolet)

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 (Chair: Christiane Nawrath)

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 | [Ruth Stark](#) – City University of New York, USA

Solid-state NMR offers challenges & rewards for « PADiBA

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-Looplins: a feedback-loop control of suberin biosynthesis

10:45 | Poster Session and Coffee break

10:45-11:20: even poster numbers

11:20-12:00: uneven poster numbers

12:00 | Prizes, announces, closing remarks