

Málaga

18th - 22nd of June 2023

## **Programme**

XVI Plant Cell Wall Meeting







#### SCIENTIFIC COMMITEE

Staffan Persson Laura Bacete Giulia De Lorenzo

Aline Voxeur Herman Höfte Verónica Gonzalez-Doblas

Yoselin Benitez-Alfonso Misato Ohtani Thorsten Hamann

Anja Geitmann Charles T. Anderson Kalina Haas

Markus Pauly Daniel Cosgrove Breeanna Urbanowicz

Candace Haigler Debra Mohnen Paul Dupree

Olga Zabotina Josh Vermaas Jérôme Pelloux

Wout Boerjan Taku Demura Georg Seifert

Ariel Orellana Zoë Popper János Urbancsok

#### LOCAL SCIENTIFIC COMMITEE

Miguel Ángel Botella Patricia Fernández-Calvo

Penélope García-Ángulo Sara Posé



# Welcome to the XVI Plant Cell Wall Meeting

Welcome to the XVI Cell Wall Meeting

It is a great pleasure for us to welcome you to the XVI Plant Cell Wall Meeting. We would like to thank this scientific community for giving us the opportunity 4 years ago to organise this event on its 45th anniversary. The organisation has been a long process, but one that we have undertaken with great enthusiasm, and we hope that the small changes we have made in the format of the meeting will be well received.

We would like to take this opportunity to thank the members of the scientific and local committees for helping us with the complex task of putting together the final programme. We hope you enjoy these 5 days of talks, and that they will allow us to establish new collaborations or strengthen existing ones.

Finally, we would also like to thank the support from the Meeting Secretariat and the team of local helpers. We also thank the sponsors for financial support.

Kind regards
On the behalf of the XVI Cell Wall Meeting Organising Committee,

Antonio Molina Universidad Politécnica de Madrid

> Hugo Mélida Universidad de León



## General information

Meeting venue

NH Málaga C. San Jacinto, 2, 29007 Málaga

**Meeting Secretariat** 

Sombradoble

Tel: 611 08 58 85

E-mail: organization@cellwall2023.org

Web: <u>sombradoble.es</u>

Internet access

Free wifi connection is provided throughout the meeting venue.

Lunches and coffee breaks

Lunches and coffees/teas and light snacks are included in the registration fee.

Certificates of attendance

After the XVI Cell Wall Meeting certificate of attendance will be sent to your email.

## **Meeting Hours**

Sunday 18th		Wednesday 21th	
15:30-21:00	Registration, workshops, welcome reception, Keynote presentations	9:00-13:30 14:00-21:00	Sessions Social activities: Caminito del Rey and Museo Picasso Visit
Monday 19th			
9:00-21:30	Sessions	Thursday 22th	
		9:00-19:00	Sessions
Tuesday 20th		21:00-3:00	Gala dinner and party
9:00-21:00	Sessions		



## Sponsors

We wish to express our sincere gratitude to XVI Plant Cell Wall Meeting sponsors:

#### **Platinum**





















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#### **SUNDAY 18TH**

15:30-16:15 WORKSHOP 1 (WSN1). Spanish Cell Wall Network.

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Chairs: Antonio Molina & Hugo Mélida

16:15-17:15 WORKSHOP 2 (WS2). Cutting edge analytical tools for

studying the sequence of the cell wall polysaccharides.

Thermo Fisher SCIENTIFIC

Chair: Parastoo Azadi.

Parastoo Azadi

Complex Carbohydrate Research Center, University of Georgia (WSP1) How can we use permethylation to study insoluble polysaccharides?

Eugene Badenhorst

Stellenbosch University

(WSP2) Analyzing plant cell wall polysaccharides and glycoproteins using ELISA and CoMPP  $\,$ 

Dimitiros Kouzounis

Laboratory of Food Chemistry Wageningen University (WSP3) Strategy to identify reduced arabinoxylo-oligosaccharides by HILIC-MSn

Ellen Verwee

**Ghent University** 

(WSP4) Fluorescence and Raman Microscopy to investigate Plant Cell Wall Polysaccharides.

17:00-17:30

Coffee/Tea Break

17:30-17:45

Welcome and Opening XVI Plant Cell Wall Meeting.

Antonio Molina & Hugo Mélida

17:45-18:35

SESSION 1: KEYNOTE SPEAKERS (KN).

Chair: Marie-Christine Ralet

The Cell Surface

Bernard Henrissat

Technical University of Denmark

(KN1) When the plant cell wall meets the gut microbiota.

18:35-19:25

**SESSION 1: KEYNOTE SPEAKERS (KN).** 

Chair: Monika Doblin

Clara Sánchez-Rodríguez

ETH/Centro de Biotecnología y Genómica de Plantas

(KN2) Bio-masonry in plant resilience.

19:30-21:30

**Welcome Reception Dinner** 

21:30

Social Activities



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#### **MONDAY 19TH**

9:00-10:30 SESSION 2 (OT). Tools to Study the Plant Cell Wall.

Chairs: Staffan Persson & Laura Bacete

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Kalina Hass

INRAE - IJPB

(OT1) Dynamics of periodic cell wall self-assembly.

Godfrey Neutelings

University Lille

(OT2) Bioorthogonal labelling strategy for studying the dynamics of

lignification in vivo.

Oliver Quinn

University of Manchester

(OT3) Probing Unique Cell Wall-Related Membrane Domains Using Proximity

Labelling.

Quentinh Hays

**GLYCO-MEV Laboratory** 

(OT4) Dynamic imaging of cell wall polysaccharides by metabolic click-mediated labeling of pectins in living elongating cells.

Renate Weizbauer

Carnegie Institution for Science, Dept Plant Biology, Stanford, CA (OT5) CarboProbes - Illuminating spatial organization of the plant cell wall.

Fiona Kang

The University of Melbourne

(OT6) Marchantia polymorpha, a simple model system for cell wall biosynthesis research.

10:30-11:00

Coffee/Tea Break

11:00-13:00

SESSION 3 (OBD). Plant Cell Wall Biology and Dynamics.

Chairs: Charles T Anderson & Kalina Haas

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Misato Ohtani

The University of Tokyo

(OBD1) Microtubule dynamics is the matter: lessons from sulfamethizole on secondary cell wall patterning during protoxylem vessel cell differentiation.

Sébastjen Schoenaers

University of Antwerp/INRAE

(OBD2) A pectin-binding RALF peptide with both a structural and signaling role in the periodic assembly of the plant cell wall.

Baocai Zhang

Institute of Genetics and Developmental Biology, Chinese Academy of Sciences

(OBD3) Xylan biosynthesis and modification are required for cell wall patterning in rice.

Georg Seifert

University of Natural Resources and Life Science, Vienna (BOKU)

(OBD4) A dual molecular mechanism of Fasciclin-Like Arabinogalactan Protein 4?

Pramod Sivan

KTH Royal Institute of Technology (OBD5) Post-synthetic modification of glucuronoxylan structure by overexpression of fungal xylanases in developing wood provides novel insights into secondary cell wall polymer interaction and architecture in hybrid aspen.

Erik Nielsen

University of Michigan

(OBD6) Characterization of CSLD2, CSLD3, and CSLD5 functions during cell wall synthesis in Arabidopsis.

Francesco Pancaldi

Wageningen University

(OBD7) Genomic dynamics underpinning cell wall evolution.

Georgia Drakakaki

University of California
Davis

(OBD8) Dissecting cell wall formation during plant cytokinesis.



#### **MONDAY 19TH**

13:00-14:15 Lunch

14:15-15:45 SESSION 4 (OP). Pectins.

Chairs: Debra Mohnen & Jérôme Pelloux

(OP1) A CRISPR-mediated approach to characterise developmentally-critical Jenny Mortimer

University of Adelaide pectin biosynthesis genes-

Breeanna Urbanowicz University of Georgia (OP2) Structural and biochemical insight into a modular β-1,4-galactan synthase in plants.

Ariel Orellana Universidad Andrés Bello

(OP3) Homogalacturonan is produced and released in the mucilage of GOSAMT mutants despite lower methyl-esterification.

Marie-Christine Ralet

(OP4) Exploring RRT1 function in the synthesis of Arabidopsis seed mucilage.

Bastien Dauphin

(OP5) TBL38 is an atypical cell wall homogalacturonan acetyl esterase of LRSV - Université Toulouse III Arabidopsis seed mucilage secretory cells. (CNRS)

Debra Mohnen University of Georgia

(OP6) Depicting pectin structure and architecture in plant cell wall models.

15:45-16:45

Coffee/Tea Break/Poster session 1 (Even Numbers)

16:45-18:45

SESSION 5 (OI). Plant Cell Wall and Interaction with the Environment (Abiotic).

Chairs: Aline Voxeur & Benedetta Mattei

Cezary Waszczak University of Helsinki (OI1) Cell wall structural changes affect plant-water relations.

Mélanie Fortier University of Rouen, GlycoMEV

(OI2) Involvement of cell wall glyco-molecules and root cap-derived cells in pea (Pisum sativum) root protection to water deficit.

Symbora

Laura Bacete

Norwegian University of Science and Technology

(OI3) Unravelling the Role of ZAT11 and ZAT18 in Cell Wall Integrity Maintenance in Response to Environmental Stress in Arabidopsis thaliana.

Samuel Hazen

University of Massachusetts (OI4) Shoring up the base: the development and regulation of cortex sclerenchyma in the basal region of nodal roots.

Irabonosi Obomighie

(OI5) Impact of Cell Wall Crosslinking on Plant Freezing Tolerance.

**Durham University** 

Henrik Scheller

Lawrence Berkeley **National Laboratory** 

(OI6) Modification of cell walls in sorghum changes the rhizosphere and root microbiome.



#### **MONDAY 19TH**

Thorsten Hamann

Norwegian University os Science and Technology

(OI7) The role of the cell wall integrity maintenance mechanism in ABA induction.

Sam Amsbury

The University of Sheffield

(OI8) Profiling cell wall stress responses: Drought and Zymoseptoria tritici infection induce distinct but overlapping cell wall modifications in wheat leaves.

18:45-20:00 Refreshmen/Poster session 2 (Odd Numbers)

21:00 Social activities



#### **TUESDAY 20TH**

9:00-10:30 SESSION 6 (OS). Plant Cell Wall Signalling.

malectin receptor kinases.

pathogen defence in Arabidopsis.

mediated by the receptor kinase STRUBBELIG.

Chairs: Miguel Angel Botella & Verónica González-Doblas

(OS1) Cell wall integrity and Pep signalling modulate phytoalexin-mediated

(OS2) Arabidopsis immune responses triggered by cellulose- and mixed-

(OS3) Molecular insight into cell wall integrity signaling in Arabidopsis

(OS5) Callose regulation and plasmodesmata in arbuscular mycorrhizal

linked glucan-derived oligosaccharides require a group of leucine-rich repeat

(OS4) Novel microorganism-derived β-glucans that trigger immune responses

PLANT RESPONSE

Timo Engelsdorf

Philipps-Universität Marburg

Marina Martín-Dacal

Centro de Biotecnología y Genómica de Plantas

Kay Schneitz

Technical University of Munich

Hugo Mélida

Universidad de León

Liam German

University of Leeds

Steven Moussu

CNRS

symbiosis.
(OS6) Pollen tube integrity sensors LRX8-RALF4 complexes interact with

in plants.

Coffee/Tea Break

11:00-12:00

10:30-11:00

SESSION 7 (OM). Cell Wall Mechanics.

demethylesterified homogalacturonans.

Chairs: Anja Geitman & Thorsten Hamann

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Arun Sampathkumar

Max Planck Institut für molekulare Pflanzenphysiologie

Leila Jaafar

The Pennsylvania State University

Asal Atakhani

Umeå University

Valérie Lefebvre

Université de Picardie Jules Verne (OM1) Tethering of Cellulose Synthase to Microtubules Dampens Mechanoinduced Cytoskeletal Organization in Arabidopsis Pavement Cells.

(OM2) Biomechanical Effects of Pavement Cells and Guard Cell Walls on Stomatal Dynamics.

(OM3) Quantifying cell-cell adhesion strength in plants.

(OM4) Arabidopsis polygalacturonases differ in their biochemical specificities and in their effects on plants and mimetic membranes.

12:00-13:00 Round Table 1: CAREERS OPPORTUNITIES.

Chair: Debra Mohnen

Misión biológica de Galicia - CSIC The University of Tokyo Universidad Andrés Bello Kungliga Tekniska Hoegskolan Carlsberg Research Laboratory Patricia Fernández-Calvo. Misato Ohtani. Susana Saez. Francisco Vilaplana. Jesper Harholt.



#### TUESDAY 20TH

13:00-14:15 Lunch

14:15-15:45 SESSION 8 (OL). Lignin.

Chairs: Wout Boerjan & Josh Vermaas

(OL1) Natural variation of lignin metabolism in poplar.

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University of Missouri

Dyoni M. Oliveira (OL2) Depletion of lignin p-coumaroylation affects phenolic metabolism and

Ghent University lignin depolymerization efficiency in maize.

Chang-Jun Liu (OL3) Differential involvement of electron transfer chains in lignin and soluble

Brookhaven National Laboratory phenolic biosynthesis.

Taku Tsuyama (OL4) Active transport of lignin monomers in lignifying tissues of vascular

University of Miyazaki plants.

**CNRS UMR** 

and Biotechnology

INRAE - IJPB

Jaime Barros

SESSION 9 (OD). Plant Cell Wall in Plant Development.

Chairs: Yoselin Benitez & Misato Ohtani

Anja Geitmann (OD1) Callose boosts the extreme cellular growth behavior of pollen tubes.

Benoit Landrein (OD2) Mechanical control of seed growth.

15:45-16:45 Coffee/Tea Break/Poster session 3 (Odd Numbers)

16:45-18:45 SESSION 9 (OD). Plant Cell Wall in Plant Development.

Henry Temple (OD3) Uncovering Golgi SAM Transporters: A Crucial Step Towards
University of Cambridge Understanding the Role of Pectin Methylation in Plant Development.

Staffan Persson (OD4) Identification of a transcriptional framework for primary wall synthesis

University of Copenhagen in Arabidopsis and rice.

Liudmila Kozlova (OD5) Root growth of monocotyledons and dicotyledons is limited by University of Montpellier different tissues.

Allan Showalter
Ohio University
OD6) Using CRISPR-Cas9 Genome Editing to Elucidate ArabinogalactanProtein Function.

Vicente Ramírez (OD7) Strigolactone-dependent suppression of the irregular xylem syndrome caused by xylan hypoacetylation.

Alexis Peaucelle (OD8) Towards a Multiscale Integrative Model of Plant Growth.

Lothar Kalmbach
University of Lausanne

Josh Vermaas (OBD9) Comparing cell wall and membrane contributions to mesophyll conductance in plants.



#### **TUESDAY 20TH**

18:45-20:00 Refreshment/Poster session 4 (Even Numbers)

20:00-20:45 Cell Wall Tasting (Sponsored by Supplant) Supplant

21:30 Social Activities



#### **WEDNESDAY 21TH**

SESSION 10 (OH). Hemicelluloses. 9:00-10:30

Chairs: Paul Dupree & Olga Zabotina

Catalin Voiniciuc (OH1) Unravelling the Mysterious Roles of GT106 Proteins in Xylan and

University of Florida Mannan.

(OH2) Altering the crosslinked molecular architecture of grass Theodora Tryfona

University of Cambridge glucuronoarabinoxylans affects cell wall assembly and results in a more

porous wall.

(OH3) Characterization of Arabidopsis polysaccharide acetyl esterases from Lavi Rastogi

tradecorp\*

JOINT RESEARCH UNIT

**♣** CBGP

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Regional Center for the GELP family and elucidating their role in determining plant cell wall Biotechnology

properties.

Olga Zabotina (OH4) The stability variations of the xyloglucan-synthesizing enzymes

Iowa State University suggest the compositional dynamics of their complexes in Golgi.

(OH5) Xylan Plays a Critical Role in Patterned Secondary Cell Wall Formation. Sarah Pfaff The Pennsylvania State University

> 11:00-12:15 SESSION 11 (OR). Cell Walls as a Resource for Sustainability.

Chairs: Taku Demura & János Urbancsok tradecoro®

Jesper Harholt (OR1) From fundamental cell wall biology to scale production of beer. Carlsberg Research Laboratory

> 10:30-11:00 Coffee/Tea Break

(OR2) Exploring the potential of algal-eating saprotrophs in the Moira Giovannoni University of L'Aquila

permeabilization of Chlorella cell walls.

(OR3) Overexpression of Polygalacturonase43 (PG43) leads to increased Ajaya Biswal University of Georgia

growth and reduced recalcitrance in Populus.

(OR4) Oligogalacturonides (OGs) production - new prospects for plant Camille Carton

Universty of Picardy Jules Verne disease biocontrol and plant health.

Fabienne Guillon (OR5) Imaging LPMO action at the tissue level using MALDI MS, deep UV

fluorescence and FT-IR microspectroscopy.

(OR6) Single-molecule imaging of cellulose degradation reveals mechanisms Charles Anderson

The Pennsylvania State of biomass recalcitrance.

University

Round Table: Innovation and knowledge transfer. 12:15-13:30

Chair: Antonio Molina

Tradecorp (Rovensa Next) Jose Nolasco

The Supplant Company Jeremy Jentis University of Adelaide Jenny Mortimer Univrsidad Politécnica de Madrid Juan Manuel Muñoz

Social activities: Caminito del Rey/ Museo Picasso Visit 14:00-21:00



#### THURSDAY 22TH

9:00-10:30 SESSION 12 (OC). Cellulose.

In-memorian of Andrew Staehelin

Chairs: Daniele Cosgrove & Alison Roberts

Nick Carpita (OC1) In-memorian of Andrew Staehelin Amino acids essential for assembly of cellulose synthase complexes Purdue University

Jochen Zimmer (OC2) Structure and Function of Primary Cell Wall Homotrimeric Cellulose

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University of Virginia Synthases.

Lise C. Noack (OC3) Phosphoinositides direct cellulose synthesis during secondary cell

University of Copenhagen wall deposition.

> Weiwei Zhang (OC4) Point mutations in the catalytic domain disrupt cellulose synthase Purdue University

complex (CSC) assembly and trafficking.

Alison W. Roberts (OC5) Functional analysis of CSLDs in moss lines lacking CESAs

University of Rhode Island

Michael Ogden (OC6) Do we really understand how cellulose biosynthesis inhibitors work? University of Copenhagen

10:30-11:00 Coffee/Tea Break

11:00-11:30 SESSION 13 (OE). Extracellular Matrices From Others.

Chairs: Zoë Popper & Hugo Mélida

(OE1) Chara - a living sister to the land plants with pivotal enzymic Lenka Franková The University of Edinburgh toolkit for mannan and xylan remodelling.

Ahlem Bouguerba-Collin (OE2) Characterisation of alginate lyases from brown algae. CNRS Station Biologique de Roscoff

11:30-12:15 SESSION 14 (OO). Other Cell Wall Components.

Chairs: Georg Seifert & Ariel Orellana

Kim Johnson (OO1) Domain structure of FASCICLIN-LIKE ARABINOGALACTAN PROTEINS La Trobe University regulates their distinct functions.

Colin Ruprecht (OO2) Kinks and second sugars: Identification of a novel

University of Natural galactosyltransferase involved in glycosylation of Arabinogalactan proteins. Resources and Life Sciences

Natalie Hoffmann (OO3) Low substitution xyloglucan disrupts trafficking to the cell wall University of Toronto

12:15-13:00 Business activity. Markus Pauly & Antonio Molina.

13:00-14:15 Lunch



#### THURSDAY 22TH

SESSION 15 (OI). Plant Cell Wall and Interaction with the Environment 14:30-16:15

(Biotic)

(Biotic)

Chairs: Benedetta Mattei & Aline Voxeur

(OI9) Plant inositol-phosphate-glycans and a fucosylated xyloglucan Luka Lelas INRAE - IJPB oligosaccharides are accumulated upon Arabidopsis thaliana/ Botrytis cinerea infection.

(OI10) Pectin methylation changes during Pseudomonas attack: part of the Asier Largo-Gosens transcriptomic reprogramming in common bean

Alvaro Luis Jimenez (OI11) Engineering structural defense responses in tomato for resistance against the bacterial wilt.

(OI12) Pro-pectin methylesterases as zymogens for plant cell wall mediated Vincenzo Lionetti Sapienza Università di Roma immunity.

Giulia De Lorenzo (OI13) The role of cell wall DAMPs in tissue injury: at the crossroad between plant defense and development.

Coffee/Tea Break/Poster session (Even & Odd Numbers) 17:15-18:30 SESSION 15 (OI). Plant Cell Wall and Interaction with the Environment

> (Ol14) Structural insights into the substrate specificity and catalytic activity of plant and fungal oligosaccharide oxidases.

(OI15) Ulva lactuca arabinogalactan-proteins activate immune responses in plants via elicitor activity

SESSION 16 (OT). Tools to Study the Plant Cell Wall.

Chairs: Staffan Persson & Laura Bacete (OT7) Monoclonal antibody probes directed toward plant cell wall glycans –

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(OT8) Studying the mechanical characteristics of plant cells using Brillouin microscopy.

Forty years of insights into plant cell wall structure and dynamics.

(OT9) Characterizing the Root Longitudinal Zonation Using a Novel Cell Wall-Bound pH Sensor.

(OT10) The role of AXY9 in the O-acetylation machinery of plant cell wall polysaccharides.

(OT11) Leveraging Synthetic Biology to Understand Xylan Biosynthesis

Universidad de Léon

Centre for Research In Agricultural Genomics

Sapienza Università di Roma

16:15-17:15

Benedetta Mattei University of L'Aquila

Eric Nguema-Ona Agro Innovation International -TIMAC AGRO

Michael Hahn

University of Georgia / Complex Carbohydrate Research Center

Luis Alonso-Baez Norwegian University of Science and Technology

> Pavel Krupař **Charles University**

Markus Pauly Heinrich Heine University Düsseldorf

> Thomas Curry University of Georgia



#### THURSDAY 22TH

18:30-19:00 Poster Awards.

FAIR Data Systems / Genomics4All /

Neogen-Megazyme/ Metrohm

19:00 Closing Ceremony

21:00-3:00 Gala dinner and party.

Costa del Sol







#### Tools to Study the Cell Wall

PT1	Enzyme-based probes for the reliable detection of rhamnogalacturonan II (RG-II) in the plant cell wall	Kristen Thorne
PT2	Fluorescence and Raman Microscopy to investigate Plant Cell Wall Polysaccharides	Ellen Verwee
РТ3	GWAS for cell wall and starch contents in Rice Grains	Li Ding
PT4	Imaging carbohydrates in the cell wall	Lisa Maria Steiner
PT5	Implementation of a novel proximity labeling approach to identify new proteins in cellulose synthesis.	Shuai Zheng
РТ6	Ionic liquid acetylation improves analytical performance of composition and linkage methods for plant cell wall analysis.	Ian Black
РТ7	Multispectral autofluorescence macro-imaging for statistical analysis of a series of maize internode sections	Fabienne Guillon
РТ8	New insights into the role of cell wall modifications induced by $\alpha$ -XYLOSIDASE1: The impact in seed and fruit size	Ignacio Ezquer
РТ9	New tools to investigate cytoskeletal regulation of secondary wall patterns in the Arabidopsis vasculature	Annika Saß
PT10	Profiling the cell wall composition of eggplant (Solanum melongena) using CoMPP and analytical methods	Eugene Badenhorst
PT11	Raman spectroscopy as a tool to examine transition from primary to secondary cell wall	Aleksandra Liszka
PT12	Real-time imaging of CELLULOSE SYNTHASE A8 expression in above and below ground tissues throughout the life of Brachypodium distachyon	Greg Gregory
PT13	Shining Light on AGPs: Synthesis and Application of a Fluorescent Yariv Reagent	Sebastian Rueda
PT14	Single cell adhesion strength quantification in plants	Léa Bogdziewiez
PT15	Strategy to identify reduced arabinoxylo-oligosaccharides by HILIC-MSn	Dimitrios Kouzounis
PT16	Transcriptomics as an effective tool for the integral study of cell wall-related processes	Tatyana Gorshkova



#### **Cell Wall Biology and Dynamics**

PBD1	Characterization of a tomato extensin peroxidase in vivo	Michael Held
PBD2	Deciphering fungal plant cell wall-loosening mechanisms	Ignacio Delgado Santamaría
PBD3	Defining the plant cell wall involvement in plant-endophytic bacteria interactions	Artur Pinski
PBD4	Investigating the Role of Ubiquitin in the Regulation of Primary Cellulose Synthase Protein	Patrick Hannah
PBD5	Mechanics and dynamics of cell-cell adhesion in plants	Stéphane Verger
PBD6	Mucilaginous envelope: structure, biomechanical properties and ecological significance	Agnieszka Kreitschitz
PBD7	Peculiarities of the biosynthesis of cellulose-enriched thickened cell walls: analysis of gene expression	Natalia Mokshina
PBD8	Plant Cell Wall secretion pathways: analysis on AtPME12, AtPME18 and AtPME34	gabriele pecatelli
PBD9	Polysaccharides tightly associated with cellulose in thickened cell walls: random capture or necessity?	Polina Mikshina
PBD10	Probing the heterogeneity of cell wall composition in needle tissues of Pinus pinaster	Antonio E. Encina García
PBD11	Proprioception in plant? Comparison of flax bast fibers and G-layers induced by long-term gravitropic stress.	Suvajit Mukherjee
PBD12	Quis custodiet ipsos custodes? Regulating cellulose biosynthesis regulation	Francisco Percio Vargas
PBD13	Regulation of ABA production and cell wall dynamics by the cell wall integrity maintenance mechanism	Dhika Amanda
PBD14	Role in signaling of Rapid ALkalinisation Factor-induced cell wall modification	Elvina Faucher
PBD15	Structural diversity of softwood and hardwood cell wall macrofibrils	Jan Łyczakowski
PBD16	Succulent aloes and their micromorphology	Louise Isager Ahl
PBD17	TTL Proteins: New members of the Cellulose Synthase Complex necessary for salt stress resistance	Raquel Pagano Márquez
PBD18	Ultra Structural Characterization of Cell Adhesion in Plants	Özer Erguvan
PBD19	Xylan Production and Secretion in Xylem Cells	Lacey Samuels
PBD20	A pectin-binding RALF peptide with both a structural and signaling role in the periodic assembly of the plant cell wall	Sébastjen Schoenaers
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#### **Pectins**

PP1	A high hydrolysis rate of pectin converts an oligogalacturonide oxidase into a dehydrogenase with radical cation scavenging activity.	Manuel Benedetti
PP2	Auxin-regulated pectin lyase-like proteins affect root cell elongation rate by modification of cell wall	Monika Kubalová
PP3	Dimers and tetramers of the pectic domain rhamnogalacturonan-II: AGPs as 'boron enzymes'	Stephen Fry
PP4	Elucidating the role of pectins in tomato grafting: an immunohistochemical approach	José Luis Acebes
PP5	Enzymatic trimming of the A and B sidechains of rhamnogalacturonan II impacts dimerization	Deepak Sharma
PP6	Fermentation kinetics of carrot derived rhamnogalacturonan-I in a SHIME® gut- model	Krishna Desai
PP7	Identification of amino acid residues involved in the pH-dependent activity and in the substrate size-dependent specificity of OGOX1 by Molecular Dynamics simulations	Emilia Piccirilli
PP8	Modification of pectin by polygalacturonases influences growth and development in Arabidopsis thaliana	Ellen Zelinsky
PP9	New analytical approaches for the structural characterization of insoluble polysaccharides	Parastoo Azadi
PP10	Overproduction of a type II arabinogalactan-specific β-galactosidase from Cicer arietinum in Arabidopsis etiolated seedlings alters hemicellulose/pectin interactions	Berta Dopico
PP11	Pectins play a key role in tomato graft healing	Carlos Frey
PP12	Structural and rheological properties of diluted alkali soluble pectin from apple and carrot	Adrianna Kaczmarska
PP13	Structure-function relationship of the GAUT gene family: How transcript expression informs us	Clifford Okoye
PP14	The role of rhamnose and arabinose for the structure and rheology of pectin, and cell wall mechanics	Artur Zdunek
PP15	Trimming of galactose side chains of type II arabinogalactan influences homogalacturonan methyl esterification	Lucía Albornos



#### Plant Cell Wall and Interactions with the Environment

PH A class III peroxidase PalPRX45 localized in cell wall of roots enhanced poplar tolerance to drought stress  P12 Adaptation responses to drought in Chenopodium quinoa mediated by cell wall enzymes  P13 Biohybrid plants with electronic roots via in vivo polymerization of conjugated oligomers  P14 Cell wall charge in roots and its role in nutrient acquisition.  Eike Barbez  P15 Cell wall composition analysis and genome-wide association study of cassava pulp derived from inbred populations  P16 Cell wall polysaccharides and morphological features associated with water imbibition of Hymenaea courbaril L. seeds  P17 Differences in microtubule interactions among COMPANION OF CELLULOSE SYNTHASE (CC) family members confer divergent functions in plant biology  P18 of study of maize inbreds genetically related but with contrasting hydroxycinnamates content  P19 Effect of oxidative stress on plant cell wall polysaccharides  P10 Genetic and Environmental Influences on Switchgrass Cell Wall Composition  P11 Identification of histological targets involved in the maize response to water deficit.  P11 Influence of cell wall pectic fraction modification on Cadmium stress capacities  P11 Insights of a GH12 from the thermoacidophillic archaea Sulfolobus acidocaldarius  Antonielle Monctaro
P13 Biohybrid plants with electronic roots via in vivo polymerization of conjugated oligomers  P14 Cell wall charge in roots and its role in nutrient acquisition.  Elke Barbez  P15 Cell wall composition analysis and genome-wide association study of cassava pulp derived from inbred populations  P16 Cell wall polysaccharides and morphological features associated with water imbibition of Hymenaea courbaril L seeds  P17 Differences in microtubule interactions among COMPANION OF CELLULOSE SYNTHASE (CC) family members confer divergent functions in plant biology  P18 Differential response in the pith cell wall composition after borer damage: case of study of maize inbreds genetically related but with contrasting hydroxycinnamates content  P19 Effect of oxidative stress on plant cell wall polysaccharides  P10 Genetic and Environmental Influences on Switchgrass Cell Wall Composition  P11 Identification of histological targets involved in the maize response to water deficit.  P112 Influence of cell wall pectic fraction modification on Cadmium stress capacities  Antonielle Monclaro
PI4 Cell wall charge in roots and its role in nutrient acquisition.  Elke Barbez  Cell wall composition analysis and genome-wide association study of cassava pulp derived from inbred populations  Pl6 Cell wall polysaccharides and morphological features associated with water imbibition of Hymenaea courbaril L. seeds  Pl7 Differences in microtubule interactions among COMPANION OF CELLULOSE SYNTHASE (CC) family members confer divergent functions in plant biology  Differential response in the pith cell wall composition after borer damage: case of study of maize inbreds genetically related but with contrasting hydroxycinnamates content  Pl9 Effect of oxidative stress on plant cell wall polysaccharides  Piotr Pieczywek  Pl10 Genetic and Environmental Influences on Switchgrass Cell Wall Composition  Laura Bartley  Identification of histological targets involved in the maize response to water deficit.  Pl12 Influence of cell wall pectic fraction modification on Cadmium stress capacities  Antonielle Monclare  Antonielle Monclare
PI5 Cell wall composition analysis and genome-wide association study of cassava pulp derived from inbred populations  Pi6 Cell wall polysaccharides and morphological features associated with water imbibition of Hymenaea courbaril L. seeds  Pi7 Differences in microtubule interactions among COMPANION OF CELLULOSE SYNTHASE (CC) family members confer divergent functions in plant biology  Pi8 Differential response in the pith cell wall composition after borer damage: case of study of maize inbreds genetically related but with contrasting hydroxycinnamates content  Pi9 Effect of oxidative stress on plant cell wall polysaccharides  Piotr Pieczywek  Pi10 Genetic and Environmental Influences on Switchgrass Cell Wall Composition  Laura Bartley  Ana López-Malvar  Pi12 Influence of cell wall pectic fraction modification on Cadmium stress capacities  Antonielle Monclaro
PI6 Cell wall polysaccharides and morphological features associated with water imbibition of Hymenaea courbaril L. seeds  PI7 Differences in microtubule interactions among COMPANION OF CELLULOSE SYNTHASE (CC) family members confer divergent functions in plant biology  Differential response in the pith cell wall composition after borer damage: case of study of maize inbreds genetically related but with contrasting hydroxycinnamates content  PI9 Effect of oxidative stress on plant cell wall polysaccharides  Piotr Pieczywek  PI10 Genetic and Environmental Influences on Switchgrass Cell Wall Composition  Laura Bartley  PI11 Identification of histological targets involved in the maize response to water deficit.  PI12 Influence of cell wall pectic fraction modification on Cadmium stress capacities  Antonielle Monclaro
PI7 Differences in microtubule interactions among COMPANION OF CELLULOSE SYNTHASE (CC) family members confer divergent functions in plant biology  PI8 Differential response in the pith cell wall composition after borer damage: case of study of maize inbreds genetically related but with contrasting hydroxycinnamates content  PI9 Effect of oxidative stress on plant cell wall polysaccharides  Piotr Pieczywek  PI10 Genetic and Environmental Influences on Switchgrass Cell Wall Composition  PI11 Identification of histological targets involved in the maize response to water deficit.  PI12 Influence of cell wall pectic fraction modification on Cadmium stress capacities  Antonielle Monclaro
PI8 SYNTHASE (CC) family members confer divergent functions in plant biology  Differential response in the pith cell wall composition after borer damage: case of study of maize inbreds genetically related but with contrasting hydroxycinnamates content  PI9 Effect of oxidative stress on plant cell wall polysaccharides  Piotr Pieczywek  PI10 Genetic and Environmental Influences on Switchgrass Cell Wall Composition  Laura Bartley  PI11 Identification of histological targets involved in the maize response to water deficit.  PI12 Influence of cell wall pectic fraction modification on Cadmium stress capacities  Insights of a GH12 from the thermoacidophillic archaea Sulfolobus  Antonielle Monclaro
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PI10 Genetic and Environmental Influences on Switchgrass Cell Wall Composition Laura Bartley  PI11 Identification of histological targets involved in the maize response to water deficit.  Ana López-Malvar  PI12 Influence of cell wall pectic fraction modification on Cadmium stress capacities Jonathan Robilliard  Insights of a GH12 from the thermoacidophillic archaea Sulfolobus  Antonielle Monclaro
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Insights of a GH12 from the thermoacidophillic archaea Sulfolobus  Antonielle Monclaro
I DITS I S
PI14 Investigating Sphagnum moss Cell Wall Structure by Solid - State NMR Darragh Kelleher
PI15 Investigating the Impact of Altered Xylan Structures on Drought Response in Arabidopsis and Aspen Félix Barbut
PI16 Involvement of arabinogalactan proteins in Arabidopsis thaliana root response to osmotic and salt stress Elise Rethoré
PI17 Lifestyle transition in wheat pathogenic Zymoseptoria tritici deciphered by transcriptome-derived analysis of CAZymes  Antonielle Monclaro



#### Plant Cell Wall and Interactions with the Environment

PI18	Localization of hormone-regulated expansins in the shoot of Arabidopsis thaliana and investigating their role in adaptive responses to abiotic stresses	Marketa Samalova
PI19	Mechanical and adhesive properties of mucilaginous coat in seeds of Ocimum basilicum (Lamiaceae)	Helen Gorges
Pl20	Modulating media composition to enhance resistance against Fusarium oxysporum by cell wall changes	Alfonso Gonzalo de la Rubia
PI21	Pectolytic enzyme treatment partially degrades AGP-rich polysaccharides in red wine as characterised using epitope mass profiling	John Moore
Pl22	Nitrogen responses & cambial growth in aspen	Anna Renström
PI23	Pine wilt disease affects xylem cell walls of Pinus pinaster but not of Pinus pinea	Sara Foubert-Mendes
Pl24	Precise control of water stress in the field reveals different response thresholds for forage yield and digestibility of maize hybrids	Oscar Main
Pl25	Release of pectin-derived Damage-Associated Molecular Patterns improves resistance to pathogens and influences root development	Laura Guerrisi
Pl26	Role of WAKL receptors in the sensing of PME17 activity	Elodie AKARY
Pl27	SBT3.3 and Pro-PME17 are secreted through distinct protein secretion pathways in the apoplast	Daniele Coculo
Pl28	Structural differences between membrane-bound and apoplastic arabinogalactan-proteins (AGPs) and their response to low temperature	Daisuke Takahashi
Pl29	Sugar and salt: How seagrass cell walls adapted to the marine habitat	Birgit Classen
PI30	The evolution of guard cell walls and stomatal speed	Robert Brench
PI31	The PineWALL project – Linking pine cell wall composition and structure to pinewood nematode resistance	Ricardo da Costa
Pl32	Tight regulation of a secreted cellulase is critical for virulence of the wheat pathogen Zymoseptoria tritici	Andrea Sánchez-Vallet
PI33	Unraveling the role of plant cell wall degrading enzymes of Zymoseptoria tritici during wheat infection	Cristian Carrasco-López
PI34	Unravelling the role of polygalacturonases in the interaction of parasitic plants and phytopathogens with their host plants	Wiebke Häger
PI35	Xylose-derived oligosaccharides trigger plant immunity	Patricia Fernandez Calvo
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#### Plant Cell Wall Signalling

PS1	"Exploring the Interplay between Pectin Metabolism and CrRLK1L in Marchantia polymorpha."	Martin Alejandro Mecchia
PS2	An Arabidopsis Regulator of G-protein like Receptor is required for the activation of defence responses induced by cellotriose.	Moira Giovannoni
PS3	Arabidopsis Early Immune Signalling in Response to Cell Wall-Derived Glycans	Diego José Berlanga
PS4	Identification of molecular components involved in plant cell wall integrity maintenance in Arabidopsis	Tereza Tichá
PS5	LRX8-RALF4-pectin cell wall integrity network supports pollen tube elongation	Hyun Kyung Lee
PS6	Pollen tube cell wall growth and reorganization is driven by calcium signaling	Marta Belloli
PS7	RALF/CrRLK1L/LRX implication in cell wall integrity during tomato fruit formation	José Antonio Montano García
PS8	SUNE42 in regulating LRX1-mediated cell wall integrity sensing	Xiaoyu Hou
PS9	The Plant Growth Oscillator: Time sifts. Paradigms shift.	Derek T Lamport
PS10	Two Berberine Bridge Enzymes - like oxidize cellodextrins and mixed-linked $\beta$ -glucans influencing the seed coat formation	Sara Costantini
PS11	Unravelling the function of wall-associated kinases in oligogalacturonide immune signaling	Laura Herold

#### **Cell Wall Mechanics**

PM1	Cell wall anisotropy plays a key role in guard cell biomechanics during Zea mays stomatal movements	Kostis Gkolemis
PM2	Disturbance of intrusive growth causes changes in primary, secondary, and tertiary cell walls of flax fibers	Anna Petrova
РМ3	Genome-wide association study of a natural population of maize dissects the genetic basis of cell wall recalcitrance	Shaogan Wang
PM4	Modeling of mechanical properties of hemicelulose-cellulose networks in plant cell wall analogues	Vadym Chibrikov
PM5	Structure-Function Analysis of Primary Cell Walls: Merging Mechanics with Molecular Dynamics	Daniel Cosgrove



#### Lignin

PL1	Elucidating the role of lignification during silique development in Arabidopsis thaliana	Justin Nichol
PL2	Field performance of poplars downregulated in CAFFEOYL SHIKIMATE ESTERASE, a gene involved in lignification	Thatiane Mota
PL3	Flavonoids incorporated into papyrus lignin	Jorge Rencoret
PL4	Freezing-induced activation of the lignin-biosynthetic machinery is conserved in spruce and Populus trees	Marta Marina Pérez Alonso
PL5	Lignin monomers from beyond the canonical monolignol biosynthetic pathway – Another brick in the wall	José C. del Río
PL6	Systems genetic analysis of lignin biosynthesis in aspen trees	Mikko Luomaranta
PL7	Temporal dynamics of wheat straw-based lignocellulose degradation by Agaricus bisporus	Mirjam Kabel
PL8	The effects of CCR2-deficiency on embolism formation and secondary cell wall composition of drought-stressed poplar trees	Jane Mademann
PL9	Topochemistry of pectin and lignin in the cell walls of eastern leatherwood (Dirca palustris)	Yasen Mottiar

#### Plant Cell Wall in Plant Development

PD1	A novel phenotyping tool for secondary walls of proto- and meta-xylem	René Schneider
PD2	Actin-based regulation of cell and tissue scale morphogenesis in developing leaves	Seerangan Kumar
PD3	Arabinogalactan Proteins sub-cellular localization and the role of the GPI anchor for its functions	Ana Marta Pereira
PD4	Calcium binding by AGPs is required for successful double fertilization in Arabidopsis	Jessy Silva
PD5	Cell wall dynamics influence mesophyll conductance and photosynthesis	María José Clemente Moreno
PD6	Cell wall mechanics, mechanosensing and germination in Marchantia	Elise Muller
PD7	Cell wall modification and elimination in the endosperm of Arabidopsis	Eduardo Berenguer
PD8	Changes in cellulose structure during tomato fruit development	Lazar Novakovic
PD9	Characterization of a putative senescence-associated $\alpha\text{-}D\text{-}galactosidase/\beta\text{-}L-arabinopyranosidase}$ from rice	Tibo De Coninck



#### Plant Cell Wall in Plant Development

PD10	Characterization of secondary cell-wall modifications in selected wild olive clones resistant to the defoliating Verticillium dahliae pathotype	Sara Posé-Albacete
PD11	Contribution of cell wall pectin metabolism in the temperature-induced hypocotyl growth	Fabien Sénéchal
PD12	Effect of modification of the AGP structure on the cell wall assembly	Agata Leszczuk
PD13	Elucidating the role of beta-1,3-glucanases in tomato fruit development	Richa Yeshvekar
PD14	Evolution of regulatory modules for cell wall degradation in Cuscuta campestris invasion	Ryusuke Yokoyama
PD15	Evolutionary trajectories of pectin methylesterases and their roles in morphogenesis.	Ooi-kock Teh
PD16	GH5_11 enzymes involved in plant and cell wall development?	Koen Gistelinck
PD17	Identification of cell wall modification enzymes necessary for seedling cuticle formation in Arabidopsis thaliana	Lucia Arenas Alfonseca
PD18	Improving strawberry fruit firmness and postharvest shelf-life by CRISPR/Cas9 editing of a polygalacturonase gene	Sara Posé-Albacete
PD19	Inflorescence stem cracking triggered by uncoordinated growth in Arabidopsis thaliana	Mariko Asaoka
PD20	Mechanical and Hormonal Regulation of Cell Division in Arabidopsis Development	Emily Oren
PD21	Mixed-linkage glucan: the primary source of glucose during Brachypodium grain germination	Mathilde Francin-Allami
PD22	Multi-omic correlations for the elongating rice internode reveal potential regulatory mechanisms for cell wall phenylpropanoid biosynthesis.	Niharika Nonavinakere Chandrakanth
PD23	Novel regulators of epidermal permeability	Marina Leal Gavarron
PD24	Onion epidermal cell as growing study model mediated by cell wall enzymes	Eva Miedes
PD25	Proteins with lectin domains as potential tuners of cell wall extension in growing maize root	Aliya Aglyamova
PD26	Role of cell wall polysaccharides in shaping the mesophyll tissue	diksha bhola
PD27	Structure of cell wall polysaccharides in relation to apple development	Patrycja Pękala



#### Plant Cell Wall in Plant Development

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PD28	Temperature plasticity of a seed coat apoplastic barrier promotes seed dormancy in Arabidopsis thaliana	Lena Hyvärinen
PD29	The Arabidopsis oligosaccharide oxidases OGOX1 and CELLOX act as enzymatic transducers between microbial glycoside hydrolases and plant peroxidases.	Anna Scortica
PD30	The role of proline hydroxylase (P4H3) in AGP biosynthesis and distribution during the tomato fruit ripening process	Nataliia Kutyrieva-Nowak
PD31	Toward a better understanding of the molecular mechanisms of return to the aquatic environment of some spermatophytes	Thomas Berthelier
PD32	Towards an integrative model of tip growth	Stephanie Afonso
PD33	Turgor-dependent impairment of apical hook development in Arabidopsis thaliana plants with altered cell wall integrity.	Riccardo Lorrai
PD34	Type II arabinogalactans initiated by hydroxyproline-O-galactosyltransferases play important roles in pollen-pistil interactions	Diana Moreira
PD35	Understanding the role of GALACTAN SYNTHASE 1 (GALS1) in pavement cell shape acquisition	Sandeep Yadav
PD36	What cell wall structures control Plantago seed capsule shattering?	Rachel Burton
PD37	A re-examination of acid growth: Asymmetric effects of increasing and decreasing pH on creep of plant cell walls suggest that extension and growth are limited by accumulation of entanglements during deformation.	D.S Thompson

#### Hemicelluloses

PH1	Characterization of Arabidopsis polysaccharide acetyl esterases from the GELP family and elucidating their role in determining plant cell wall properties	Lavi Rastogi
PH2	Convergent Acquisition of Mannan β-galactosyltransferase in Asterids and Rosids	Konan Ishida
PH3	Designed $\alpha\text{-galactosylation}$ on $\beta\text{-mannan}$ fine-tunes its interaction with cellulose	Yoshihisa Yoshimi
PH4	Identification of novel proteins involved in the cell wall polysaccharide biosynthesis by immunoprecipitation of Arabidopsis protoplasts	Supachai Vuttipongchaikij
PH5	Regulation of the biosynthesis of (1,3;1,4)-β-glucan, a soluble dietary fibre of cereal grains	Guillermo Garcia Gimenez
PH6	Xylothex: the development of sustainable thermoplastics from hemicelluloses for next generation 3-D printable materials	Daniel Josey



### Cell Walls as a Resource for Sustainability

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PR1	An NMR study on deconstruction of switchgrass cell walls by thermophilic bacteria	Maria Pena
PR2	Cell wall composition of Sugarcane and Energy Cane and its implication for biomass saccharification	Adriana Grandis
PR3	Cell wall engineering for the negative emission	Nobutaka Mitsuda
PR4	Cell wall enzymatic degradability: improving potential maize uses	Alba Manga Robles
PR5	Chilean papaya mucilage: a fruit waste enriched of homogalacturonan	Susana Saez
PR6	Flax dew retting, a unique and specific plant cell wall degradation process	Suvajit Mukherjee
PR7	Functional characterization of two closely related AA3 family carbohydrate oxidoreductases in Arabidopsis	Mengyi Sun
PR8	Investigation of a novel algal-based biostimulant against RLS on barley	Wendy Delpont
PR9	Salt stress affects the primary and secondary cell wall composition in M. sinensis	Kasper van der Cruijsen
PR10	Subcritical water extraction of Equisetum arvense biomass withdraws cell wall fractions that trigger plant immune responses and disease resistance	Antonio Molina
PR11	Targeted enzymatic degradation of the pectic glycan Rhamnogalacturonan I (RG-I) to enhance solubilization of poplar biomass during consolidated bioprocessing	Pradeepa Jayawardhane
PR11	Targeted enzymatic degradation of the pectic glycan Rhamnogalacturonan I (RG-I) to enhance solubilization of poplar biomass during consolidated bioprocessing	Pradeepa Jayawardhane
PR12	The effect of nitrogen fertilization on poplar cell walls composition and recalcitrance towards OrganoCat processing	Jimena Martinez Diaz
PR13	VALORISATION OF BIOWASTES FROM OLIVE OIL MILL AND BIOREFINERY AS INDUCERS OF PLANT DEFENCE RESPONCE	Marco Greco



#### Cellulose

PC1	A complex complex - new components of the CESA complex	Orianne Montulet
PC2	Deep Analysis of Amino Acid Constraints in Plant Cellulose Synthases	Mark Frank
PC3	Engineering Marchantia polymorpha cellulose synthase into a mixed-linkage cellulose synthase	Gustav B. Pedersen
PC4	Evaluation of physical properties of bacterial cellulose modified with pectin and hemicelluloses	Magdalena Kurzyna- Szklarek
PC5	Investigation of possible causes for the variable morphology of cellulose synthesis complexes in land plants	Candace Haigler
PC6	S-acylation and cellulose synthesis in Arabidopsis thaliana	Manoj Kumar
PC7	Short and scarce xylan alters conformations of xylan and cellulose	Alberto Echevarría-Poza
PC8	Solution NMR Investigation of Cellulose Synthase RING Domain Functional Diversification	Thomas Wilson
PC9	The adsorption of different plant cell wall polysaccharides on apple microfibrillar cellulose	Monika Szymanska-Chargot

#### **Extracellular Matrices From Others**

PE1	Discovery of red algal carbohydrate sulfotransferases and their implication in cell wall biosynthesis	Antonin Chevenier
PE2	Exploring the diversity of algal cell walls through the optimisation of fractionation methods	Asier Largo
PE3	Kallfu and Wenutram: Two Chilean flaxseed cultivars, with contrasting mucilage content.	Susana Grant-Grant
PE4	Polysaccharides from the extracellular matrix in brown algae: origin and evolutive histories	Cécile Hervé
PE5	Study of fungal cell wall evolution and its role in fungus-plant interactions	María Fuertes Rabanal
PE6	The antagonizing activity between two microbial GH16 and GH17 enzymes suggests how saprotrophs can feed on 1,3-β-glucan without incurring in autohydrolysis.	Valentina Scafati



#### Other Cell Wall Components

PO1	AGP protein backbones seem to have evolved prior to characteristic glycosylation patterns	Lukas Pfeifer
PO2	An optimized method for comparative analysis of aspen cuticle integrating mass spectrometry with multivariate tools	Madhusree Mitra
PO3	CAGEs and GH43s in Golgi ß-1,3-galactan biosynthesis and cell wall assembly	Totte Niittylä
PO4	Deciphering the molecular basis of Silicon deposition in plant cell wall	Diego Rebaque
PO5	Fern cell walls: Structural investigations and the evolution of arabinogalactan- proteins	Kim-Kristine Mueller
PO6	Role of O-Glycosylation in regulating FLA4 stability	Chaitra Hiremath



# XVI Plant Cell Wall Meeting

#### **Organizers**





#### **Platinum**





















#### Gold





#### Silver







#### **Bronze**









