

PROGRAM (25 May 2009)

Wednesday 8 July

17.00 – 19.00 h: Registration in FORUM

Thursday 9 July

Morning session

Chair person: Anne Mie Emons, Plant Cell Biology, Wageningen University

09.45: John Barnett, Chairman EU COST E40 action: Opening

10.00: Raoul Bino, director Plant Science Group of Wageningen University: Welcome

PLANT CELL WALL OPENING PRESENTATION

10.15: Markus Gunl¹, Jacob Jensen¹, Amancio Souza¹, Lutz Neumetzler², Florian Kraemer¹, Ingo Burgert³, and Markus Pauly¹: KEEPING MICROFIBRILS TIGHT: ELUCIDATING THE FUNCTION OF HEMICELLULOSES BY TAPPING INTO GENETIC RESOURCES ¹DOE-Plant Research Lab, Michigan State University, East Lansing, USA, ²Max-Planck Institute for molecular plant physiology, Golm, Germany, ³Max-Planck Institute of colloids and interfaces, Golm, Germany

CELLULOSE

Chair person: Ingo Burgert, MPIKG Golm, Germany

11.00: Marek Mutwil, Björn Usadel, Moritz Schütte, Oliver Ebenhöf, Ann Loraine, and Staffan Persson: A SYSTEMS APPROACH TO CELLULOSE SYNTHESIS", *Max-Planck-Institute for Molecular Plant Physiology, Am Mühlenberg 1, 14476 Potsdam, Germany*; *Ann Loraine: Department of Bioinformatics and Genomics, North Carolina Research Campus, University of North Carolina at Charlotte, 203 Oak Avenue, Kannapolis, NC 28081, USA*

11.30: Vincent Bulone, CELLULOSE BIOSYNTHESIS: STATE OF THE ART, CHALLENGES AND PERSPECTIVES, *Division of Glycoscience, School of Biotechnology, Royal Institute of Technology (KTH), AlbaNova University Centre, SE-10691 Stockholm, Sweden*

CELLULOSE AND MICROTUBULES

12.00: Ryan Gutierrez¹, Jelmer J. Lindeboom², Alex R. Paredez³, Anne Mie C. Emons^{2,4}, and David W. Ehrhardt¹ THE CORTICAL MICROTUBULE ARRAY ORGANIZES CELLULOSE SYNTHASE TRAFFICKING AND INSERTION INTO THE PLASMA MEMBRANE; ¹Department of Plant Biology, Carnegie Institution for Science, and Department of Biological Sciences, Stanford University, USA; ²Laboratory of Plant Cell Biology, Wageningen University and ⁴Department of Biomolecular Systems, FOM Institute for Atomic and Molecular Physics, Amsterdam The Netherlands; ⁴Department of Molecular and Cellular Biology, University of California, Berkeley, USA

12.30: Simon Tindemans, Rhoda Hawkins, Bela Mulder, Simon Tindemans: LAYING DOWN THE TRACKS: MODELLING SELF-ORGANISATION IN THE CORTICAL MICROTUBULE ARRAY; *FOM Institute AMOLF Amsterdam/Wageningen University, the Netherlands*

13.15 LUNCH IN RESTAURANT OF THE FUTURE

Afternoon session

PLANT DEVELOPMENT

Chair person: Ton Bisseling, Molecular Biology, Wageningen University

14.15: Ben Scheres, ARCHITECTURE FROM STEM CELL CENTRED FEEDBACK NETWORKS, *Department of Molecular Genetics, Utrecht University, Padualaan 8, 3584 CH Utrecht, The Netherlands*

15.00: Charlie Hodgman, CHANGES IN CELL-WALL COMPOSITION ARE THE KEY TO REGULATION OF ROOT GROWTH AND DEVELOPMENT, *Bioinformatics and Systems Biology, University of Nottingham, UK*

15.30: Julia Rausenberger,^{1, 2} Andrea Hussong,² Stefan Kircher,² Daniel Kirchenbauer,² Jens Timmer,^{3, 4} Ferenc Nagy,⁴ Eberhard Schäfer,² and Christian Fleck¹, FROM PROTEIN DYNAMICS TO PHYSIOLOGY: NEW INSIGHTS INTO PHYTOCHROME B MEDIATED PHOTOMORPHOGENESIS ¹ *Centre for Biological Systems Analysis; University of Freiburg; Habsburgerstr. 49; 79104;* ² *Institute of Biology II; University of Freiburg; Schänzlestraße 1; 79104;* ³ *Institute of Physics; University of Freiburg; Hermann-Herder-Straße 3; 79104 Freiburg;* ⁴ *Freiburg Institute for Advanced Studies (FRIAS); University of Freiburg; Albertstr. 19; 79104 Freiburg; Germany*

16.00: tea

Selected presentations WG 1 and 2:

chair person: Katja Ruel, Grenoble

16.30 Clara Sánchez-Rodríguez¹, Sven-Matthias Ehrlich¹, Andrew Carroll², and Staffan Persson¹: CHARACTERIZATION OF A NOVEL VESICLE TRAFFICKING PROTEIN POTENTIALLY INVOLVED IN PRIMARY WALL CELLULOSE PRODUCTION, ¹*Max-Planck-Institute for Molecular Plant Physiology, Am Mühlenberg 1, 14476 Potsdam, Germany.* ²*EBI, 130 Calvin Hall, MC 5230, Berkeley, California 94720, USA.*

16.50: Volker Bischoff*, Virginie Gascioli, Thierry Desprez, Elizabeth Faris Crowell, Herman Höfte, Samantha Vernhettes, Martine Gonneau: CESA5 IS A MEMBER OF THE PRIMARY CELLULOSE SYNTHASE COMPLEX AND IS REGULATED BY LIGHT, *Laboratoire de Biologie Cellulaire, Institut Jean-Pierre Bourgin, INRA, Route de Saint-Cyr, 78026 Versailles, France*

17.10: Tae-Wuk Kim¹, Shenheng Guan², Yu Sun¹, Zhiping Deng¹, Wenqiang Tang¹, Jian-Xiu Shang³, Ying Sun³, Alma L. Burlingame² & Zhi-Yong Wang¹: THE SIGNALLING PATHWAY AND TRANSCRIPTIONAL NETWORK FOR BRASSINOSTEROID ACTIONS, ¹*Department of Plant Biology, Carnegie Institution for Science, Stanford, CA 94305.* ²*Department of Pharmaceutical Chemistry, University of California, San Francisco, CA 94143.* ³*Institute of Molecular Cell Biology, Hebei Normal University, Shijiazhuang, Hebei, 050016, China.*

17.30 Kurt V. Fagerstedt¹, K. Marjamaa², E.M. Kukkola¹: LIGNIFICATION AND THE ROLE OF CLASS III PLANT PEROXIDASES IN ITS POLYMERISATION IN NORWAY SPRUCE, ¹*Department of Biological and Environmental Sciences, Plant Biology, P.O. Box 65, FI-00014 Helsinki University, Finland,* ²*Technical Research Center of Finland (VTT), PL 1000, 02044 VTT, Finland*

18.00: BUFFET IN GRAND CAFE FORUM

19.00-21.00: POSTER SESSION

Friday 10 July

morning session

MECHANICS AND LIGNIFICATION

Chair person: Kurt Fagerstedt, Plant Biology, Helsinki University

09.00: Ingo Burgert, Michaela Eder, Bo Zhang, Markus Rüggeberg: MICROMECHANICAL AND (NANO)STRUCTURAL CHARACTERIZATION OF PRIMARY AND SECONDARY CELL WALLS, *Max-Planck-Institute of Colloids and Interfaces, Department of Biomaterials, Research Campus Golm, Potsdam, Germany*

09.30: Ruben Vanholme, Véronique Storme, Kris Morreel, Geert Goeminne, Jorgen Christensen, Antje Rohde, Eric M essens and Wout Boerjan: SYSTEMS BIOLOGY OF LIGNIFICATION AND RELEVANCE TO BIOFUELS, *VIB Department of Plant Systems Biology; UGent Department of Plant Biotechnology and Genetics, Technologiepark 927, 9052, Gent, Belgium*

10.00 Roeland Merks(1,2,*), Frederik van Parijs (3,4), and Wout Boerjan (3,4) MODELING LIGNIN POLYMERISATION: TOWARDS A RATIONAL DESIGN OF LIGNIN STRUCTURE FOR BIOFUELS 1. *NCSB-NISB, Science Park 123, 1098 XG Amsterdam* 2. *CWI, Science Park 123, 1098 XG Amsterdam* 3. *VIB Department of Plant Systems Biology, Technologiepark 927, B-9052 Ghent, Belgium*, 4. *Department of Molecular Genetics, Ghent University, Technologiepark 927, B-9052, Ghent, Belgium*

10.30 COFFEE

BIOLOGICAL NETWORKS

chair person : Bela Mulder, FOM Institute AMOLF, Amsterdam

11.00: Gerco Angenent, TRANSCRIPTIONAL NETWORKS IN FLOWER DEVELOPMENT, *Wageningen University and Research Center, The Netherlands*

11.30: Pieter Rein ten Wolde, HOW WALKING SLOWER CAN MAKE YOU RESPOND FASTER. *FOM Institute AMOLF Amsterdam, the Netherlands*

12.00: Phong Tran: FISSION YEAST CYTOSKELETON AND CELL SHAPE REGULATION, *University of Pennsylvania, Philadelphia, PA 19104 USA Institut Curie - CNRS, Paris, 75005 France*

12.30 LUNCH IN FORUM

Afternoon session

THE NEXT STEP: TOWARDS DESIGN

chair person : Anne Mie Emons, Plant Cell biology, Wageningen University

13.30: Silvester de Nooijer, Ton Bisseling NUCLEAR ORGANISATION BY NONSPECIFIC INTERACTIONS, *Molecular Biology, Wageningen University, the Netherlands*

14.00: Björn Usadel MODELING VARYING LEVELS OF CARBON IN THE PLANT BY INTEGRATING OMICS DATA, *Max Planck Institute for Molecular Plant Physiology, Germany*

- 14.30: Peter Fratzl and Ingo Burgert FIBRIL DESIGN FOR MECHANICAL FUNCTION, *Max Planck Institute of Colloids and Interfaces, Potsdam, Germany*
- 15.00: Lars A. Berglund BIOINSPIRED COMPOSITES – FROM MECHANICALLY FUNCTIONAL PLANT SYSTEMS TO SYNTHETIC BIOLOGY, *Royal Inst of Technology, Dept of Fiber and Polymer Technology, SE-100 44 Stockholm, Sweden*

15.30: TEA

Selected presentations WG 3 and 4:

chair person : Joseph Grill, Mechanics and Civil Engineering, CNRS/University of Montpellier

16.00: Tancrede Alméras^{*}, Bruno Clair, Joseph Gril, THE ORIGIN OF MATURATION STRESS IN TENSION WOOD: USING A MICRO-MECHANICAL MODEL TO DISCRIMINATE BETWEEN HYPOTHETIC MECHANISM, *Laboratory Mechanics and Civil Engineering, CNRS/University Montpellier 2, Place E. Bataillon, cc048, 34095 Montpellier cedex 5, France*

16.30: Adriana Gregorova^{1*}, Marta Hrabalova², Rupert Wimmer³, Bodo Saake⁴, Clemens Altaner⁵, PROPERTY-DESIGN OF BIOPOLYMER-COMPOSITES USING JUVENILE, MATURE AND COMPRESSION WOOD FIBRES FROM SITKA SPRUCE, *¹Institute of Wood Science and Technology, BOKU Vienna, Peter-Jordan Strasse 82, 1190 Vienna, Austria, ²Institute for Natural Materials Technology, BOKU Vienna, Austria, ³Wood Technology and Wood-based Composites, Georg-August-University Göttingen, Germany, ⁴Johann Heinrich von Thünen-Institut, Hamburg, Germany ⁵Department of Chemistry, University of Glasgow, Glasgow, UK*

17.00: Léplé Jean-Charles^{1*}, Lesage-Descauses Marie-Claude¹, Fedirko Estelle¹, Fichot Régis¹, Desplat Nelly¹, Renou Jean-Pierre², Balzergue Sandrine², Bourgait Isabelle¹, Laurans Françoise¹, Millet Nadège¹, Moreau Alain¹, Déjardin Annabelle¹, Pilate Gilles¹, GENOME-WIDE ANALYSIS OF THE FASCICLIN-LIKE ARABINOGALACTAN (FLA) GENE FAMILY IN POPULUS TRICHOCARPA AND THEIR EXPRESSION PROFILING IN TENSION WOOD, *¹INRA, Amélioration Génétique et Physiologie Forestières, Orléans, BP 20619 Ardon, 45166 Olivet, France, ²INRA, UMR1165 Unité de Recherche en Génomique Végétale, Centre de Versailles-Grignon, 2 rue Gaston Crémieux CP 5708, 91057 Evry, France*

17.30: Rahime Bag, Johnny Beaugrand, Bernard Kurek and Patrice Dole, SELECTIVE REMOVING OF CELL WALL EXTRACTIVE MOLECULES INFLUENCES LIGNIN AND HEMICELLULOSE VISCOELASTIC PROPERTIES IN WOODY HEMP CORE, *Laboratory of Fractionation of Agricultural Resources and Environment, INRA (French National Institute for Agricultural Research) Reims, 2 Esplanade Roland Garros 51686 Reims, France*

20.00: CONGRESS DINER IN HOTEL RESTAURANT "DE WAGENINGSE BERG".

Saturday 11 July

09.00: 4 Parallel sessions of the working groups of COST E50

10.30: COFFEE

11.00: MANAGEMENT COMMITTEE MEETING COST E50

13.00: LUNCH AND END