

**Henrik V. Scheller**  
**CURRICULUM VITAE**

*November 2013*

**Education:**

1983 M.Sc. Biology, University of Copenhagen, Copenhagen, Denmark  
 1989 Ph.D. Biochemistry, Royal Veterinary and Agricultural University, Copenhagen, Denmark  
 1992 Dr. Sc. Photosynthesis, University of Copenhagen, Copenhagen, Denmark

**Appointments:**

2011-Present Vice President for Feedstocks, the Joint BioEnergy Institute, Emeryville, CA  
 2011-Present Adjunct Professor, Department of Plant and Environmental Science, University of Copenhagen, Denmark  
 2010-Present Adjunct Professor, Department of Plant & Microbial Biology, UC Berkeley, CA  
 2008-Present Senior Scientist, Lawrence Berkeley Laboratory, Berkeley, CA  
 2008-Present Director of Cell Wall Biosynthesis, the Joint BioEnergy Institute, Emeryville, CA  
 2004-2007 Head, Plant Biochemistry Laboratory, University of Copenhagen, Denmark  
 1999-2008 Professor, Dept. of Plant Biology and Biotechnology, Univ. of Copenhagen, Denmark  
 1991-1998 Associate Professor, Dept. of Plant Biology, Royal Veterinary and Agricultural University (RVAU), Copenhagen, Denmark  
 1991-1996 Department Deputy, Dept. of Plant Biology, RVAU, Copenhagen, Denmark  
 1989-1991 Postdoc, Department of Plant Biology, RVAU, Copenhagen, Denmark  
 1984-1986 Research Fellow, Departments of Entomology and Horticulture, Purdue University, West Lafayette, IN

**Summary**

My research is focused on understanding how plants make their cell walls and on exploiting this fundamental knowledge to engineer plants with improved properties as feedstocks for biofuel production. Other research topics include plant response to environmental stresses and the mechanisms of photosynthetic electron transport.

I have worked most of my career at University of Copenhagen and the Royal Veterinary and Agricultural in Denmark. In 2008 I joined Lawrence Berkeley National Laboratory to work at the Joint BioEnergy Institute, where I lead the Feedstocks Division with a total of about 40 employees.

**Recognitions and Awards:**

- Brinch's Research Prize, Denmark (1998)
- Member of ATV (Danish Academy of Technical Sciences)
- Treasurer of Scandinavian Society of Plant Physiology 2001-2008
- Member of Society for Glycobiology, American Society of Plant Biologists, and Scandinavian Society of Plant Physiology.

**Commercial enterprise etc.**

Co-founder of Poalis A/S (previously BioLogic A/S), 2001  
 Member of the Board of Poalis A/S, 2001-2005

**Recent Invited lectures at scientific meetings:**

**Gordon Conference on Plant Molecular Biology**, Holderness, NH, July 13-18, 2008: 'Biochemistry of cell wall biosynthesis and digestibility'.

**9th Nordic Photosynthesis Congress**, Copenhagen, Denmark, October 21-24, 2008: 'Biofuel and Biomass'

**4th annual NanoScience Center Spring School**, Neksø, Denmark, April 14-17, 2009: 'Engineering of plant cell walls'.

**21th International Conference on Arabidopsis Research**, Edinburgh, June 30-July 4, 2009: 'Arabidopsis as a model for cell wall biosynthesis in bioenergy crops'.

**Synthetic biology Workshop**, Berkeley, July 23-25, 2009: Design of plants suitable for biofuel production

**Gordon Research Conference on Plant Cell Walls**, Smithfield, RI, August 2-7, 2009: 'Identification of targets for modification of hemicellulose composition'.

**Fifth Annual Georgia Glycoscience Symposium**, Athens, GA, September 17-18, 2009: 'California Dreaming - Sun, Sugar and Cell Walls'.

**Workshop on strategic plant research – solutions to global societal challenges**, Copenhagen, March 24, 2010. 'Biomass - Design of plants for biofuel production and other novel applications'.

**Joint 65th Northwest/22nd Rocky Mountain Regional Meeting of the ACS**, Pullman, WA, June 20-23, 2010: 'Developing plants with improved properties as feedstocks for biofuel production'.

**XIIth Cell Wall Meeting**, Porto, Portugal, July 25-30, 2010: 'RWA proteins are required for acetylation of cell wall polysaccharides in *Arabidopsis thaliana*'

**Agricultural Biotechnology International Conference**, Saskatoon, September 12-15, 2010: 'How can we design plants with improved properties as feedstocks for production of biofuels?'

**2nd Annual Next Generation Bio-Based Chemicals Summit**, San Diego, February 14-17: "Optimizing feedstocks for biobased chemicals production".

**Genomic Science Awardee Meeting IX and USDA-DOE Plant Feedstock Genomics for Bioenergy Awardee Meeting**, Crystal City, Virginia, April 10–13, 2011: 'Optimizing Plant Cell Walls for Efficient Biofuel Production'

**Transforming Biomass into Feedstock**, Idaho Falls, Idaho, August 22-24, 2011: 'Engineering of biomass density and cell wall composition for improved biofuel production'.

**Transforming Biomass into Feedstock**, Idaho Falls, Idaho, August 22-24, 2011: 'Conversion of Mixed Feedstocks using Ionic Liquids'.

**International Synthetic Biology Workshop: A Bio-based Future**, Berkeley, CA, August 29-31, 2011: 'Improving biofuel production by modifying biosynthesis of cell wall polysaccharides'.

**4th Conference on Biosynthesis of Plant Cell Wall**, Awajishima, Japan, October 2-6, 2011: 'Biosynthesis and engineering of xylan'.

**LIFE, Light and Laetrile Symposium**, Copenhagen, Denmark, November 17, 2011: 'Fog, Fuel and Cell Walls'.

**Cold-Spring Harbor Asia, Synthetic Biology**, Suzhou, November 26-30, 2012: 'Plant synthetic biology—Engineering of plants for use as biorefinery feedstocks'.

**Gordon conference on Cellulosomes, Cellulases & Other Carbohydrate Modifying Enzymes**, Andover NH, Aug. 4-9, 2013: 'Enzyme discovery in plant cell wall biosynthesis'.

**Annual Meeting of the Society for Glycobiology**, St. Petersburg, FL, November 17-20: 'Identification of a GlcA transferase involved in biosynthesis of glycosyl inositol phosphorylceramide sphingolipids in plants'

#### **Graduate students:**

Supervisor of 26 past and current graduate students

**Publications 2007-present:**

**2013**

- Manabe Y, Verhertbruggen Y, Gille S, Harholt J, Chong S-L, Pawar PM-A, Mellerowicz EJ, Tenkanen M, Cheng K, Pauly M, Scheller HV. RWA proteins play vital and distinct roles in cell wall O-acetylation in *Arabidopsis thaliana*. **Plant Physiol**, in press.
- Estavillo GM, Verhertbruggen Y, Pogson BJ, Heazlewood JL, Scheller HV, Ito J (2012) Isolation of the plant cytosolic fraction for proteomic analysis. In **Plant Proteomics: Methods and Protocols**, Second Edition, (J Jorrín, V Novo, S Komatsu, W Weckwerth, S Weinkoop, eds.), Springer, New York, in press.
- Zhu Y, Zuo M, Liang Y, Jiang M, Zhang J, Scheller HV, Tan M, Zhang A (2013) ZmMAP65-1a positively regulates H<sub>2</sub>O<sub>2</sub> amplification and enhances brassinosteroid-induced antioxidant defense in maize. **J Exp Bot**, in press.
- Geshi N, Johansen J, Dilokpimol A, Rolland A, Belcram K, Kotake T, Tsumuraya Y, Kaneko S, Tryfona T, Dupree P, Verger S, Scheller HV, Höfte H, Mouille G (2013) A galactosyltransferase acting on arabinogalactan protein glycans is essential for embryo development in *Arabidopsis*. **Plant J**, in press.
- Chiniquy D, Varanasi P, Oh T, Harholt J, Katnelson J, Singh S, Auer M, Simmons B, Adams PD, Scheller HV, Ronald PC (2013) Three novel rice genes closely related to the *Arabidopsis* *IRX9*, *IRX9L*, and *IRX14* genes and their roles in xylan biosynthesis. **Frontiers Plant Biotechnol** 4: 83.
- Gille S, Sharma V, Baidoo EEK, Keasling JD, Scheller HV, Pauly M (2013). Arabinosylation of a Y-ariv precipitable cell wall polymer impacts plant growth as exemplified by the *Arabidopsis* glycosyltransferase mutant *ray1*. **Mol Plant**, in press.
- Bartley LE, Peck ML, Kim S-R, Ebert B, Manisseri C, Chiniquy D, Sykes R, Gao L, Rautengarten C, Vega-Sanchez ME, Benke PI, Canlas PE, Cao P, Brewer S, Lin F, Smith WL, Zhang X, Keasling JD, Jentoft RE, Foster SB, Zhou J, Ziebell A, An G, Scheller HV, Ronald PC (2013) Overexpression of a BAHD Acyltransferase, OsAt10, alters rice cell wall hydroxycinnamic acid content and saccharification. **Plant Physiol** 161: 1615-1633.
- Oikawa A, Lund CH, Sakuragi Y, Scheller HV (2013) Golgi-localized enzyme complexes for plant cell wall biosynthesis. **Trends Plant Sci** 18: 49-58.
- Vega-Sánchez ME, Verhertbruggen Y, Scheller HV, Ronald PC (2013) Abundance of mixed linkage glucan in mature tissues and secondary cell walls of grasses. **J Plant Signaling Behavior** 8: e23143.
- Chen X, Vega-Sánchez ME, Bartley L, Verhertbruggen Y, Chiniquy D, Canlas P, Fagerström A, Prak L, Christensen U, Oikawa A, Chen M, Zuo S, Auer M, Willats W G.T., Harholt J, Scheller HV, and Ronald PC. (2013) Inactivation of *OsIRX10* leads to decreased xylan content in rice stem cell walls and improved biomass saccharification. **Mol Plant** 6: 570-573.
- Yang F, Mitra P, Zhang L, Prak L, Verhertbruggen Y, Kim JK, Sun L, Zheng K, Tang K, Auer M, Scheller HV and Loqué D. (2012) Engineering secondary cell wall deposition in plants. **Plant Biotechnol J** 3: 325-335.

**2012**

- Liwanag AJM, Ebert B, Verhertbruggen Y, Rennie EA, Rautengarten C, Oikawa A, Andersen MCF, Clausen MH, Scheller HV. (2012) Pectin Biosynthesis: GAL51 in *Arabidopsis thaliana* is a  $\beta$ -1,4-galactan  $\beta$ -1,4-galactosyltransferase. **Plant Cell** 24: 12 5024-5036.
- Petersen PD, Lau J, Ebert B, Yang F, Verhertbruggen Y, Kim JS, Varanasi P, Suttangkakul A, Auer M, Loqué D, Scheller HV. (2012) Engineering of plants with improved properties as biofuels feedstocks by vessel-specific complementation of xylan biosynthesis mutants. **Biotechnol Biofuels** 5: 84.
- Chiniquy D, Sharma V, Schultink A, Baidoo EE, Rautengarten C, Cheng K, Carroll A, Ulvskov P, Harholt J, Keasling JD, Pauly M, Scheller HV, and Ronald PC. (2012) XAX1 from glycosyltransferase family 61 mediates xylosyltransfer to rice xylan. **Proc Natl Acad Sci USA** 109: 17117-17122.
- Rennie EA, Hansen SF, Baidoo EEK, Hadi M, Keasling JD, Scheller HV (2012) Three members of the *Arabidopsis* glycosyltransferase family 8 are xylan glucuronosyltransferases. **Plant Physiol** 159, 1408-1417.
- Harholt J, Sørensen I, Roberts A, Willats W, Scheller HV, Petersen BL, Banks JA, Ulvskov P. (2012). The glycosyltransferase repertoire of the spikemoss *Selaginella moellendorffii* and a comparative study of the cell wall structure. **Plos One** 7(5): e35846.

- Hansen SF, Harholt J, Oikawa A, Scheller HV. (2012) Plant glycosyltransferases beyond CAZy: A perspective on DUF families. **Frontiers Plant Physiol**, 3:59
- Parsons HT, Christiansen K, Knierim B, Carroll A, Ito J, Bath TS, xSmith-Moritz AM, Morrison S, McInerney P, Hadi MZ, Auer M, Mukhopadhyay A, Christiansen K, Scheller HV, Loque D, Heazlewood JL (2012). Isolation and proteomic characterization of the Arabidopsis Golgi defines functional and novel components involved in plant cell wall biosynthesis. **Plant Physiol** 159: 12-26
- Vega-Sánchez ME, Verhertbruggen Y, Christensen U, Chen X, Sharma V, Varanasi P, Jobling SA, Talbot M, White, RG, Joo M, Singh S, Auer M, Scheller HV, Ronald PC (2012). Loss of Cellulose Synthase-Like F6 function affects mixed-linkage glucan deposition, cell wall mechanical properties and defense responses in vegetative tissues of rice. **Plant Physiol** 159: 56-69
- Harholt J, Jensen JK, Verhertbruggen Y, Søgaaard C, Bernard S, Nafisi M, Poulsen CP, Geshi N, Sakuragi Y, Driouich A, Knox JP, Scheller HV (2012). ARAD2 is involved in arabinan biosynthesis and forms complexes with ARAD1. **Planta**, 01/2012.
- Orfila C, Degan FD, Jørgensen B, Scheller HV, Ray PM, Ulvskov P (2012). Expression of mung bean pectin acetyl esterase in potato tubers: effect on acetylation of cell wall polymers and tuber mechanical properties. **Planta**, Feb 1, 2012.
- Søgaaard C, Stenbæk A, Bernard S, Hadi M, Driouich A, Scheller HV, Sakuragi Y (2012) GO-PROMTO illuminates protein membrane topologies of glycan biosynthetic enzymes in the Golgi apparatus of living tissues. **PLoS ONE** 7: e31324.
- Rautengarten C, Ebert B, Ouellet M, Nafisi M, Baidoo EEK, Benke P, Stranne M, Mukhopadhyay A, Keasling JD, Sakuragi Y, Scheller HV (2011). The Arabidopsis *Deficient in Cutin Ferulate (DCF)* encodes a transferase required for ferulylation of w-hydroxyfatty acids in cutin polyester. **Plant Physiol** 158: 654-665.

## 2011

- Atmodjo MA, Sakuragi Y, Zhu X, Burrell A, Mohanty SS, Atwood JA, Orlando R, Scheller HV, Mohnen D (2011) GAUT1:GAUT7 are the core of a pectin biosynthetic homogalacturonan:galacturonosyl-transferase complex. **Proc Natl Acad Sci USA**, in press.
- Christensen U, Scheller HV (2011) Regulation of (1,3;1,4)- $\beta$ -D-glucan synthesis in developing endosperm of barley *lys* mutants. **J Cereal Sci**, in press.
- Verhertbruggen Y, Yin L, Oikawa A and Scheller HV (2011) Mannan synthase activity in the CSLD family. **J Plant Signaling Behavior** 6: 1620-1623.
- Rautengarten C, Ebert B, Herter T, Petzold CJ, Ishii T, Mukhopadhyay A, Usadel B, Scheller HV (2011) The Interconversion of UDP-Arabinopyranose and UDP-Arabinofuranose is Indispensable for Plant Development in *Arabidopsis thaliana*. **Plant Cell** 23: 1373–1390.
- Yin L, Verhertbruggen Y, Oikawa A, Manisseri C, Knierim B, Prak L, Jensen JK, Knox JP, Auer M, Willats WGT, Scheller HV (2011) The cooperative activities of CSLD2, CSLD3 and CSLD5 are required for normal *Arabidopsis* development. **Mol Plant** 4: 1024-1037
- Banks JA, Nishiyama T, Hasebe M, Bowman JL, Gribskov M, dePamphilis C, Albert VA, Aono N, Aoyama T, Ambrose BA, Ashton NW, Axtell MJ, Barker E, Barker MS, Bennetzen JL, Bonawitz JD, Chapple C, Cheng C, Correa LGG, Dacre M, DeBarry J, Dreyer I, Durnford DG, Elias M, Engstrom EM, Estelle M, Feng L, Finet C, Floyd SK, Frommer WB, Fujita T, Gramzow L, Gutensohn M, Harholt J, Hattori M, Heyl A, Hirai T, Hiwatashi Y, Ishikawa M, Iwata M, Karol KG, Koehler B, Kolukisaoglu HU, Kubo M, Kurata T, Lalonde S, Li K, Li Y, Litt A, Lyons E, Manning G, Maruyama T, Michael TP, Mikami K, Miyazaki S, Morinaga S-I, Murata T, Mueller-Roeber B, Neilson JAD, Nelson DR, Obara M, Oguri Y, Olmstead RG, Onodera N, Petersen BL, Pils B, Prigge M, Rensing SA, Mauricio Riano-Pachon D, Roberts AW, Sato Y, Loque D, Scheller HV, Schulz B, Schulz C, Shakirov EV, Shibagaki N, Shinohara N, Shippen DE, Sørensen I, Sotooka R, Sugimoto N, Sugita M, Sumikawa N, Tanurdzic M, Theissen G, Ulvskov P, Weng J-K, Willats WWT, Wipf D, Wolf PG, Yang L, Zimmer AD, Zhu Q, Mitros T, Hellsten U, Otiillar R, Salamov A, Schmutz J, Shapiro H, Lindquist E, Lucas S, Rokhsar D, Grigoriev IV. (2011) The compact *Selaginella* genome identifies changes in gene content associated with the evolution of vascular plants. **Science** 332: 960-963.

- Sakuragi Y, Nørholm MHH, Scheller HV (2011) Visual Mapping of Cell Wall Biosynthesis. Book Chapter *In: The Plant Cell Wall: Methods and Protocols*, Ed. by Z. Popper. Springer Science, Berlin, Germany, pp. 153-167.
- Manabe Y, Nafisi M, Verhertbruggen Y, Orfila C, Gille S, Rautengarten C, Cherk C, Marcus SE, Somerville S, Pauly M, Knox JP, Sakuragi Y, Scheller HV (2011) Loss-of-function mutation of *REDUCED WALL ACETYLATION 2* in *Arabidopsis* leads to reduced cell wall acetylation and increased resistance to *Botrytis cinerea*. **Plant Physiol** 155:1068-1078.
- Geshi N, H.J., Sakuragi Y, Jensen JK, Scheller HV. (2011). CAZy Glycosyltransferase family 47. *In Plant polysaccharides - biosynthesis and bioengineering* (P. Ulvskov and N. Carpita, eds.), Wiley-Blackwell, Oxford, UK, pp. 265-284.

#### 2010

- Oikawa A, Joshi HJ, Rennie EA, Ebert B, Manisseri, C., Heazlewood JL, Scheller HV (2010) An integrative approach to the identification of *Arabidopsis* and rice genes involved in xylan and secondary wall development. **Plos One** 5: e15481.
- Harholt J, Suttangkakul A, Scheller HV (2010) Biosynthesis of pectin. **Plant Physiol** 153: 384-395.
- Arora R, Manisseri C, Li C, Ong M, Scheller HV, Vogel K, Simmons BA, Singh S. (2010) Monitoring and Analyzing Process Streams towards Understanding Ionic Liquid Pretreatment of Switchgrass (*Panicum virgatum*). **Bioenergy Res** 3: 134-145.
- Scheller HV, Singh S, Blanch H, Keasling JD (2010) The Joint BioEnergy Institute (JBEI): Developing New Biofuels by Overcoming Biomass Recalcitrance. **Bioenergy Res** 3: 105-107.
- Rautengarten C, Baidoo E, Keasling JD, Scheller HV (2010) A simple method for enzymatic synthesis of unlabeled and radiolabeled hydroxycinnamate-CoA. **Bioenergy Res** 3: 115-122.
- Liepmann AH, Wightman R, Geshi N, Turner SR, Scheller HV (2010) *Arabidopsis* – a Powerful Model System for Plant Cell Wall Research. **Plant J** 61: 1107-1121.
- Scheller HV, Ulvskov P (2010) Hemicelluloses. **Ann Rev Plant Biol** 61: 263-289.
- Vogel JP, Garvin DF, Mockler TC, Schmutz J, Rokhsar D, Bevan MW, Barry K, Lucas S, Harmon-Smith M, Lail K, Tice H, Grimwood J, McKenzie N, Huo N, Gu YQ, Lazo GR, Anderson OD, You F, Luo M-C, Dvorak J, Wright J, Febrer M, Idziak D, Hasterok R, Lindquist E, Wang M, Fox SE, Priest HD, Filichkin SA, Givan SA, Bryant DW, Chang JH, Mockler TC, Wu H, Wu W, Hsia A-P, Schnable PS, Kalyanaraman A, Barbazuk B, Michael TP, Hazen SP, Bragg JN, Laudencia-Chingcuanco D, Weng Y, Haberer G, Spannagl M, Mayer K, Rattei T, Mitros T, Lee S-J, Rose JKC, Mueller LA, York TL, Wicker T, Buchmann JP, Tanskanen J, Schulman AH, Gundlach H, de Oliveira AC, Maia LdC, Belknap W, Jiang N, Lai J, Zhu L, Ma J, Salse J, Murat F, Abrouk M, Bruggmann R, Fahlgren N, Sullivan CM, Carrington JC, Chapman E, May GD, Zhai J, Ganssmann M, Gurazada GR, German M, Meyers BC, Green PJ, Tyler L, Thomson J, Chen S, Scheller HV, Harholt J, Ulvskov P, Kimbrel JA, Chang JH, Bartley LE, Cao P, Jung K-H, Sharma MK, Vega-Sanchez M, Ronald P, Dardick CD, DeBodt S, Verelst W, Inzé D, Heese M, Schnittger A, Yang X, Kalluri U, Tuskan GA, Hua Z, Vierstra RD, Cui Y, Ouyang S, Sun Q, Liu Z, Yilmaz A, Grotewold E, Sibout R, Hematy K, Mouille G, Höfte H, Michael T, Pelloux J, O'Connor D, Schnable J, Rowe S, Harmon F, Cass CL, Sedbrook JC, Byrne M, Walsh S, Higgins J, Li P, Brutnell T, Turgay U, Budak H, Belcram H, Charles M, Chalhoub B, Baxter I. (2010) Genome sequence analysis of the model grass *Brachypodium distachyon*: insights into grass genome evolution. **Nature** 463: 763-768.
- Harholt J, Bach IC, Lind-Bouquin S, Nunan KJ, Madrid SM, Brinch-Pedersen H, Holm PB, Scheller HV (2010). Generation of transgenic wheat (*Triticum aestivum* L.) accumulating heterologous endo-xylanase and ferulic acid esterase in the endosperm. **Plant Biotechnol J** 8: 351-362.
- Christensen U, Alonso-Simon A, Scheller HV, Willats WGT, Harholt J (2010) Characterization of the primary cell walls of seedlings of *Brachypodium distachyon* – A potential model plant for temperate grasses. **Phytochemistry** 71: 62-69.
- Li C, Knierim B, Manisseri C, Arora R, Scheller HV, Auer M, Vogel K, Simmons BA, Singh S (2010) Comparison of dilute acid and ionic liquid pretreatment of switchgrass: Biomass recalcitrance, delignification and enzymatic saccharification. **Bioresour Technol** 101: 4900-4906

#### 2009

- Landau AM, Lokstein H, Scheller HV, Lainez V, Maldonado S, Prina AR (2009) A cytoplasmically inherited barley mutant is defective in Photosystem I assembly due to a temperature sensitive defect in *ycf3* splicing. **Plant Physiol** 151: 1802–1811.

- Petersen BL, Egelund J, Damager I, Faber K, Jensen JK, Yang Z, Bennett EP, Scheller HV, Ulvskov P (2009) Assay and heterologous expression in *Pichia pastoris* of plant cell wall type-II membrane anchored glycosyltransferases. **Glycoconjugate J** 26: 1235-1246.
- Takahashi J, Rudsander UJ, Hedenström M, Banasiak A, Harholt J, Amelot N, Immerzeel P, Ryden P, Endo S, Ibatullin FM, Brumer H, del Campillo E, Master ER, Scheller HV, Sundberg B, Teeri TT, Mellerowicz EJ (2009) *KORRIGANI* and its aspen homologue *PttCel9A1* decrease cellulose crystallinity in Arabidopsis stems. **Plant Cell Physiol** 50:1099-1115
- Meng M, Geisler M, Johansson H, Harholt J, Scheller HV, Mellerowicz EJ, Kleczkowski LA (2009) UDP-glucose pyrophosphorylase is not rate-limiting, but is essential in Arabidopsis. **Plant Cell Physiol** 50: 998-1011.

### 2008

- Fristedt R, Carlberg I, Zygadlo A, Piippo M, Nurmi M, Aro E-M, Scheller HV, Vener AV (2008). Intrinsically Unstructured Phosphoprotein TSP9 Regulates Light Harvesting in *Arabidopsis thaliana*. **Biochemistry** 48: 499-509.
- Bernal AJ, Yoo C-M, Mutwil M, Jensen JK, Hou G, Blaukopf C, Sørensen I, Blancaflor EB, Scheller HV, Willats WGT (2008) Functional Analysis of the Cellulose Synthase Like Genes *ATCSLD1*, *ATCSLD2* and *ATCSLD4* In Tip Growing Arabidopsis Cells. **Plant Physiol** 148: 1238-1253
- Sirpiö S, Khrouchtchova A, Allahverdiyeva Y, Hansson M, Fristedt R, Vener A, Scheller HV, Jensen PE, Haldrup A, Aro E-M (2008) AtCYP38 ensures early biogenesis, correct assembly and sustenance of photosystem II. **Plant J** 55: 639–651.
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- Vainonen J, Sakuragi Y, Stael S, Tikkanen M, Allahverdiyeva Y, Paakkarinen V, Aro E, Suorsa M, Scheller HV, Vener A, Aro E-M (2008) Light regulation of CaS, a novel phosphoprotein in the thylakoid membrane of *Arabidopsis thaliana*. **FEBS J**, 275: 1767–1777.

### 2007

- Bernal AJ, Jensen JK, Harholt J, Sørensen SO, Møller I, Blaukopf C, Johansen B, de Lotto R, Pauly M, Scheller HV, Willats WGT (2007) Disruption of ATCSLD5 results in reduced growth, reduced xylan and homogalacturonan synthase activity and altered xylan occurrence in Arabidopsis. **Plant J** 52: 791-802.
- Jensen PE, Bassi R, Boekema EJ, Dekker JP, Jansson S, Leister D, Robinson C, Scheller HV (2007) Structure, function and regulation of green plant photosystem I. **Biochim Biophys Acta** 1767: 335-352.
- Zandleven J, Sørensen SO, Harholt J, Beldman G, Schols HA, Scheller HV, Voragen AGJ (2007) Xylogalacturonan exists in cell walls from various tissues of *Arabidopsis thaliana*. **Phytochemistry** 68: 1219-1226.
- Hansson A, Amann K, Zygadlo A, Meurer J, Scheller HV, Jensen PE (2007) Knock-out of the chloroplast-encoded PSI-J subunit of photosystem I in *Nicotiana tabacum*. PSI-J is required for efficient electron transfer and stable accumulation of photosystem I. **FEBS J** 274: 1734–1746.
- Scheller HV, Jensen JK, Sørensen SO, Harholt J, Geshi N (2007) Biosynthesis of pectin. **Physiol Plant** 129: 283-295

### Patent applications

Bartley LE, Ronald P, Scheller HV (2012) Modulation of Expression of Acyltransferases in Grasses to Modify Hydroxycinnamic Acid Content. US Provisional.

Chiniquy D, Ronald P, Scheller HV (2012) Inhibition of a Xylosyltransferase to Improve Saccharification Efficiency. US Provisional.

Scheller HV, Heazlewood J (2012), Improved crops with increased galactan content. PCT application.

Scheller HV, Heazlewood J (2012), Improved crops with increased galactan content. US Provisional.

Loque D, Scheller HV (2012) Spatially modified gene expression in plants. PCT/US2012/023182.

Loque D, Scheller HV (2011) Spatially modified gene expression in plants. US provisional.

Scheller HV, Harholt J, Ulvskov P (2010) Stress-tolerant Plants Expressing Mannosylglycerate-Producing Enzymes. International patent application PCT/US2010/033581.

Scheller HV (2010) Method of reducing acetylation in plants to improve biofuel production. International patent application PCT/US2010/024477

Scheller HV, Harholt J, Ulvskov P (2009) Stress-tolerant Plants Expressing Mannosylglycerate-Producing Enzymes. US provisional.

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Scheller HV, Sørensen SO, Harholt J (2005) Xylosyltransferase. Application PA 2005 00065.