



# European Plant Science Organisation

## 4<sup>th</sup> EPSO Conference

### “Plants for Life”

Toulon (Côte d’Azur), France

22 – 26 June 2008

[www.epsoweb.org/catalog/conf2008.htm](http://www.epsoweb.org/catalog/conf2008.htm)



## Final Programme

Sunday		22 June 2008	
From 13:00	Registration		
15:00 – 16:30	<b>Opening and Keynote</b> <b>Chair: Karin Metzloff</b> , Brussels, BE <b>&amp; H�el�ene Lucas</b> , Versailles, FR	<b>Speakers:</b>  <b>Karin Metzloff and H�el�ene Lucas</b> (10 min) Executive Director of European Plant Science Organisation <i>Head of Genetics and Plant Breeding Division, INRA and Local Conference Organiser</i> Welcome from EPSO  <b>Fran�ois Houllier</b> , FR (10 min) <i>Scientific Director for Plant and Plant Products, INRA</i>  <b>Andr� Le Bivic</b> , FR (10 min) <i>Deputy Scientific Director, Department of Life Sciences, CNRS</i>  <b>Richard B. Flavell</b> , USA (60 min) <b>S 001</b> <i>Chief Scientific Officer of Ceres, Inc. - The Energy Crop Company</i> What do we need to improve crops faster and cheaper?	
16:30 – 17:00	Break		
17:00 – 19:00	<b>Plant Science in Europe – Science Policy</b> <b>Chair: Wilhelm Gruissem</b> , Z�urich, CH <b>&amp; Karin Metzloff</b> , Brussels, BE	<b>Speakers:</b>  <b>Timothy Hall</b> , EU (25 + 5 min) <b>S 002</b> <i>Acting Director of Directorate Food, Agriculture, Fisheries and Biotechnology, DG Research</i> The knowledge-based bio-economy from a “plant” perspective  <b>Babis Savakis</b> , GR (25 + 5 min) <b>S 003</b> <i>Senior Advisor to the President of the ERC</i> The European Research Council: A benchmark for frontier research funding in Europe  <b>Wilhelm Gruissem</b> , CH (25 + 5 min) <b>S 004</b> <i>President of European Plant Science Organisation (EPSO)</i> Plant science in Europe – Breaking new ground  <b>Mike Gale</b> , UK (25 + 5 min) <b>S 005</b> <i>Member of the CGIAR Science Council</i> Grain for food – the breeding challenge	
19:30 – 22:30	Welcome Reception		
Monday		23 June 2008	
8:30 – 10:30	<b>Understanding, preserving and using plant diversity I: Genome structure and evolution</b> <b>Chair: Catherine Feuillet</b> , Clermont-Ferrand , FR	<b>Speakers:</b>  <b>Catherine Feuillet</b> , Clermont-Ferrand , FR (30 + 5 min) A glimpse into the impossible: physical mapping of the giant hexaploid wheat genome using a chromosome based approach <b>S 006</b>  <b>Graham Moore</b> , Norwich, UK (25 + 5 min) It’s not size but coordination that matters <b>S 007</b>	

		<b>Joachim Messing</b> , Piscataway, USA (25 + 5 min) Evolution of grasses by comparative genomics <b>S 008</b>
10:30	Coffee Break	<b>Anne-Françoise Adam-Blondon</b> , Evry, FR (15 + 5 min) The grapevine genome sequence suggest hexaploïdization in major angiosperm phyla <b>S 009</b>
<b>11:00 – 13:00</b>	<b>Understanding, preserving and using plant diversity II: Plant adaptation, domestication and conservation</b> Chair: Stephen Hopper, Kew, UK	<b>Speakers:</b>  <b>Stephen Hopper</b> , Kew, UK (30 + 5 min) <b>S 010</b> Rethinking agriculture and urban green space management: plant adaptation, domestication and conservation  <b>Simon Hiscock</b> , Bristol, UK (25 + 5min) <b>S 011</b> Hybrid speciation in flowering plants  <b>Thomas Städler</b> , Zürich, CH (25 + 5min) <b>S 012</b> Assessing demographic history in a population-genetic framework: A multilocus case study in wild tomatoes  <b>Benjamin Kilian</b> , Gatersleben, DE (15 + 5 min) <b>S 013</b> A dispersed-specific model of plant domestication
13:00 – 15:00	Lunch	
<b>13:45 – 14.45</b>	<b>SEB Careers Workshop</b>	<b>Making the most of your research position</b>
<b>15:00 – 17:00</b>	<b>Understanding, preserving and using plant diversity III: Climate change and challenges for the next decades</b> Chair: Ulrich Schurr, Jülich, DE	<b>Speakers:</b>  <b>Ulrich Schurr</b> , Jülich, DE (30+5 min) <b>S 014</b> Dynamics of plants in a changing environment – novel insights into growth, transport and exchange processes through non-invasive phenotyping  <b>Andrew D. Friend</b> , Cambridge, UK (25 + 5 min) <b>S 015</b> Impacts of global environmental changes on the distribution of plant production to 2100  <b>Bruce Osborne</b> , Dublin, IE (25 + 5 min) <b>S 016</b> Using comparative assessments of net ecosystem exchange and carbon sequestration to identify mitigation options for managed ecosystems  <b>Shravani Basu</b> , Nottingham, UK (15 + 5 min) <b>S 017</b> Promoting indigenous crops as a tool for tackling climate change and food insecurity in semi-arid Africa
17:00	Coffee Break	
<b>17:30 – 19:30</b>	<b>Science and Society: The challenges for tomorrow's agriculture</b> Chair: Robert Watson, London, UK	<b>Speakers:</b>  <b>Robert Watson</b> , London, UK (20 min) <b>S 018</b> Is multifunctionality the future of agriculture or simply a trade issue?  <b>Tim Lang</b> , London, UK (15 min) <b>S 019</b> A food system which ticks all the policy boxes: Can it be done? What would it look like? Is anyone pushing for it?  <b>Matin Qaim</b> , Göttingen, DE (15 min) <b>S 020</b> Economic consequences of Golden Rice  <b>Joachim Schiemann</b> , Braunschweig, DE (10 min) <b>S 021</b> Regulation and risk assessment of transgenic plants at European level  <b>Discussion</b> (60 min)
<b>19:30 – 20:30</b>	Dinner	

20:30 – 22:30	<b>Poster Session I with drinks</b> Chair: Dénes Dudits, Szeged, HU	20:30 – 20:50 Opening and short presentations of <b>P 032</b> , <b>P 042</b> and <b>P 057</b> 20:50 – 21:40 Even poster numbers will be attended 21:40 – 22:30 Uneven poster numbers will be attended
<b>Tuesday 24 June 2008</b>		
8:30 – 10:30	<b>Improving plant product quantity and quality I: Developmental biology</b> Chair: <b>Ottoline Leyser</b> , York, UK	<b>Speakers:</b>  <b>Ottoline Leyser</b> , York, UK (30 + 5 min) <b>S 022</b> Regulation of shoot branching  <b>Enrico Coen</b> , Norwich, UK (25 + 5 min) <b>S 023</b> Modelling genes, growth and form in plants  <b>Björn Sundberg</b> , Umeå, SE (25 + 5 min) <b>S 024</b> Wood development – what do plant hormones do?  <b>Raffaele Dello Iorio</b> , Rome, IT (15 + 5 min) <b>S 025</b> Cytokinins control root meristem activities and root growth by antagonizing auxin action
10:30	Coffee Break	
11:00 – 17:00	Excursion	
17:30 – 19:30	<b>Preserving our future by reducing the inputs in agriculture I: Reducing fertilisers</b> Chair: <b>Mark Stitt</b> , Golm, DE	<b>Speakers:</b>  <b>Mark Stitt</b> , Golm, DE (30 + 5 min) <b>S 026</b> Genomics analysis of responses to nutrients  <b>Javier Paz-Ares</b> , Madrid, ES (25 + 5 min) <b>S 027</b> Phosphate starvation signalling in plants  <b>Nicolaus von Wirén</b> , Hohenheim, DE (25 + 5 min) <b>S 028</b> Nitrogen uptake and signaling networks  <b>Heike Schneider, Jülich, DE</b> (15 + 5 min) <b>S 029</b> A new approach for imaging nutrient distributions in plant tissue using time of flight secondary ion mass spectrometry and scanning electron microscopy
19:30 – 20:30	Dinner	
20:30 – 22:30	<b>Poster Session II with drinks</b> Chair: <b>Kirsi-Marja Oksman-Caldentey</b> , Espoo, FI	20:30 – 20:50 Opening and short presentations of <b>P 064</b> , <b>P 095</b> and <b>P 121</b> 20:50 – 21:40 Even poster numbers will be attended 21:40 – 22:30 Uneven poster numbers will be attended
<b>Wednesday 25 June 2008</b>		
8:30 – 10:30	<b>Preserving our future by reducing the inputs in agriculture II: Reducing pesticides</b> Chair: <b>Jonathan Jones</b> , Norwich, UK	<b>Speakers:</b>  <b>Jonathan Jones</b> , Norwich, UK (30 + 5 min) <b>S 030</b> Monitoring and manipulating information flow at the host/pathogen interface  <b>Sophien Kamoun</b> , Norwich, UK (25 + 5 min) <b>S 031</b> Filamentous pathogen effectors  <b>Frank Takken</b> , Amsterdam, NL (25 + 5 min) <b>S 032</b> Resistance proteins: scouts of the plant innate immune system  <b>Montserrat Solé</b> , Barcelona, ES (15 + 5 min) <b>S 033</b> A family of bacterial effectors promote disease by interfering with plant MAP-kinases
10:30	Coffee Break	
11:00 – 13:00	<b>Preserving our future by reducing the inputs in agriculture III: Reducing water input</b> Chair: <b>Peter Langridge</b> , Glen Osmond, AUS	<b>Speakers:</b>  <b>Peter Langridge</b> , Glen Osmond, AUS (30 + 5 min) <b>S 034</b> Genetic and genomic approaches to deal with subsoil constraints to yield

		<b>Jian-Kang Zhu</b> , Riverside, USA (25 + 5 min) <b>S 035</b> Small RNAs and epigenetic regulation in abiotic stress resistance
		<b>François Tardieu</b> , Montpellier, FR (25 + 5 min) <b>S 036</b> An integrated approach of tolerance to water deficit involving precise phenotyping and modelling
		<b>Laszlo Szabados</b> , Szeged, HU (15 + 5 min) <b>S 037</b> Controlled cDNA overexpression system to isolate novel stress genes in <i>Arabidopsis</i> .
13:00 – 15:00	Lunch	
13:45 – 14:45	<b>SEB Careers Workshop</b>	<b>Identifying and selling your skills</b>
15:00 – 17:00	<b>Improving plant product quantity and quality II: Improving yield</b> Chair: <b>Lothar Willmitzer</b> , Golm, DE	<b>Speakers:</b>  <b>Lothar Willmitzer</b> , Golm, DE (30 + 5 min) <b>S 038</b> Metabolic composition and biomass <b>Ian Bancroft</b> , Norwich, UK (25 + 5 min) <b>S 039</b> The identification of molecular markers for yield components <b>Wim Van Camp</b> , Gent, BE (25 + 5 min) <b>S 040</b> Yield increase by transgenic approaches <b>Teresa Penfield</b> , York, UK (15 + 5 min) <b>S 041</b> Increasing Artemisinin Yield in <i>Artemisia annua L.</i>
17:00	Coffee Break	
17:30 – 19:30	<b>Improving plant product quantity and quality III: Food and feed</b> Chair: <b>Kaisa Poutanen</b> , Espoo, FI	<b>Speakers:</b> <b>Kaisa Poutanen</b> , Espoo, FI (30 + 5 min) <b>S 042</b> How to optimally exploit grains for food? <b>Roberto Ranieri</b> , Parma, IT (25 + 5 min) <b>S 043</b> Food product innovation taking advantage of plant selection <b>Søren K. Rasmussen</b> , Frederiksberg, DK (25 + 5 min) Presentation of the white paper of the EPSO workshop on “The European Feed Value Chain” held in Copenhagen from 26 to 27 June 2007. <b>S 044</b> <b>Wessel van Leeuwen</b> , Wageningen, NL (15 + 5 min) An <i>Arabidopsis</i> genetical genomics approach to improve phytonutrient quality in <i>Brassica</i> vegetable crops <b>S 045</b>
20:00	Conference Dinner	Prices for the three best posters will be awarded
<b>Thursday 26 June 2008</b>		
8:30 – 10:00	<b>New Products I: Plant based biofuels: how to improve them?</b> Chair: <b>Birgitte K. Ahring</b> , Lyngby, DK	<b>Speakers:</b> <b>Birgitte K. Ahring</b> , Lyngby, DK (30 + 5 min) <b>S 048</b> Second generation bioethanol production from lignocellulosic material <b>Jay D. Keasling</b> , Berkeley, USA (25 + 5 min) <b>S 047</b> Engineering microbial metabolism for production of advanced biofuels <b>Hélène Zub</b> , Peronne, FR (15 + 5 min) <b>S 049</b> Effect of early plant development and genotypic variation in frost tolerance for 3 species of <i>Miscanthus</i>
10:00	Coffee Break	
10:30 – 12:30	<b>New Products II: Biomaterials, biopharmaceuticals and other new products</b> Chair: <b>Yuri Gleba</b> , Halle, DE	<b>Speakers:</b> <b>Yuri Gleba</b> , Halle, DE (30 + 5 min) <b>S 050</b> New materials from new plants

		<b>Inge Broer</b> , Rostock, DE (25 + 5 min) <b>S 051</b> Biomaterials, synthesis of the biopolymer cyanophycin in tobacco and potato
		<b>Dirk Bosch</b> , Wageningen, NL (25 + 5 min) <b>S 052</b> Controlling of quality of biopharmaceuticals in plants
		<b>Melanie Oey</b> , Potsdam, DE (15 + 5 min) <b>S 053</b> High efficient synthesis in chloroplasts of a protein antibiotic active against human pathogenic bacteria
<b>12:30 – 13:00</b>	<b>Closing</b>	<b>Karin Metzloff and H�el�ene Lucas</b> <i>Executive Director of European Plant Science Organisation Head of Genetics and Plant Breeding Division, INRA and Local Conference Organiser</i>
<b>13:00</b>	<b>Departure</b>	

### Conference programme – time schedule

Morning			Afternoon			Evening		
8:30 - 10:30	Break	11:00 – 13:00	Break	15:00 – 17:00	Break	17:30 – 19:30	Break	20:00 – 22:00
<b>Sunday, 22.6.</b>								
			<b>Registration</b>	<b>Opening Keynote</b>	T1 Plant Science in Europe – Science Policy <b>Welcome Reception</b>			
<b>Monday, 23.6.</b>								
T2S1 Genome structure and evolution		T2S2 Plant adaptation, domestication and conservation	<b>Lunch</b> SEB careers Workshop I	T2S3 Climate change and challenges for the next decades		T3 Science and Society: The challenges for tomorrow's agriculture		Poster Session
<b>Tuesday, 24.6.</b>								
T5S1 Developmental biology		<b>Excursion</b>				T4S1 Reducing fertilisers		Poster Session
<b>Wednesday, 25.6.</b>								
T4S2 Reducing pesticides		T4S3 Reducing water input	<b>Lunch</b> SEB careers Workshop II	T5S2 Improving yield		T5S3 Food and feed		<b>Conference Dinner</b>
<b>Thursday, 26.6.</b>								
T6S1 Plant based biofuels: how to improve them		T6S2 Biomaterials, biopharmaceuticals and other new products	<b>Closing Departure</b>					

**We would like to thank our committees and secretariat members for organising this conference:**

**Members of the organising committee:** Wilhelm Grisseem, Jacek Hennig, Dirk Inz e, Jonathan Jones, H el ene Lucas (local coordinator), Karin Metzloff (EPSO coordinator), Kirsi-Marja Oksman-Caldentey, Pere Puigdomenech, Ulrich Schurr, Chiara Tonelli, Erkki Truve.

**Members of the local committee:** H el ene Barbier-Brygoo (CNRS), H el ene Lucas (INRA), Jean-Christophe Glaszmann (CIRAD).

**Conference secretariat:** Katrien Molders, AnnaKarin Hedin and Agnes Hubert