



## FEDERATION OF EUROPEAN SOCIETIES OF PLANT BIOLOGY

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# **FESPB Newsletter**

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No. 1 (2) August 2007

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## **Plant Science in the News**

### **Biofuels v Forests?**

A recent study published in Science ([Righelato and Spracklen, Science August 17<sup>th</sup> issue; volume 317: 902](#) and supplementary data on-line) has found that more carbon would be sequestered by reforestation than would be saved by growing crops for biofuels. It is estimated that 38% of cropland in Europe and 40% in the US would need to be turned over to growing crops for biofuels in order to substitute just 10% of current petrol and diesel fuel. Even at this modest level it is clear that this amount of agricultural land cannot be lost from food production. Hence, in order to meet this demand, forests and grasslands would have to be brought into cultivation. The authors estimate that the carbon released from vegetation and soils as a result of this land clearance would far outweigh the carbon saved as a result of biofuel production, even over a 30-year period. The amount of carbon saved by using woody biomass for diesel production is somewhat better than for other crops (e.g. oilseed rape, maize) and is compatible with sustainable forests. Nevertheless, the authors conclude that the

conversion of land to biofuel crops is not the best way to reduce net carbon flux to the atmosphere.

## UK to grow more opium poppies

Farmers in the UK are being approached by a leading pharmaceutical company to cultivate opium poppies (*Papaver somniferum*) in order to meet the estimated demand for diamorphine in the event of an influenza pandemic. Diamorphine is used as a painkiller and the UK currently imports raw materials for its production from India and Tasmania. Opium poppies were first cultivated in the UK in 2003 and the area under cultivation has increased from 428 hectares to a current area of 3,000 hectares. Other European countries that currently grow opium poppies for legitimate use are France (6,000 hectares), Hungary (13,000 hectares), Turkey (70,000 hectares), Spain and Czech Republic. These figures contrast with recent estimates of 166,000 hectares of opium poppy cultivation in Afghanistan, primarily for heroin production.

## Meeting Reports

### The *Nitrogen2007* Symposium, Lancaster, UK

The *Nitrogen2007* Symposium was held at Lancaster University from July 27-31<sup>st</sup>, 2007. The conference, which was attended by over 130 delegates from 24 countries, focused on nitrogen acquisition and assimilation in plants, although some talks on bacterial and fungal systems were also included. *Nitrogen2007* was generally acknowledged to have been a major success, with most of the key players in plant nitrogen research attending and a very high standard of oral and poster presentations throughout. The programme and abstracts of all the presentations are still available on the conference web site (<http://biol.lancs.ac.uk/nit2007/>). As can be seen from the photographs that also can be easily viewed on the web site, the delegates certainly enjoyed themselves. The evening meals with copious wine were definitely the high spot, where everybody was able to get together and discuss the exciting new data that they had heard about that day. A special issue of the *Journal of Experimental Botany*

(vol 58, no. 9), containing nine up-to-date review articles by some of the invited speakers, was made available at the conference and can now be seen on-line:-

<http://jxb.oxfordjournals.org/content/vol58/issue9/index.dtl>

*Nitrogen2007* was held under the joint auspices of the European Nitrate and Ammonium Assimilation Group (ENAAG) and the Nitrate Assimilation: Molecular and Genetic Aspects Group (NAMGA). Although these groups have both been organising regular conferences over the past 20 or more years, this was the first time they had come together for a joint meeting. The success of *Nitrogen2007* was such that it was decided during the meeting to have only joint conferences in the future. With this objective in mind, ENAAG and NAMGA were dissolved and a new grouping called the International Plant Nitrogen Group (IPNG) was formed. The first IPNG meeting will be held in Japan in July 2010 and will be organised by Prof. Tomoyuki Yamaya (Tohoku University) and Prof. Tatsuo Omata (Nagoya University) at Inuyama-City <http://www.city.inuyama.aichi.jp/english/index.html>

For more information about IPNG and to join the nitrogen nutrition email discussion group, contact Brian Forde (b.g.forde@lancaster.ac.uk).

Brian G. Forde  
Peter J. Lea  
Hanma Zhang

**Organising Committee**  
***Nitrogen2007***

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## **2<sup>nd</sup> ISSS Workshop on Molecular Aspects of Dormancy and Germination, Salamanca, Spain**

The ISSS meeting, organized by Drs. Dolores Rodriguez and Oscar Lorenzo was held in Salamanca, Spain from July 1st-4th, with over 100 registered attendees. The program was intensive and educational, intermixed with enjoyable social events. It was notable how far the field of research has progressed since the first workshop on this topic three years ago, in particular at the genome level, with the identification of

specific genes or gene sets that are related to seed dormancy and germination and the influx of new researchers into these topics, a rich source of new ideas, technologies and approaches.



**Dolores Rodriguez and Oscar Lorenzo, organizers of the Second ISSS Workshop on Molecular Aspects of Dormancy and Germination, Salamanca, July 2007.**

## **NEWS**

Dr. Oscar Lorenzo, from the University of Salamanca, Spain, has received the 2007 Award of the Spanish Society of Plant Physiology and will be the Spanish candidate for the Federation of European Societies of Plant Biology 2008 Award.

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## **14th International Congress on Photosynthesis (PS07) Glasgow, UK**

Over 800 participants congregated at the Scottish Exhibition and Conference Centre (SECC) in Glasgow for the 14th International Congress on Photosynthesis (PS07) from 22nd-27th July, 2007. This congenial gathering of international leaders, researchers and students came together to discuss recent developments within the domain of photosynthesis. The vibrant city of Glasgow provided an excellent backdrop for the exceptional scientific and education programme, with

sessions covering topics that ranged from molecular structures and artificial photosynthesis to improving stress tolerance and applications in food and bio-energy crop production. PS07 addressed recent developments in the basic science and methods as well as the new challenges and discoveries that underpin emerging concepts, providing a dynamic forum for exchange of information and research from all areas. The conference had a large number of student delegates, for many of whom this was the first experience of an International forum of scientific exchange. The abstracts for all the oral and poster presentations are published in *Photosynthesis Research*, volume 91. The Congress Proceedings Volume received 350 submissions and there are a number of Journal Special Issues arising from the meeting including one in the *Journal of Experimental Botany*.



**A dramatic demonstration of energy at the public session on “Light and Life”**

Making knowledge and information accessible to the public was an integral aspect of PS07. Thus, in order to promote a broader understanding of the importance of photosynthesis to the public, an accompanying event called “Light and Life” was held over two days in conjunction with the main Photosynthesis Congress sessions in the Clyde Suite at the nearby Glasgow Science Centre (GSC). This venue provided scientists with a unique opportunity for informal interactions with the public to explain their work using simple but effective interactive displays, shows and tools. We recorded 850 members of the general public visiting in the “Light and Life” event, a number that represented about 80% of those entering the GSC.

PS07 was supported by a large number of organisations including the BBSRC (UK). In addition, to providing financial support for the Bio-Energy session, BBSRC organised a public meeting on the second day of the Conference that was chaired by Quentin Cooper. The public meeting which gave a broad view of the emerging technologies, as well as economic, and social issues was well attended by local residents and enabled members of the general public to engage in a discussion on “Photosynthesis and Bio-energy”.

The organisation of PS07 also marked the first collaborative venture between the International Society for Photosynthesis Research (ISPR) and the Society of Experimental Biology (SEB). Moreover, the event greatly benefited from the participation of other organisations such as The American Society of Plant Biologists (ASPB) in the “Light and Life”, exhibition.



#### **The Scottish Exhibition and Conference Centre, Glasgow**

With its perfect combination of advanced technical facilities and professional service experience across a broad spectrum of events, the SECC lived up to expectations as one of the World’s finest conference venues, with a very good range of lecture halls and ample space for informal discussions, posters and stands for exhibitors. In addition to the excellent science, PS07 was an occasion for meeting old friends and making new ones. Overall, the 14th International Congress on Photosynthesis proved to be a happy and successful occasion for the participants, who generally commented that it was a great meeting.

Prof Christine H. Foyer  
University of Newcastle upon Tyne, UK

Email:christine.foyer@newcastle.ac.uk

**PS07 National Organising Committee and Chairs:** John Allen (Queen Mary College, London, UK), Neil Baker (University of Essex, UK), James Barber (Imperial College London, UK), Sarah Blackford (SEB), Ann Borland (University of Newcastle, UK), Christine H. Foyer (Chair, Rothamsted Research, UK), Howard Griffiths (University of Cambridge, UK), Jeremy Harbinson (University of Wageningen, The Netherlands), Julian Hibberd (University of Cambridge, UK), Peter Heathcote (Queen Mary College, London, UK), Neil Hunter (University of Sheffield, UK), Giles Johnson (University of Manchester, UK), Michael Jones (University of Bristol, UK), David Lawlor (Rothamsted Research), Richard Leegood (University of Sheffield, UK), Steven Long (University of Illinois, Urbana-Champaign, USA), Conrad Mullineaux (Queen Mary College, London, UK), Erik Murchie (University of Nottingham UK), Peter Nixon (Imperial College London, UK), Graham Noctor (Université Paris XI, France) Martin Parry (Rothamsted Research), Paul Quick (University of Sheffield, UK), Christine Raines (University of Essex, UK) John Raven (University of Dundee, UK) and William Rutherford (CEA, France).

**ISPR International Meetings Program Committee:** Christine Foyer (Chair; Rothamsted Research), Robert Blankenship (Co-chair Arizona State University, USA), Arthur Grossman (Carnegie Institution, USA), Gerald Edwards (Washington State University, USA), Susanne von Caemmerer (Australian National University, Canberra) , Masahiko Ikeuchi (University of Tokyo, Japan), Jean-David Rochaix (Université de Genève, Switzerland) and John-Louis Prioul (Université Paris XI, France)

## Spotlight on Recent Publications

Two Spanish groups from the CNB and CSIC, Madrid, have published in *Nature* during August. The group led by Dr Roberto Solano has identified a family of repressor proteins involved in jasmonate signalling in the defence response:

**The JAZ family of repressors is the missing link in jasmonate signaling.** *Nature* **448**, 666-671 (9 August 2007)

A. Chini<sup>1,4</sup>, S. Fonseca<sup>1,4</sup>, G. Fernández<sup>1,4</sup>, B. Adie<sup>1</sup>, J. M. Chico<sup>1</sup>, O. Lorenzo<sup>1,5</sup>, G. García-Casado<sup>2</sup>, I. López-Vidriero<sup>2</sup>, F. M. Lozano<sup>3</sup>, M. R. Ponce<sup>3</sup>, J. L. Micol<sup>3</sup> & R. Solano<sup>1,2</sup>

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5 Present address: Dpto. de Fisiología Vegetal. Centro Hispano-Luso de Investigaciones Agrarias (CIALE), Facultad de Biología, Universidad de Salamanca, Plaza de los Doctores de la Reina s/n, 37007 Salamanca, Spain.

**Target mimicry provides a new mechanism for regulation of microRNA activity** *Nature Genetics* **39**, 1033 - 1037 (2007)

José Manuel Franco-Zorrilla<sup>1</sup>, Adrián Valli<sup>1</sup>, Marco Todesco<sup>2</sup>, Isabel Mateos<sup>1</sup>, María Isabel Puga<sup>1</sup>, Ignacio Rubio-Somoza<sup>2</sup>, Antonio Leyva<sup>1</sup>, Detlef Weigel<sup>2</sup>, Juan Antonio García<sup>1</sup> & Javier Paz-Ares<sup>1</sup>

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## Forthcoming Meetings

### **Plant Genomics European Meeting Tenerife, Canary Islands, Spain October 3rd to 6th 2007**

Plant GEM is an international annual meeting on the subject of genomics in all its assets, designed to be the platform for researchers from Europe and all over the world to discuss latest developments and to exchange new ideas for future projects and to improve cooperation. Opening Session. Highlights in Genomics/ Opening Keynote Lectures Session 1. Emerging Plant Genomic Tools and Platforms Session 2. Genomes of Model Plants and Crops Session 3. Genomics in Evolution (Genome Structure and Comparative Genomics Approaches) Session 4. Natural Variation & Ecosystem genomics Session 5. Plant Systems Oriented Biology Session 6. Bioinformatics & Process Oriented Approaches Session 7. Phenotypic Plasticity on Biotic & Abiotic Stresses Session 8. Genomics for Agriculture Sustainability and Food Security Session 9. Epigenetics, Small RNAs and Chromatin Structure Session 10. Nutrition and Health Related Plant Genomics Session 11. Industries in Plant Genomics

For more information visit <http://www.plant-gems.org/>

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## **International Conference on “Molecular Mapping and Marker Assisted Selection in Plants” in Vienna, Austria, February 3<sup>rd</sup> to 6<sup>th</sup> 2008**

Molecular Mapping & Marker Assisted Selection in Plants will cover the following topics: a) Plant Genome Organisation; b) Plant Genome Analysis and Mapping; c) Molecular Markers for Genetic Mapping of Plant Genome; d) Marker-assisted Selection; e) Mapping of Quantitative Trait Loci (QTL); f) Map-based Cloning & Chromosome Mapping.

Amongst the invited speakers are internationally known names such as M. Freeling, J. Bennetzen, S. Briggs, D. Zamir, J. Snape, P. Langridge, W. Powell, G. Copenhaver, R. Dirks, and others. The program combines plenary lectures, poster sessions, and sightseeing tours of the beautiful city of Vienna.

Approximately 300 participants are expected including almost 40 speakers and many presentations selected from abstracts, which can be submitted to the organisers until November 12th, 2007.

Conference webpage (<http://www.univie.ac.at/molmapping/>)

Alisher Touraev, Chair of the organizing committee

For any questions please contact conference organisers:

[molmapping.pflanzenmolbio@univie.ac.at](mailto:molmapping.pflanzenmolbio@univie.ac.at)

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## **19 September 2007 - London Technology Network: Nutrition & Health**

An evening event organised by the London Technology Network, evaluating the latest innovations in diet, micronutrients and gut stability. "This event will provide a unique forum in which to access the region's academic brilliance and gain detailed knowledge of the cutting edge research and developments in the field of Nutrition and Health".

Further information and programme available at:  
[http://www.ltnetwork.org/SITE/UPLOAD/DOCUMENT/nutrition & health\\_programme.pdf](http://www.ltnetwork.org/SITE/UPLOAD/DOCUMENT/nutrition & health_programme.pdf)

**Venue:** The Royal Society of Medicine, London

### **27 September 2007 - 1st Norwich Flow Day**

Event organised for everyone, from beginners to seasoned users to learn from experts in the field of flow cytometry, to share experiences with and to meet other users. Further information at:  
<http://www.ifr.ac.uk/flowcytometry/default.html>

**Venue:** Institute of Food Research, Norwich UK at 09:25

**9 October 2007 - Norwich Centre for Preventive Medicine  
Inaugural Symposium**  
Further information at:

<http://www.preventivemedicine.nrp.org.uk/cms.php?pageid=150>

**Venue:** Institute of Food Research, Norwich UK at 14:00

## **Positions Available**

### **Humboldt Foundation Sofia Kovalevskaja Awards**

#### **Seeking outstanding research talents**

**Sofja Kovalevskaja Award** – Cutting-edge research award for the best junior researchers from abroad

The Alexander von Humboldt Foundation is now inviting applications for the Sofja Kovalevskaja Award 2008, one of the most valuable academic awards in Germany. Award money of up to 1.65 million euros allows excellent researchers to carry out academic work under unique conditions: For a period of five years, they are able to work – independently and virtually unaffected by administrative constraints – on their own research projects at an institute of their own choice in Germany and set up their own working groups. Scientists and scholars from all disciplines from abroad who have completed their doctorates within the last six years are eligible to apply. The award targets outstanding talent and a creative approach to research. The closing date for applications is 4 January 2008.

Further information can be found on our website:

[www.humboldt-foundation.de/kovalevskaja](http://www.humboldt-foundation.de/kovalevskaja)

## **Herausragende Forschertalente gesucht**

**Sofja Kovalevskaja-Preis** – Spitzenforschungspreis für die besten Nachwuchswissenschaftlerinnen und -wissenschaftler aus dem Ausland

Die Alexander von Humboldt-Stiftung eröffnet ab sofort das Bewerbungsverfahren für den Sofja Kovalevskaja-Preis 2008, einen der höchst dotierten deutschen Wissenschaftspreise. Preisgelder von bis zu 1,65 Millionen Euro ermöglichen den ausgezeichneten Forschern wissenschaftliche Arbeit zu einzigartigen Konditionen: Fünf Jahre lang können sie – unabhängig und ohne administrative Zwänge – ein eigenes Forschungsvorhaben an einem Institut ihrer Wahl in Deutschland durchführen und eigene Forschergruppen aufbauen. Bewerben können sich Wissenschaftlerinnen und Wissenschaftler aller Disziplinen aus dem Ausland, die ihre Promotion vor nicht mehr als sechs Jahren abgeschlossen haben. Ausgezeichnet werden herausragendes Talent und kreative Forschungsansätze.

Die Bewerbungsfrist endet am 4. Januar 2008.

Für weitere Informationen besuchen Sie unsere Website:

[www.humboldt-foundation.de/kovalevskaja](http://www.humboldt-foundation.de/kovalevskaja)

### **Items for the next newsletter:**

**Please submit items for the next newsletter to your representative on the publications committee, or directly to:**

Dr Alyson Tobin, Chair of Publications Committee and FESPB Newsletter Editor University of St Andrews, Scotland.

We are still looking for national members of this new committee- please send nominations to your national representative on FESPB executive committee- contact details on the FESPB website- or directly to Alyson Tobin.

## **National members of the FESPB Publications committee:**

### **Albania**

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