



## Newsletter from the European Plant Science Organisation



EPSO News N° 21 / June 2011

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##### Note to the reader:

This is the extract print version of *EPSO News*: e-newsletter from the European Plant Science Organisation. To access the hyperlinks, login at: <http://epsoweb.org/publications/newsletter>

### Editorial

#### Consultation on the Bioeconomy — EPSO provides input to the development of a European perspective towards bioeconomy

by [Uli Schurr](#) (Vice-President) and [Karin Metzloff](#), (Executive Director)

The European Commission (EC) recently held a public [consultation on the future of bioeconomy](#) to involve many diverse stakeholders in policy development. EPSO used this opportunity to provide the [perspective of our members on Bioeconomy to the EC](#). In this editorial we present a selection of the ideas submitted to the EPSO membership and our readership at large.

We would be happy to discuss these further with interested stakeholders and policy makers at European, national and multinational levels.

Bioeconomy will contribute to solutions addressing global food security, sustainable use of natural resources, public health, climate change and clean energy production. Bioeconomy in Europe must be integrated into a synergistic network with other industrial sectors and we must be aware that Europe is not and will not be a Bioeconomy island. Europe can only maintain its position and contribution to the global development of the bioeconomy, if society is open and supportive to all relevant technologies and innovations. The implementation of technologies must be considered relative to their contribution in addressing global societal challenges and needs. In addition, international cooperation with present and future leading economies must be supported.

A European bioeconomy strategy needs strong support for individual frontier research as well as for collaborative research across Europe: for collaborative strategic research that translates knowledge into product options, as well as for collaborative curiosity-driven research, which provides inspiration and the knowledge for the future. That does not imply a strict separation, rather a balanced support as we clearly require both components for an efficient innovation-oriented bioeconomy.

For collaborative, agenda-driven research projects, industry — including the farming communities — must be involved in defining the research needs and have access to research results in an effective manner. In projects ranging from pilot to demonstration plants, industries must be directly involved to ensure adequate implementation and should provide an increasing share of the financial resources required towards near-market products.

The bioeconomy would consequently be an excellent focus for establishing a "European Innovation Partnership on Agricultural Productivity and Sustainability" accelerating the research, development and market deployment of innovations. This would strongly benefit from and support the alignment of the future EU Research and Innovation Programme for bioeconomy with the new Common Agricultural Policy beyond 2013.

Funding at EU level should focus on carrying out research and improving the innovation framework at European level. In addition, smaller financial resources are important to better coordinate research and innovation across the Member States and EU initiatives. One exception to the innovation programme — by default only addressing hurdles for innovation, but not performing innovation itself — could be the 'Joint Research and Innovation Initiatives for Humanitarian Aid', actually funding research AND innovation for developing countries, such as for food security and for human health. They could be supported by better aligning strategies and resources from the



European research, the innovation and the development programmes, as well as similar national and charitable programmes. In addition to the EC's consultation on

bioeconomy, EPSO also submitted [input](#) to the next framework programme, currently called the '[Common Strategic Framework](#)' (CSF).

## EPSO Activities

### Outstanding workshop on Plant Pigments and Human Health – join the new network!

The EPSO workshop on Plant Pigments and Human Health was held in the Costa Brava, Spain, on 24-26th May. Fifty five researchers from 39 organisations — including research institutions, universities and food companies – from 16 countries attended the workshop, from across Europe, New Zealand and the USA.

Attendees were welcomed to the workshop by Karin Metzloff, Executive Director of EPSO, and Karla Falloon, representing the New Zealand Ministry for Science and Innovation — one of the sponsors of the event.

Chiara Tonelli, representing the EC Food Advisory Group and the organising committee, talked about the priorities of the European Framework Programme, and Carlos Serovia Perez from the Instituto de Salud Carlos III spoke about the Joint Programming Initiatives, in particular Healthy Diet for Healthy Life.

The first session addressed fundamental research into the identification, biosynthesis and regulation of plant pigments, with an introductory keynote by Mary Ann Lila from the Plants for Human Health Institute in North Carolina, USA. The session concentrated on chemical synthesis and metabolism of pigment compounds commonly found in fruits and vegetables.

The second session, initiated by Cathie Martin from the John Innes Centre, UK, discussed the genetic mechanisms of anthocyanin and carotenoid production in specific key crops – tomato, corn, apple, berries and grapes. The speakers also presented new technologies developed to facilitate genome studies in plants.

A session on bioavailability and delivery of pigments in the diet was opened by Paul Kroon of the Institute of Food Research, UK. Speakers presented current understanding of the absorption of plant pigments in the human body, and the methods of processing and delivery that could be investigated to optimise any pigment research aimed at human health.

The second day of the workshop was opened by Lynn Ferguson from the University of Auckland, New Zealand, who introduced the topic of health claims and functional foods. Talks presented current research on how pigments may influence human health, and the complexity of whole system interactions and consumer drivers in developing these foods.

The final theme was the role of pigments in specific human disorders, opened by Michel de Logeril from the University of Grenoble, France. Current research was presented on the effects of plant pigments in cardiovascular disease, inflammatory disorders, such as asthma and arthritis, neurodegenerative disorders and on gut microflora,

including cell, animal trials and human intervention studies in these areas.

Key themes raised throughout the programme were the need for research in: understanding the mechanisms of action of plant pigments in the human body, particularly mechanisms reaching beyond antioxidant effects; designing model foods and clinical trials that aim to address health claims; dosage, composition and delivery of plant pigments for effectiveness and absorption in the diet; new analytical and pre-clinical tools; and a greater focus on prevention of disease rather than therapeutic treatment.

The discussions from the workshop will be incorporated into a white paper that will be presented at European and national levels to guide funding and support decisions, specifically highlighting research at the interface between plant science and human health, an area not routinely recognised by regulatory and funding agencies. Anyone who would like to submit ideas or comments for possible inclusion in this white paper should contact Cathie Martin or Chiara Tonelli.

Allan White, one of the organisers from New Zealand, will soon start a dedicated website to foster networking of the experts interested in this cross-disciplinary approach.

For more information, watch the EPSO [workshop](#) page where you can find the abstract book including the list of participants at the workshop.



All participants were excited by the excellent science presented at the workshop and the inspiring discussions: ... Mary Ann Lyla, Plants for Human Health Institute, North Carolina State University '*Not*

*just the venue (gorgeous), but the outstanding concentration on hot topics so near and dear to our hearts. Uncommon for sure to have a gathering of scientists all spot-on intensely focused on plant pigments and health – what a rare treat to have the movers and shakers in the science of pigments and health all in one place. Well done – you really pulled off a stellar conference.'*

A big thank you to all participants, speakers, sponsors and helping colleagues for making this workshop a great success!

**Contacts:** [Karin Metzloff](#) & [Allan White](#) (networking, input to policy discussion); [Cathie Martin](#) & [Chiara Tonelli](#) (input to White paper: emerging EPSO working group on the topic)

### EPSO General Meeting

14-15 June 2011

Evry, France

Read the report in the next EPSO newsletter

Contact: [Karin Metzloff](#)

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### 4th ETNA Summer School

6-14, September 2011

Klewenaalp, Switzerland

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Apply by: 20 July 2011

Contact: [Andrea Pfisterer](#)

### EPSO

Apply to become a personal member

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[Registration](#)

Contact: [Nadia Khawaja](#)