

Spring 2020 newsletter

This is the shorter public version. All articles with * are only in the full Newsletter available on the members' only website.

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- * CHIC A game changer for inulin and terpene production
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- * Herbarium genomics
- * Can viruses help us defend plant health?
- * SILESIA, a novel flax cultivar relevant to human health
- * Visibility of European Research Infrastructures
- * Agricultural Systems of the Future and food4future (f4f)
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President's Editorial



EPSO challenges and contributions in 2020 and beyond

Contact: Alan Schulman, EPSO President

For EPSO, for Europe, for the world, and for all of us, the onset of the coronavirus pandemic in early 2020 rapidly changed our lives, both privately and professionally. Among our member countries and institutions, there have been scientists or their families directly and tragically touched by the virus. Like most of you, I am working from my desk at home, and meeting only

virtually (but seemingly continuously). Big changes naturally bring big challenges. Nevertheless, because plant science provides the means for securing food production, the current crisis also brings new opportunities to serve society at large.

December 2019 concluded a highly successful year for EPSO, an achievement we reached together due to each member's efforts. Among our accomplishments, we were consulted on science strategy and policy on multiple levels by the European Commission (EC) and European Parliament (EP), by various multi-national research programme coordinators, and also by multiple national authorities. We were able to propose themes for the Horizon 2020 Work Programme for this year, together with our partners at Plant ETP, and also to provide input towards the coming Horizon Europe. EPSO served as an official observer in both ERA-CAPS and SusCrop, allow for both insight and input.

EPSO also engaged strongly with the general public through its organizational role for the 5th Fascination of Plants Day (FoPD), with over 860 interactive events in over 51 countries. The very active Working Groups served through their meetings as both as a unifying force among EPSO members and as a bridge to policy makers. On a subject of keen interest on all levels of society, namely New Breeding Technologies within the context of the ECJ Ruling of 7.2018 on genome editing (GE), EPSO was able to provide a forum for interaction of scientists and policy-level actors to build an understanding of possible ways forward.

At the end of January 2020, while the planes were still flying, EPSO organised a second informal policy/science forum in Brussels, which attracted representation from many European countries. This provided a good basis for our current active effort, as one of the few EU organisations invited to respond to the EC's survey on New Genetic Techniques (NGTs), including Genome Editing (GE), which we hope will lead to a future for GE and other methods that facilitate ways for agriculture in Europe to meet its many challenges.

EPSO has adapted to restrictions on travel and face-to-face interactions by implementing conferencing technology for our networking. We have held Working Group and Board meetings online. Our 2020 General Meeting was to be held in Torino, following the PBE 2020 Conference, but the Conference was postponed until 2021, at which point the 3rd EPSO Young Plant Scientists Awards will be presented. Making lemonade from lemons, we are reorganising the GM as a series of regional meetings on 2-3 July 2020 as a way not only to strengthen local and regional EPSO activities, but also to provide logistical flexibility in the event that face-to-face events will be possible. For voting at the devolved GM, a secure and anonymous online tool will be implemented. We expect that, in the future, wider use of online meeting tools will help strengthen EPSO's work to bring the plant science community across Europe and beyond together.

Among the lessons being learned from the covid-19 pandemic, one is that our global distribution systems for foodstuffs, medical supplies, and consumer goods are fragile and subject to disruption. Awareness is growing that regional and national nutritional self-sufficiency is a crucial component of security and well-being. EPSO has been ahead of the curve with its input to Horizon Europe strategic programming, emphasizing diverse crops for diverse diets, human health and resilient production of improved crops (see page 3). We as plant scientists are well placed to deliver on these needs. The available research tools that connect phenotype to genotype and allow us to understand and improve traits are better than ever. As EPSO, we look forward to working together to encourage funding bodies to provide the wherewithal to carry out the necessary research, to deepen public understanding of the good that plant research can deliver, and to strengthen our collaborative networks to move the field forward.



EPSO Activities



EPSO advises on science policy: Research and innovation strategies: Agricultural technologies



EPSO welcomes the European Commision's (EC) 'Orientation paper' and looks forward to actions across clusters and pillars to better address the Sustainable European and national level:

and Nutritional Security as well as Human Health

- Encourage contributions from plant scientists to
 - stewardship for resilient and environmentally sustainable production in agriculture, horticulture and forestry
- b. improve plant / crop health for resilient and environmentally sustainable production, thereby supporting the one health concept in agriculture, horticulture and forestry
- not only help decrease the environmental footprint, but also improve Food and Nutritional Security for human health and wellbeing.
- Develop a food label acknowledging environmental footprint without reducing yield and
- Engage more stakeholders in research projects through a consultative process from the start.

2-Support new technologies and adhere international agreements by improving the legislation and supporting flagship projects utilising New Breeding Technologies.

3-Ensure continued open access to Digital Sequence Information (DSI) - DSI must NOT be included under the Nagoya protocol, as this would prevent open access.

4-Close the research and innovation cycle in pillar 2 of the Horizon Europe 2021-27 programme.

5-Implement underlying concepts to address global challenges and EU priorities:

- 1001 Crops Diverse crops for diverse diets, human health and resilient production.
- Encourage and combine crop improvement, crop management and crop processing.
- Combine all available approaches.

These recommendations are relevant to the strategy for future Work Programmes as well as for Partnerships and Missions in Horizon Europe, particularly the partnerships 'Accelerating farming systems transitions: agro-ecology living labs and research infrastructure', 'Rescuing biodiversity to safeguard life on earth', ,Safe and sustainable Food System for People, Planet and Climate' and 'Circular bio-based Europe: Sustainable, inclusive and circular bio-based solutions', and the mission area for 'Soil and Food'.

Development Goals and the EU Green Deal including EPSO is in close contact with colleagues from the the farm to fork and the biodiversity strategies. To this European Commission, including presentations at the end, EPSO makes in its EPSO statement on the recent EPSO Board meeting, to further discuss these Horizon Europe Strategic Plan from 18.2.2020 the suggestions and consider how best encourage major following key recommendations to policy makers at contributions from plant science and innovation towards the anticipated impacts - how crop improvement and crop management as intrinsic part of integrated 1-Combine genetic, chemical, ecological and approaches with ICT and machine learning, agricultural agronomic strategies for smart, diverse agriculture engineering, food processing, extraction of high-value that benefits the environment and increases Food compounds (biorefining), can play a key role. This may include areas such as 'increasing yield (stability) in changing environments', 'improving food crops for a. help boost the water- and nutrient-use efficiency of better nutrition and human health', 'utilising secondary agricultural crops and to improve resource plant metabolites and proteins for renewable materials, energy, human wellbeing and health', 'improving resource use efficiency and resource stewardship for resilient production', 'improving plant and crop health for resilient production', and 'improving forest resilience and productivity under anticipated future climate conditions'

> EPSO provides advice as well to national funders in the frame of ERA-Networks. EPSO is official observer in two ERA-Nets: on Molecular Plant Sciences (ERA-CAPS), which has ambitions towards a new selfsustained call, and on Sustainable Crop production (SusCrop), a COFUND ERA-Net which just had its second call for proposals open until 28 April 2020.

> EPSO continues science advice to policy on Agricultural Technologies, including New Breeding Technologies (NBTs). EPSO invited colleagues from national ministries to a 2nd informal science - policy meeting in January to exchange views on the current situation of genome editing in Europe and possible next steps to enable Europe better addressing climate change, achieving food and nutritional security and establishing a sustainable agriculture in Europe and world-wide.

> Currently EPSO develops with its members the submission to the European Commission study on New Genomic Techniques - EPSO has been invited to submit as one of very few EU level stakeholders from academia.

> Please contact us to get involved and collaborate with us on science advice to policy.

Contact: Karin Metzlaff , EPSO Executive Director



EPSO holds General Meeting 2020 as 9 Regional GM meetings on 2-3.7.2020



member.

activities of EPSO members as they suggested at our in and beyond Europe. 2019 General Meeting.

plenty of time for regional specific discussions.

Representatives discussing and approving the activity fundamental principles. and financial report 2019, the proposed financial plan 2021 and most importantly electing Board members The Board member chairing the regional GM will decide for five open seats, to which candidates from among in the EPSO Representatives can be proposed in the Representatives where to hold the regional meeting. coming weeks.

themes across all Regional GMs. Representatives member and representatives can decide to have a full are welcome to add to and modify suggestions from the online meeting. board to focus this on Discussing: Our membership basis - engaging members; Science policy - Input to Representatives and one Supporting Scientist per Horizon Europe, Fostering collaborative research member are welcome to start developing the 1.7.2021.

The novel third part is dedicated to region specific Contact: Karin Metzlaff & chairs of the Regional GM themes which will be decided by the respective

Due to the impact of the corona virus, the EPSO Board Regional GM chair and Representatives. We are decided to hold the 2020 General Meeting as curious to see what is of most interest there and which simultaneous regional General Meetings in 9 different ideas our Representatives will develop and implement regions across Europe, each one chaired by one Board afterwards in the various regions and at European level. First ideas surfaced already on opportunities to build EPSO national / regional networks, to have regional Though an unforeseen change, this can foster communication efforts and to exchange experience of engagement of the EPSO Representatives, of EPSO many associate countries in our membership with UK Supporting Scientists and possibly encourage regional colleagues to ensure close collaboration across borders

An additional advantage of the Regional GMs will be for The meetings will have a common agenda including more Supporting Scientists and interested new members to participate in parts 2 and 3 of the meeting, enriching the discussion and strengthening the The first part will be a joint online meeting of all grassroots idea of EPSO activities, one of our

the coming weeks with the respective Currently a mixed format of physical and online meeting would allow best interaction. However, in case of longer The second part is dedicated to discussing joint travel restrictions in a region, the respective Board

beyond Framework Programmes, 2021—EPSO's 20th agenda with the chair of their Regional GM: with Odd anniversary, Plant science after corona; and Science Arne R. for NO, SE, UK and IE; Alan S. for FI, EE, LV, support - Preparing the Fascination of Plants Day 2021; LT, DK and IL; Ernst vdE. for NL, BE and NZ; Next steps and ideas for our Working Groups; further Przemyslaw W. for PL, UKR, CZ and SK; Ulrich S. for suggestions for the Plant Biology Europe conference in DE; Carole C. for FR; Josef G. for AT, HU, RO, CH and Turin which has been postponed from 2020 to 28.6.- SV; Antonio L. for ES, PT, CY and GR; and Angelo S. for IT, BG and Serbia.



EPSO Young Plant Scientist Award 2020

2016 and repeated this in 2018 and 2020.





In 2020, we congratulate Contact: Karin Metzlaff, EPSO Apolonio I. HUERTA who was selected for his fundamental plant research and Ann-Katrin BEUEL for her applied plant research. Ann-Katrin and Apolonio will have

opportunity to present their research during a plenary session of the next Plant Biology Europe conference to

encourage the development of ideas and be held from 28 June to 1st July 2021 in Turin (Italy). imaginative thinking in the plant sciences, EPSO In addition, each awardee will receive 200 €, the Local initiated the EPSO Young Plant Scientist Award in organizing committee will cover their registration and EPSO their travel to the meeting.





Call for EPSO Internship Experts and PhD student trainees

EPSO Internship Expert 2020 / 2021

Each EPSO institutional Member can offer an Internship Expert to EPSO for a stay of at least 6 months. The next 2020. Please look at the Internship Call including experience from our three previous intern experts and

further information.



EPSO PhD student traineeship 2020

Moreover, EPSO is continuously looking for PhD students in biological and agricultural sciences for a remote or

(scholarship/grant holders) traineeship of 3 to 6 months.

Sonsoles Alonso joined the EPSO team as a trainee from Agricultural Sciences of the University of Almería / ES in September to November 2019 through a CECAM scholarship (European mobility of Castilla-la Mancha).

During her internship Sonsoles prepared an analysis of project relevant to plant research and innovation (R&I) ifunded under the Horizon 2020 Work Programmes internship expert can start at EPSO from September 2017. She also helped with EPSO communication and monitored funding opportunities for plant R&I.

> Agreement and contact Karin Metzlaff to get "This internship provided me a look behind the scenes to get better insight and understanding of what's going on in the EU – in general and according to the Horizon 2020 Work Programmes. This experience meant for me to get out of my comfort zone and quite a challenge, but the professional and friendly environment of EPSO made everything easier. I learned a lot about the EU business and I do hope my work contributed to the mission of EPSO, because for me it was a work and personal experience in the capital of Europe that I will never forget".

> > Contact: Karin Metzlaff

Fascination of Plants Day: prepare for FoPD 2021 around the world



new edition of the biennial international Fascination Plant Day coordinated May, 18th, 2021!

EPSO, its partners and sponsors aim at welcoming more people, regions and countries than in 2019 when Have a look at our FoPD success stories 2019 to get we gathered over 862 events across 51 countries.

To reach this goal, EPSO will launch officially the 6th Contacts: Global coordinators: Alexandra Barnoux, edition Fascination of Plants Day in September 2020. EPSO, BE; Trine Hvoslef-Eide, Norwegian University of We are counting on our coordinators, partners , Life Sciences, NO, <u>Przemysław Wojtaszek</u>, Adam sponsors and all of you who are making this adventure Mickiewicz University, PL; <u>Karin Metzlaff</u>, EPSO, BE. a success since 2012. Looking back to this success of

2021 is coming fast, carrying a previous editions, EPSO has decided to launch an Instagram channel to allow people sharing even more of their stories, activities and enjoyment for the by Fascination of Plants Day. This adds to the FoPD EPSO. Book in advance your Facebook, Twitter, Youtube and FoPD website. So feel free to communicate with #FoPD, #PlantsDay on social networks if you organize sporadic events in 2020 and preparing 2021.

inspired for 2021!

Plants and Microbiomes Working Group: 3rd workshop 13-14.1.2021



has the pleasure announce its third workshop the Hotel Stefanie.

Building on the recommendations from the 2nd workshop (see report), this third workshop has two aims. First, we will hear first highlights from (multi-)national plants. We kindly ask you to register for your participation by efrom our Working Group members to present. Second, we will discuss in more detail two themes which need further elaboration by the Working Group: 'Advancing We hope welcoming you in Vienna in January! from correlation to causation from lab to field to Angela Sessitsch, Paul Schulze-Lefert, Corné Pieterse ecosystems' and on 'Research infrastructure' - and and Karin Metzlaff provide advice to Horizon Europe and (multi-)national research strategies. The meeting intends to increase Contact: Angela Sessitsch, AIT, AT

The EPSO Working Group collaborations between the working group members (via on Plants and Microbiomes e.g. COST action, Coordination & Support Actions, to initiate more collaborations both bi-and multi-lateral).

to take place on 13-14 At the end of the meeting, a workshop report will be January 2021 in Vienna at drafted on the current status, goals and next steps in plants and microbiomes research - particularly - and will be provided as science advice to policy to the European Commission.

and microbiomes research and innovation initiatives - to mail to angela.sessitsch@ait.ac.at before 31 October this end we will invite later on Expression of Interest 2020. A registration fee to cover meeting and catering costs will be charged.



2nd Cologne Conference on Food for Future, 13-14.9.2021



"Food Security" the Institute of Geography

Cologne Conference on Food for Future" to be held between 13 – 14 September 2021 in Cologne, Germany (initially scheduled for 14–15 September 2020)

The general objective of the conference is to bring together scientists with different expertise to discuss cross-disciplinary aspects of the future of food Please find more information on www.food-for-future.eu. production, development of new products & processes, Contact: Dorit Grunewald, University of Cologne, DE

The University of Cologne land use change in urban and peri-urban agriculture and Area the impact of development on everyday rural livelihood and to ensure global food and nutrition security.

invite you to the "2nd This year's conference focuses on: Functional Food, Plant-Environment Interactions, Urbanization and Development and Food and Rural Livelihoods We call for oral presentations and posters. Young investigators from developing countries have the opportunity to apply for travel grants.



About EPSO

EPSO General Meeting 9 Regional meetings 2 - 3 July

Contact: Karin Metzlaff

EPSO AgTech WG 24 Nov 2020

Contact: Frank Hartung

PBE Conference 28 June- 1July 2021

Contact: Karin Metzlaff

EPSO, the European Plant Science Organisation, is an independent academic international non-profit organisation that represents over 200 leading academic research institutes, universities and departments from 31 countries. Together they represent over 26 000 plant researchers and staff. In addition, EPSO has over 3000 personal members.

The mission of EPSO is to promote plant science and plant scientists, to represent plant scientists in discussions about future plant science programme priorities across Europe, to provide an authoritative source of independent information on plant science (science advice to policy), and to promote training of plant scientists to meet 21st Century challenges in breeding, agriculture, horticulture, forestry, plant ecology and sectors related to plant science.

To achieve its mission, EPSO advises policy and decision makers at European and national level on science policy, as an independent body and as member of the Initiative for Science in Europe (ISE) and the European Technology Platform 'Plants for the Future' (Plant ETP). EPSO supports plant scientists via the EPSO working group meetings, conference, workshops, internships and as information broker via EPSO briefings, newsletter and its website.

EPSO's strategy is defined by the representatives at the General Meeting and further elaborated by the elected Board. Current Board members are Alal Schulman (President - IT), Ulrich Schurr (Vice-President -DE), Carole Caranta (FR), Ernst van den Ende (NL), Antonio Leyva (ES), Przemysław Wojtaszek (PL), Josef GloessI (AT) and Angelo Santino (IT).

EPSO's strategy is implemented by its members and staff. EPSO staff profiles are available here. Contact us to join our activities:

- Science policy (EPSO, ISE, Plant ETP), Science Support (working groups, projects), members, observers, association relations: Karin Metzlaff
- Website, social media, briefings, newsletter, communications: Alexandra Barnoux & Ronald Tipan
- Office, accounts, projects, meetings, database, personal membership administration: Sofia Ciravegna

Since its creation in 2000, the organisation has become a strong advocate of plant research in Europe and an important voice articulating the contributions and needs of plant scientists at national and European levels and beyond. One of EPSO's priorities is science advice to policy.

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