

European Plant Science Organisation

Activities' Report - Year 2021

Aldo Ceriotti/Angelo Santino

1. Introduction

The European Plant Science Organisation (EPSO, <http://www.epsoweb.org>) is an association based in Brussels (Belgium) which represent more than 200 research centers, departments and universities from 31 different countries, with the goal of fostering plant science in Europe and providing independent information concerning the plant research sector.

2. Main activities carried on by EPSO during 2021 relevant for Italy and for CNR

In 2021 EPSO carried on several actions of relevance for European research policies, in order to:

- Highlight the importance to address environmental sustainability together with food and nutritional security and human health;
- Fostering the concept of “Diverse crops for diverse diet and human health and resilient production”;
- Encouraging comprehensive contributions through “combining crop improvement with crop management and processing”;
- Fostering the concept “Defining the goals but leaving the pathways to achieve these open” to truly support innovation without restricting possible approaches and thereby the final impact.

On these topics, EPSO increased its interaction with European Commission (EC) and relevant Directorates (e.g. Directorate General Research and Innovation, Agriculture and Rural Development, Health and Food Safety), through inviting EC representatives to meetings of the EPSO board of Directors or preparing and delivering documents on specific topics.

Furthermore, EPSO continued to provide strategic inputs as official observer in two European Research Area Networks (ERA-Nets), one on Sustainable Crop production (ERA-SusCrop) and one on Molecular Plant Sciences (ERA-CAPS). EPSO is also funding member of the Initiative for Science in Europe (ISE). The EPSO executive Director is member of the ISE executive Committee and co-led the development of draft recommendations for Horizon Europe. Finally, EPSO is funding member of the “Plants for the Future European Technology Platform” (Plant ETP, <http://www.plantetp.org/>) and thus contributes to develop joint research priorities shared between Industry, farmers and academia.

EPSO carries out an intense activity of scientific dissemination and coordinates the Fascination of Plants Day, an international initiative which will be organized in May 2022.

On 18 March 2021 EPSO launched a new European-wide seminar series on a hot and/or emerging topics in plant science, aimed at the Plant Science community and its stakeholders.

The EPSO website presents EPSO's tailored information for plant scientists at the Members only section. The EPSO Newsletters is released as a short public version, while the full version is available on the Members Only Website. EPSO is also providing support to scientific activities by the release of briefings on the main European research programs, tailored to plant scientists. In 2021 these included a completely new brief on Horizon Europe Work Programmes 2021-22. In addition, EPSO updates national funding profiles (Members only website).

In 2021, special emphasis was placed on the activities of EPSO Working Groups (WG). The most active was the “Agricultural Technologies” WG which also released a set of documents on initiatives related to genome

editing. Other active WGs were the ones on “Nutritional Security”, “Plants and Microbiomes” and “Tree and Forestry Biology and Biotechnology”. In 2021 the new EPSO WG “Future Proofed Crops” was established, focusing on photosynthesis, abiotic stress and nutrient use efficiency

EPSO promoted other events concerning the application of Genome Editing in agriculture, with two meetings on May 14 and November 4. The meetings were held according to the “Chatham House Rules”, with ministry and science representatives from several European countries, who informally debated the perspectives of Genome Editing in Europe.

3. Activities carried out by the representative within EPSO during 2021 and impact on the Italian scientific community

Three meetings of the Board of Directors were held online in 2021 (March 30, July 8, December 2), at which the CNR substitute Angelo Santino participated as board member.

The CNR representatives (delegate and substitute) also participated to the General Meeting, which was held online on July 2, 3. The General Meeting included a general part (July 2) on general topics, and a set of regional meetings (RGM) organized by the EPSO representatives on July 5. The Southern Europe RGM was co-organized by Angelo Santino (CNR) and Antonio Leyva (CSIC, Madrid) and was attended by EPSO representatives from Spain, Portugal, Serbia, Bulgaria and from different Italian institutions (University of Turin, University of Milan, University of Bologna, University of Udine, University of Padova).

The CNR delegate Aldo Ceriotti attended the meetings of the Working Group “Agricultural Technologies” which were held on-line on 23/03/2021 and 23 /11/2021. The Working Group addressed issues related to the regulation of genome editing in Europe and the implementation of the Nagoya protocol, which imposes tight restrictions to the international exchange of genetic material. It also set the basis for the organization of a joint European Molecular Biology Laboratory/EPSO workshop on intellectual property to be held in 2022.

The CNR substitute Angelo Santino participated in the activities of the Working Group “Nutritional Security”. The scope of the Working Group is the development of a comprehensive strategy to ensure a better nutritional security to European citizens. With this aim, an official document entitled “Re-thinking the agro-food chains to address the nutritional security goal in Europe” was developed on the following strategic actions:

- I. Reduce the burden of unhealthy & unsustainable dietary habits.
- II. Improve choices of high nutritious foods specifically targeted to different consumer groups.
- III. Re-think agro-food chains to improve the nutritional value of major and minor crops.
- IV. Provide valuable alternatives to animal proteins.
- V. Develop health-proofed crops.

The next workshop of the EPSO Nutritional Security WG is scheduled in presence on May 26-27 2022 in Lecce, Italy.

The active participation to the meetings of the Board of Directors, the General Meeting and the meetings of the Working Groups guaranteed a continuous flow of information on several, relevant issues for the scientific community including the strategic programming of Europe. All these activities increased the visibility of CNR and the Italian plant science community at European level.

4. Evaluation of the participation in terms of benefits and membership cost

The EPSO membership allows the involvement in a constant discussion forum on the strategic development of European plant science and of the agricultural research sector, also providing opportunities to bring these issues to the attention of the European Commission. EPSO regularly informs members about upcoming events and publishes a newsletter distributed through the EPSO website. The Annual General Meeting is also an important opportunity to discuss strategies to foster plant science in Europe. Overall EPSO provides a useful

discussion forum for European Institutions in the plant science domain, and promotes the participation to international networks which can further converge into research partnerships and joint projects.

Through EPSO, the National plant science community participates in the activities of the European Technology Platform (Plant ETP), and contributed to the organization of the biannual conference “Plant Biology Europe” which was held online from 28/06/2021 to 01/07/2021 with a wide participation of plant scientists from many different countries. The CNR Delegate Aldo Ceriotti was co-chair of the Organizing Committee, contributed to the definition of the program, and was co-organizer of the science policy session “Plant Research – European Green Deal – Global Future; Contributions of plant science to the European Green Deal and the UN Sustainable Development Goals (SDGs) and the role of the Horizon Europe R&I Programme”.

5. Evaluation of Italians’ attendance and how to improve interest and involvement

Six other Italian institutions, in addition to CNR, are currently members of EPSO: University of Milan, University of Bologna, University of Turin, University of Udine, University of Padova, Università Politecnica delle Marche.

CNR scientists participated to EPSO activities by contributing to the group of “EPSO Supporting Scientists”, with scientific expertises spanning the main areas of plant biology. Currently, the group of Supporting Scientists involves eight researchers from two Departments. To further stimulate the active participation of CNR Supporting Scientists, internal meetings were organized to illustrate the major points discussed and approved at the General Meeting. In these meetings, the involvement of supporting scientists in EPSO Working Groups was encouraged to improve interactions with the European plant science community. This has resulted in the engagement of several CNR scientists in EPSO working groups, and in a rising interest toward the work of EPSO by the CNR community of plant scientists.

6. Italian experts with important roles within EPSO or within related Commissions and Programs

The General Meeting held online in July 2021 confirmed the CNR substitute Angelo as member of the Board of Directors, whose three-year term started on 1st December 2021. As Board member, Angelo Santino participated in the meetings of the Board of Directors carried out in 2021. In the last meeting of the EPSO board of Directors Angelo Santino was nominated EPSO vice-President.

7. Conclusions

EPSO is the main association promoting plant science and agricultural research in Europe, and plays an important role as scientific advisor on European research policies. Thanks to the EPSO membership, CNR representatives are part of a European level discussion forum, thus contributing to the development of the European research strategies. The EPSO membership significantly contributes to the internationalization of CNR activities, improves the visibility and impact of CNR in Europe, and creates further opportunities to participate in international research consortia.

11/05/2022

Aldo Ceriotti



Angelo Santino

