Open Statement

European scientists urgently reach out to the newly elected European Parliament and European Commission to enable the potential of genome editing for sustainable agriculture and food production.

European agriculture can make considerable contributions to the **UN Sustainable Development Goals**. Precision breeding methods like genome editing with CRISPR are innovative tools that have the potential to help reach these goals in a faster and more efficient way.

The current interpretation of the European legislation (case C-528/16) prevents **the use of genome editing for sustainable agriculture and food production in the EU.**

A small revision of the European legislation will harmonize it with the legal framework in other nations and enable European scientists, breeders, farmers and producers to include genome editing as one of their tools to meet the future challenges of sustainable development.

Our planet is facing unprecedented challenges because of a rising, more affluent world population, while biodiversity is diminishing at an alarming pace and the average temperature on earth continues to rise. To meet these global challenges and others, we will have to shift our mentality and lifestyle, to increase investments in knowledge creation and facilitate the use of innovative technologies.
This also means that agriculture and food production must become more sustainable. The environmental footprint of agriculture has to diminish and farming has to adapt to the rapidly-changing climate. Drought is one of the major factors that is threatening crop yields. We are witnessing this today in Europe. All possible approaches are required to meet these challenges. Plant breeding can make a substantial contribution by developing new crop varieties that are less susceptible to pathogens and are more resilient to drought. **This will enable farmers to produce high yields while decreasing the use of chemicals and water.**

As an example, **the use of chemicals could be reduced drastically to fight fungal infections during wheat cultivation.** Here a minimal change of the so-called MLO genes induced by genome editing is sufficient to obtain resistance against powdery mildew. This type of alteration already exists in nature but is very difficult and time consuming to introduce via conventional breeding approaches. This is a clear example that shows how innovative methods like CRISPR can significantly accelerate the introduction of beneficial properties into crops.

To develop these varieties, scientists and plant breeders must have access to the widest possible array of breeding tools. The most recent addition to the toolbox is precision breeding with CRISPR. It allows scientists and breeders to develop desired crop varieties in a faster, relatively simple and much more directed way compared to previous breeding techniques. **Scientists and breeders in the EU should be enabled to use precision breeding techniques with CRISPR to contribute to a more sustainable agriculture and food production.**

Exactly one year ago, on the 25th of July 2018, the European Court of Justice (ECJ) ruled that plants obtained by precision breeding techniques like CRISPR are genetically modified organisms (GMOs) which, in contrast to the products of much less precise mutation breeding techniques, are not exempt from the GMO legislation. As of consequence, even crops with the smallest CRISPR-mediated alteration, which can also arise spontaneously in nature, are subjected to these provisions. This is highly problematic as the European GMO legislation presents an unreasonable regulatory threshold affecting research institutes and small breeder companies. It is simply too complicated and too expensive to comply with.

The EU GMO legislation, issued in 2001, no longer correctly reflects the current state of scientific knowledge. There are no scientific reasons to consider **genome-edited crops** differently than conventionally-bred varieties that have similar alterations. Plants that have undergone simple and targeted genome edits by means of precision breeding and which do not contain foreign genes **are at least as safe as varieties derived from conventional breeding techniques**.

EU maintains a high standard in food safety and the environment
It is important to note that not being subject to GMO legislation does not mean that such crops and foods are not regulated. There is general food safety legislation that prescribes that foods introduced onto the European market must be safe, and there is environmental legislation that will hold market players liable in case they would introduce crops into the environment that cause damage to biodiversity and protected habitats.

The consequence of the ECJ ruling is that in Europe precision breeding techniques like CRISPR are becoming the privilege of a select group of large multinational companies to exploit it in large cash crops. Consequently, the inability to market genome edited crops in Europe will cause a chilling effect on the investments in R&D in the European breeding sector. The result will be that the further development of beneficial varieties in a faster and much more directed way will be halted in Europe, while the rest of the world embraces the technology.

The EU GMO legislation differs from the legislation in many other nations. These countries apply legislation which is more adapted to the current state of scientific knowledge, excluding plants that have alterations that could also occur naturally or result from conventional breeding activities. **In other words, in these countries genome-edited plants are not subjected to the GMO legislation, enabling scientists and breeders to use genome editing for a more sustainable agriculture and food production.**
The difference in regulatory approach will likely lead to disruptions of international trade and have consequences for food security in Europe. As stated before, small alterations introduced by precision breeding also arise spontaneously in nature. Therefore, it is not possible to determine the origin of such small alterations implying that the current EU GMO legislation cannot be enforced on imported products. **A small revision of the European legislation, by means of harmonizing the legal framework with the other countries of the world, is vital to enable European scientists and breeders to use precision breeding methods like CRISPR as one of the tools to meet the global challenges of sustainable development.** It will unlock scientific progress to help provide solutions to the current challenges we are facing.

The European scientific community, signatory to this Open Statement, urgently calls upon the European institutions including the European Council, the new European Parliament and the upcoming European Commission to take appropriate legal action to enable European scientists and breeders to apply genome editing for sustainable agriculture and food. The ability to use genome editing is crucial for the welfare and food security of European citizens.


Give CRISPR a chance!

Regulating genome edited organisms as GMOs has negative consequences for agriculture, society and economy

On July 25th, the Court of Justice of the European Union (ECJ) ruled that organisms obtained by modern forms of mutagenesis such as CRISPR are not exempt from the EU GMO legislation. Consequently, genome edited organisms must comply with the strict conditions of the EU GMO legislation. This is in stark contrast with the opinion of the Advocate-General of the Court, which was published in January of this year and advised ruling otherwise. We regret the purely process-based interpretation of the legislation by the Court and conclude that the EU GMO legislation does not correctly reflect the current state of scientific knowledge. Organisms that have undergone simple and targeted genome edits by means of precision breeding and which do not contain foreign genes are at least as safe as if they were derived from classical breeding techniques. Therefore, we call upon all European authorities to quickly respond to this ruling and alter the legislation such that organisms containing such edits are not subject to the provisions of the GMO Directive but instead fall under the regulatory regime that applies to classically bred varieties. In the longer term, the GMO Directive should be thoroughly revised to correctly reflect scientific progress in biotechnology.

There are many reasons why agriculture in Europe and around the globe must become more sustainable. Agricultural practices put pressure on our environment, we are faced with a growing population (mounting to an estimated 10 billion mouths to feed by 2050), and climate change poses increasing challenges for crops – climate measurements from the summer of 2018 underline the urgency of this message.

Time is a luxury we don't have. Reducing the environmental footprint of agriculture and adapting farming to a changing climate are imperative. For example, crops that are more tolerant to rapidly changing and harsher environments will be crucial for the success of tomorrow's food production approaches. To address challenges like this and meet food production goals efficiently, we will need to use all knowledge and technical means available and thus also new technologies, specifically biotechnology. One of the latest breakthroughs in this field is precision breeding, an innovative crop breeding method based on genome editing. Crops developed with precision breeding could help the farmer to minimize inputs such as fertilizers and pesticides. Precision breeding can also contribute to tailoring crops to a specific area, taking into account the environmental factors of a certain region. E.g. having plants that are drought resistant could mean higher crop yields without increasing arable land.

Taking traditional breeding to the next level

The search to introduce additional genetic variation in crops is anything but new. Plant breeding started around 8,000 BC, when farmers selected seeds from crops with the best characteristics obtained through spontaneous genetic mutations and crossbred them to produce new crop varieties with desirable properties. In more recent times, chemicals and radiation are applied to incite these mutations. This type of conventional mutagenesis is exempt from the provisions of the GMO legislation because of its long safety record. Nevertheless, this method incites hundreds or even thousands of random mutations with unknown effects and consequences. Mutations leading to non-intended changes then must be removed during the further breeding process, which is very time consuming and not always successful.

New genome editing technologies follow the same principle, but with higher efficiency and precision, as they apply only one or a few targeted mutations – the type of changes that can also occur naturally or through traditional mutagenic approaches. Recent breakthroughs in plant research allow breeders to know exactly where the change will occur and to better predict the effects of the changes. That is why these techniques are called **precision breeding**. In addition, no DNA from non-related species is present in the final crop, in contrast to GMOs.

What the ECJ ruling means

It is generally concluded that the ECJ ruling means that the crops obtained through this type of precision breeding must comply with the strict GMO directive. In practice, the implications are far-reaching. European agricultural innovation based on precision breeding will come to a halt because of the high threshold that this EU GMO legislation presents. This will hinder progress in sustainable agriculture and will give a competitive disadvantage to plant breeding industries in Europe. The impacts on our society and economy will be enormous.

From a scientific point of view, the ruling makes no sense. Crops containing small genome edits are at least as safe as crops obtained through classical mutagenesis or conventional breeding. But more importantly, we find the ruling irresponsible in the face of the world's current far-reaching agricultural challenges.

The ruling proves that current EU GMO legislation is outdated and not in line with recent scientific evidence. As a result, it is crucial that the legislation be adapted such that organisms containing small edits are not subject to the provisions of the GMO legislation, but instead fall under the regime that applies to conventionally bred varieties. Additionally, a more

thorough revision of the legislation is necessary for GMOs and new breeding techniques to correctly reflect scientific progress in biotechnology.

Agricultural innovation will miss an important opportunity

Let's make these consequences a bit more tangible. The strict legislation will make precision breeding hyper-expensive and, by consequence, a privilege of just a few large multinational companies. As such, European farmers will miss out on a new generation of hardier and more nutritious crop varieties that are urgently needed to respond to the results of climate change.

For example, diseases and pests from southern areas are rapidly spreading due to increasing temperatures. Switching off certain genes could make crops resistant to these diseases without the use of new pesticides. This applies particularly to crops that reproduce asexually, like potatoes, bananas and strawberries. These crops are more susceptible to diseases because offspring are genetically identical to their parent plants, leading to a lack of diversity. The same principle applies to drought: a significant problem many regions in the world are facing right now. On top of that, precision breeding is also ideal to improve food quality and safety, such as the breeding of new crop varieties with fewer allergens.

Societal and economic impacts

Europe is in a leading position in terms of innovative agricultural research. This has led to the formation of dynamic biotech clusters consisting of numerous innovative start-ups and corporate partnerships. Many of these (small) European seed-breeding companies embrace the new technologies, as they can be implemented relatively cheaply and quickly, and because they can democratize the research and development of new agricultural products.

However, the ruling of the ECJ forces companies to go through a very long and expensive regulatory process. For entrepreneurs engaged in start-up projects involving precision breeding and their potential investors, this creates a low probability of market admission for products developed through precision breeding. Due to this significant uncertainty and additional risk, smaller biotech companies will seek refuge elsewhere. SMEs and investors might consider it too great a risk to develop activities in this hostile environment, ultimately leading to job losses in the sector. Additionally, we risk a brain drain effect when plant researchers leave Europe for better job opportunities abroad.

This also means that in Europe, developing genome-edited crops is only financially feasible for large (multinational) companies and for application in large, broad-acre crops such as maize and soy. In other words, Europe is pushing technology back into the hands of the big

market players. This is in huge contrast with countries that have adopted more flexible regulations. In such countries, universities, government institutions and small companies are poised to lead the precision-breeding revolution in agriculture. For example, US regulators have taken the view that genome-edited crops are not a problem as long as they do not contain any foreign genes and are therefore not genetically different from crops developed through traditional breeding processes. As a result, genome-edited crops will soon appear on the American market. Meanwhile, relative lower production costs in non-European areas will lead to more food and feed imports in the EU.

Summary

Subjecting crops obtained through modern genome editing to GMO regulations will deny European consumers, producers, researchers and entrepreneurs important opportunities in sustainable agriculture. Therefore, an urgent review and amendment of the European legislation on new breeding technologies is needed. In the short term, the legislation should be altered such that crops with small DNA adaptations obtained through genome editing are **not subject to the provisions of the GMO Directive but instead fall under the regulatory regime that applies to classically bred varieties.** In the long term, new regulations for GMOs should be developed that are adapted to modern breeding techniques. This new directive should provide more legal certainty and evaluate new crop varieties on a scientific basis.

We therefore urge European policy makers to act to safeguard Europe's competitiveness on all levels.

Signatures:

From Austria:	
Magnus Nordborg, Scientific Director GMI	GMI GREGOR MENDEL INSTITUTE OF MOLECULAR PLANT BIOLOGY
Hubert Hasenauer, Rector at BOKU **Christian Obinger**, Vice-Rector for Research and Innovation	BOKU
Wolfgang Knoll & **Anton Plimon**, Managing Directors of the AIT Austrian Institute of Technology	AIT AUSTRIAN INSTITUTE OF TECHNOLOGY

Thomas Henzinger, President of the Institute of Science and Technology (IST) Austria **Jiri Friml,** Group Leader at the the Institute of Science and Technology (IST) Austria	
Giulio Superti-Furga, Director of the Research Center for Molecular Medicine of the Austrian Academy of Sciences (Ce-M-M)	

From Belgium:	
Jo Bury & **Johan Cardoen,** Managing Directors VIB **Dirk Inzé,** Science Director VIB-UGent Center for Plant Systems Biology	
Joris Relaes, Administrator-General ILVO	
Luc Sels, Rector KU Leuven	
Rik Van de Walle, Rector Ghent University	
Claire Périlleux, Professor at ULiège	
François Chaumont, Professor at UCLouvain	
Geert Angenon, Professor at VUB	
Nathalie Verbruggen, Professor at ULB	

From Bulgaria:

Atanas Atanassov, Professor at Joint Genomic Center	
Ivan Atanassov, Director Agrobioinstitute	

From Cyprus	
Vassilis Fotopoulos, Professor at Cyprus University of Technology	

From Czech republic:	
Markus Dettenhofer, Executive Director of CEITEC **Karel Riha,** Deputy Director for Research, CEITEC Masaryk University	
Tomáš Zima, Rector Charles University	
Martin Vagner, Director of the Institute of Experimental Botany AS CR	
Jiri Hasek, Director of the Institute of Microbiology, Czech Academy of Sciences (CAS) **Jana Peknicova,** Director of the Institute of Biotechnology, Czech Academy of Sciences (CAS) **Eva Bartova,** Director of the Institute of Biophysics, Czech Academy of Sciences (CAS) **Frantisek Foret,** Director of the Institute of Analytical Chemistry, Czech Academy of Sciences (CAS) **Jan Kopecky,** Director of the Institute of Physiology, Czech Academy of Sciences (CAS) **Frantisek Marec,** Director of the Institute of Entymologym Biology Centre of the Czech Academy of Sciences (CAS) **Libbor Grubhoffer,** Director of the Institute of Plant Molecular Biology of the Czech Academy of Sciences (CAS)	

Ivo Frébort, Executive Director, Centre of the Region Haná for Biotechnological and Agricultural Research	
Vojtech Adam, Vice-Rector at the Faculty of AgriSciences, Mendel University, Brno and Head of the Department of Chemistry and Biochemistry	

From Denmark:	
Poul Erik Jensen, Head of Copenhagen Plant Science Centre **Svend Christensen,** Head of the Department of Plant and Environmental Sciences in Copenhagen Plant Science Centre	
Jens Stougaard, Professor at Aarhus University	
Anders Lund, Director of the Biotech Research and Innovation Centre (BRIC)	

From Estonia:	
Mati Koppel, Director Estonian Crop Research Institute	
Ülle Jaakma, Vice-Rector of Research, Estonian University of Life Sciences **Ülo Niinemets,** Chair of Crop Science and Plant Biology, Estonian University of Life Sciences	
Erkki Truve, Programme Director Chemistry and Gene Technology, Tallinn University of Technology	
Hannes Kollist, Professor at the University of Tartu	

From Finland:

Kirsi-Marja Oksman, Research Manager VTT **Antti Vasara,** CEO and President VTT	
Jari Niemelä, Rector University of Helsinki	
Johanna Buchert, President and CEO of Natural Resources Institute Finland (Luke)	
Kalervo Väänänen, Rector at the University of Turku	
Mark Daly, Director of the Institute for Molecular Medicine Finland (FIMM)	

From France:	
Pascal Genschik, Director of Research CNRS – IBMP	
Martin Crespi, Director IPS2 and member SPS, Saclay Herman Höfte, Director of Researchm INRA, SPS, Saclay **Loïc Lepiniec,** Group Leader IJPB, Versailles and Head SPS, Saclay	
Genevieve Almouzni, Director of the Institute Curie	

From Germany:

Ralph Bock, Managing Director of the Max Planck Institute of Molecular Plant Physiology	Max-Planck-Institut für Molekulare Pflanzenphysiologie
Geourge Coupland, Director of the Max Planck Institute for Plant Breeding Research	Max Planck Institute for Plant Breeding Research
Detlef Weigel, Director Max Planck Institute for Developmental Biology	MAX-PLANCK-INSTITUT FÜR ENTWICKLUNGSBIOLOGIE
Andreas Meyer, Professor at University of Bonn **Frank Hochholdinger,** Professor at University of Bonn **Peter Dörmann,** Professor at the University of Bonn **Gabriel Schaaf,** Professor at the University of Bonn	UNIVERSITÄT BONN
Claus Schwechheimer, Chair Plant Systems Biology at TUM München	Technische Universität München
Karl-Josef Dietz, President of the German Society of Plant Science	DBG
Pascal Falter-Braun, Director of the Institute of Network Biology at Helmholtz Zentrum München **Klaus Mayer,** Professor at Helmholtz Zentrum München	HelmholtzZentrum münchen Deutsches Forschungszentrum für Gesundheit und Umwelt
Johannes Hermmann, President of the Germany Society for Biochemistry and Molecular Biology	GBM
Stefan Schillberg, Member of the Institute Management (acting) at the Fraunhofer Institute for Molecular Biology and Applied Ecology (IME)	Fraunhofer IME
Andreas Weber, Professor at the Cluster of Excellence on Plant Sciences (CEPLAS)	CEPLAS Cluster of Excellence on Plant Sciences
Andreas Graner, Director at the Leibniz Institute of Plant Genetics and Crop Plant Research (IPK)	IPK GATERSLEBEN 75 1943 – 2018

Karin Schumacher, Professor at the Centre for Organismal Studies (COS) Heidelberg **Thomas Greb,** Professor at the Centre for Organismal Studies (COS) Heidelberg **Rüdiger Hell,** Professor at the Centre for Organismal Studies (COS) Heidelberg **Ingrid Lohmann,** Professor at the Centre for Organismal Studies (COS) Heidelberg **Jan Lohmann,** Professor at the Centre for Organismal Studies (COS) Heidelberg **Alexis Maizel,** Professor at the Centre for Organismal Studies (COS) Heidelberg	Centre for Organismal Studies Heidelberg
Jörg Kudla, Professor at the Institute of Plant Biology and Biotechnology, University of Münster **Antje van Schaewen,** Professor at the Institute of Plant Biology and Biotechnology, University of Münster **Iris Finkemeier,** Professor at the Institute of Plant Biology and Biotechnology, University of Münster **Michael Hippler,** Professor at the Institute of Plant Biology and Biotechnology, University of Münster **Bruno Moerschbache,** Professor at the Institute of Plant Biology and Biotechnology, University of Münster **Markus Schwarzländer,** Professor at the Institute of Plant Biology and Biotechnology, University of Münster **Dirk Prüfer,** Professor at the Institute of Plant Biology and Biotechnology, University of Münster	WWU MÜNSTER
Marja Timmermans, Director of the Center for Plant Molecular Biology, University of Tübingen	EBERHARD KARLS UNIVERSITÄT TÜBINGEN
Thomas Sommer, Director of the Max Delbrück Center for Molecular Medicine in the Helmholtz Association	MDC MAX DELBRÜCK CENTER FOR MOLECULAR MEDICINE IN THE HELMHOLTZ ASSOCIATION
Steffen Abel, Managing Director of the Leibniz Institute of Plant Biochemistry	IPB Leibniz Institute of Plant Biochemistry

Holger Puchta, Institute Director, Kalrsruhe Institute of Technology (KIT) **Natalia Requena** , Group Leader at the Kalrsruhe Institute of Technology (KIT) **Peter Nick,** Group Leader at the Kalrsruhe Institute of Technology (KIT) **Tilman Lamparter,** Professor at the Botanical Institute, Kalrsruhe Institute of Technology (KIT)	Karlsruhe Institute of Technology
Christopher Grefen, Professor and Chair of Molecular and Cellular Botany, Ruhr-University Bochum **Ute Krämer,** Professor and Chair of Molecular Genetics and Physiology of Plants, Ruhr-University Bochum **Sacha Baginsky,** Professor and Chair of Biochemistry of Plants, Ruhr-University Bochum	RUHR UNIVERSITÄT BOCHUM RUB

From Greece:	
Kostas Vlachonasios, F, Aristotle University of Thessaloniki	τμήμα βιολογίας
Panagiotis F. Sarris, Director of the Microbiology & Plant Biotechnology Group, IMBB-FORTH	FORTH INSTITUTE OF MOLECULAR BIOLOGY & BIOTECHNOLOGY
Kriton Kalantidis, Professor at the Biology Department, University of Crete	UNIVERSITY OF CRETE
Kalliope Papadopoulou, Associate Professor of Plant Biotechnology, University of Thessaly	DEPARTMENT OF Biochemistry & Biotechnology UNIVERSITY OF THESSALY
Panagiotis Moschou, Professor at the University of Crete	

From Hungary:	
Ferenc Nagy, Director General Biological Research Centre of the Hungarian of Sciences	

From Italy:	
Gennaro Ciliberto, President of the Italian Society of Life Sciences (FISV)	
Luca Sebastiani, Director, Institute of Life Sciences, Sant'Anna School of Advanced Studies	
Marco Perduca, Coordinator Science for Democracy	
Filomena Gallo, Secretary of the Associazione Luca Coscioni	
Marco Marchetti, President Associazione Italiana della Societa Scientifiche Agrarie	
Andrea Schubert, President of the Italian Society of Plant Biology (SIBV)	
Alessandro Vitale, Group Leader, Institute of Agricultural Biology and Biotechnology, National Research Council (CNR) of Italy	

Gian Paolo Accotto, Director of the CNR Institute for Sustainable Plant Protection	
Mario Pezzotti, President of the Italian Society of Agricultural Genetics (SIGA)	
Roberto Tuberosa, Italian Technology Platform "Plants for the future"	
Pier Giuseppe Pelicci, Director of the European Institute of Oncology (IEO)	

From Latvia	
Nils Rostoks, associated professor at the University of Latvia	
Isaak Rashal, professor at the University of Latvia & Chair of the Latvian Society of Geneticists and Breeders	

From Lithuania:	
Gintaras Brazauskas, Director of the Lithuanian Research Centre for Agriculture and Forestry	

From Poland:

Marta Koblowska, Faculty of Biology, University of Warsaw **Andrzej Jerzmanowski,** Professor at Warsaw University	
Jacek Hennig, Professor at the Institute of Biochemistry and Biophysics, Polish Academy of Sciences	
Tomasz Twardowski, President of The Committee of Biotechnology, Polish Academy of Sciences	
Wojciech Pląder, Professor at Warsaw University of Life Sciences (WULS), Vice-Dean of the Faculty of Horticulture, Biotechnology and Landscape Architecture **Monika Rakoczy-Trojanowska,** Professor at Warsaw University of Life Sciences (WULS), Head of the Department of Plant Genetics, Breeding and Biotechnology **Stanislaw Karpinski,** Professer at Warsaw University of Life Sciences (WULS), Member of the National Development Council **Marcin Filipecki,** Professor at Warsaw University of Life Sciences (WULS)	

From Portugal:	
Monica Bettencourt Dias, Scientific Director of the Instituto Gulbenkian de Ciência **Elena Baena-González,** Instituto Gulbenkian de Ciência **Paula Duque,** Instituto Gulbenkian de Ciência	
Margarida Oliveira, Professor ITQB, Lisboa	
Rui Malhó, Professor at the University of Lisboa	

Eugénia de Andrade, National Institute for Agricultural and Veterinarian Research (INIAV)	

From Romania:	
Antonia Ivascu, Executive Director of the Romanian Seed Industry Alliance (AISR)	
Lizica Szilagyi, Professor at the University of Agronomical Sciences and Veterinary Medicine	
Doru Pamfil, Head of the Biotechnology Commission of the Romanian Academy of Agriculture and Forestry, University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca	

From Spain:	
Pablo Vera, Research Professor CSIC, Director IBMCP **Vicente Pallàs,** Research Professor CSIC, IBMCP; President of the Spanish Society for Phytopathology **José Pío Beltran,** Professor at CSIC, Institute for Plant Cell and Molecular Biology (UPV-CSIC)	
José Luis García, Director of the Institute for Integrative Systems Biology I2SysBio (University of Valencia-CSIC) **Juli Pereto,** Vice-Director of the the Institute for Integrative Systems Biology I2SysBio (University of Valencia-CSIC)	

Fernando Rojo, Director National Center of Biotechnology (CNB)	
José Luis Riechmann, Director Centre for Research in Agricultural Genomics **Josep Casacuberta,** CSIC Associate Professor Centre for Research in Agricultural Genomics **Pere Puigdomènech,** CSIC Research Professor	
Juan Carlos del Pozo, Deputy Director of the CBGP (Centro de Biotecnología y Genómica de Plantas)	
Paul Christou, ICREA Professor, University of Lleida-Agrotecnio Center, Lleida	
Rosa Maria Cusido Vidal, Professor at the University of Barcelona	
Francisco Juan Martinez Mojica, Professor at the University of Alicante	
Jordi García-Mas, Scientific Director IRTA (Centre de Recerca en Agrigenòmica CSIC-IRTA-UAB-UB)	
Francisco Javier Cejudo, Director IBVF (Instituto de Bioquímica Vegetal y Fotosíntesis) Sevillq	
Carlos Hermenegildo, Vice-Chancellor of the Research University of Valencia	
Luis Serrano Pubull, Director of the Centre for Genomic Regulation (CRG)	

From Slovakia:

Eva Čellárová, Head of the Department of Genetics Pavol Jozef Šafárik, University in Košice, Faculty of Science	
Anna Bérešová, Director at the Plant Science and Biodiversity Center, Slovak Academy of Sciences (SAS)	

From Slovenia	
Špela Baebler, President of the Slovenian Society of Plant Biology	
Matjaž Kuntner, Director of the National Institute of Biology	
Jana Ambrožič-Dolinšek, Professor at the University of Maribor	
Andrej Simončič, Director at the Agricultural Institute of Slovenia	

From Sweden:	
Ove Nilsson, Director Umea Plant Science Centre	
Panagiotis Moschou, Professor at the Swedish University of Agricultural Sciences (SLU)	
Erik Alexandersson, Director of PlantLink	

Eva Sundberg, Chairperson at the Linnean Centre of Plant Biology in Uppsala	LINNEAN CENTRE

From Switzerland	
Susan Gasser, Director of the Friedrich Miescher Institute for Biomedical Research (FMI)	FMI Friedrich Miescher Institute for Biomedical Research

From the Netherlands	
Sjef Smeekens, Professor at Utrecht University **Rens Voesenek,** Professor at Utrecht University **Corné Pieterse,** Professor at Utrecht University **George Kowalchuk,** Professor at Utrecht University **Ronald Pirsik,** Professor at Utrecht University **Guido van den Ackerveken,** Professor at Utrecht University	Utrecht University
Rene Medema, Director of The Netherlands Cancer Institute	NETHERLANDS CANCER INSTITUTE ANTONI VAN LEEUWENHOEK

From UK:	
Achim Dobermann, Director Rothamsted Research	ROTHAMSTED RESEARCH
Dale Sanders, Director John Innes Centre	John Innes Centre Unlocking Nature's Diversity
David Baulcombe, Professor at University of Cambridge	UNIVERSITY OF CAMBRIDGE

Jane Langdale, Professor at University of Oxford	
Julian Ma, Director, Institute for Infection and Immunity, St. George's Hospital Medical School	
Nicholas J. Talbot, Executive Director of the Sainsbury Laboratory (Norwich) **Jonathan Jones,** Group Leader at the Sainsbury Laboratory (Norwich)	
Jeff Cole, EFB Vice-President on behalf of the European Federation of Biotechnology Executive Board	
Michael Wakelam, Director of the Babraham Institute	

From Europe	
Marta Agostinho, EU-Life Director EU-Life: - Austria: Research Center for Molecular Medicine of the Austrian Academy of Sciences (Ce-M-M) - Belgium: Flanders Institute for Biotechnology (VIB) - Czech Republic: Central European Institute of Technology (CEITEC) - Denmark: Biotech Research and Innovation Centre (BRIC) - Finland: Institute for Molecular Medicine Finland (FIMM) - France: Institute Curie - Germany: Max Delbrück Center for Molecular Medicine in the Hemholtz Association - Italy: European Institute of Oncology (IEO) - Portugal: Gulbankian Institute for Science (IGC)	

- Spain: Centre for Genomic Regulation (CRG) - Switzerland: Friedrich Miescher Institute for Biomedical Research (FMI) - The Netherlands: The Netherlands Cancer Institute - UK: Babraham Institute	
FESPB is an umbrella organization for the European Societies of Plant Biology that encompasses 5000 plant scientists. Andrea Schubert, President of the Federation of European Societies of Plant Biology (FESPB) Christine Foyer, Secretary General of the Federation of European Societies of Plant Biology (FESPB)	FESPB The Federation of European Societies of Plant Biology