

Position Paper Regarding Horizon Europe and Proposed Amendments

The ISSCR is the leading professional organization of stem cell scientists and represents more than 4,000 members in Europe and around the world. Our members are scientists, clinicians, business leaders, ethicists and educators dedicated to the responsible advancement of stem cell research and its translation to the clinic with the goal of improving human health. In Europe, our members are conducting basic research to advance understanding of human physiology and seeking to develop therapies for a wide-range of conditions. On behalf of our members in Europe, we offer the following suggestions to improve Horizon Europe and continue the European Union's support for biomedical research, including stem cell research and regenerative medicine.

Balancing Basic and Applied Research

We believe investments in both basic and applied research are necessary to advance understanding of human health and develop new therapies to treat human disease. In recent years, two key discoveries that have revolutionized the field of gene and cell therapies came from investments in basic science: CRISPR gene editing technology, and the discovery that mature cells could be “reprogrammed” to become pluripotent. In both cases, comparatively small investments in basic science have had lasting impact, with numerous applications in regenerative medicine and agriculture. These discoveries have launched scores of biotechnology companies and have fundamentally changed the future of medicine. Governments also play a role in supporting basic research that can stimulate the private sector to invest in translational research that results in medicines for patients.

ISSCR Recommendation: The Commission's proposal for Horizon Europe does not achieve the proper balance between basic and applied research; we support the amendments offered by Rapporteurs Christian Ehler¹ and Dan Nica² that seek to improve the balance.

Scientific Excellence

The ISSCR supports excellence as the sole criterion for the evaluation of Horizon Europe grant proposals. While we appreciate the desire to fund proposals that have “impact” and “quality and efficiency of the implementation,” we believe that funding the most promising and innovative research will have the greatest impact by advancing the scientific enterprise and fostering dynamic economic growth in the EU. Conversely, funding inferior scientific proposals because of non-scientific, policy objectives

¹ PE 625 306v01 Amendments 18 and 81

² PE 625 305v01 Amendments 10, 12, and 56

undermines the scientific process and will limit innovative science that has the potential to transform healthcare.

ISSCR Recommendation: Narrow the award criteria in Title II, Rules for Participation Dissemination, Article 25 to “excellence.” Furthermore, we oppose the amendments³ proposed by Rapporteur Dan Nica that require evaluation committees to prioritize proposals based on non-scientific policy objectives. Proposals should be ranked and funded based upon their scientific excellence.

Finally, the ISSCR believes the EU can improve the scientific rigor of proposals financed through Horizon Europe by requiring evaluation committees with “subject matter expertise.”

ISSCR Recommendation: Evaluation committees need to be composed of scientists capable of identifying the most innovative research. The bureaucratic process for joining evaluation committees must also be simplified to allow for the participation of the EU’s best scientists who are currently dissuaded by the time-consuming process. A robust, peer-review process by scientists with demonstrated expertise and accomplishment in the areas in which they review is essential to the identification of the most promising biomedical research.

Germline Editing Research

The Commission’s proposal for Horizon Europe continues an antiquated prohibition on research “intended to modify the genetic heritage of human beings which could make such changes heritable.” The ISSCR, along with other international and national bodies recognize the importance of regulated in vitro research in this area while also stating that this technology should not be used clinically at this time. Human germline editing research is already occurring in the United Kingdom, China, Sweden, and the United States. This research has the potential to advance our ability to treat and prevent genetic diseases. By removing the funding prohibition for germline editing research, the EU could become a leader in this important field.

ISSCR Recommendation: The EU should fund basic research, but not clinical research, that involves human germline modification to enable the discovery of new therapies to treat and prevent genetic diseases.

Investing in Biomedical Research

We support €160 billion in overall funding for Horizon Europe and at least twelve percent for the Health Research Cluster, which would restore the share of EU research funding for biomedical research to the level in the 7th Framework Programme. Without additional investments in research, Europe will be at a competitive disadvantage to other parts of the world. According to data from the Organisation for Economic Co-operation and Development, the European Union is falling behind the United States,

³ PE 625 305v01 Amendments 184, 185, and 186

China, Israel, Korea, and Japan, as measured by the share Gross Domestic Product (GDP) spent on research and development.⁴

ISSCR Recommendation: The EU should increase its investment in biomedical research to remain a global leader in this field and keep pace with recent increases in the United States and China.

Thank you for considering our views as the European Commission, Parliament and Council continue the co-decision process for Horizon Europe. If the ISSCR can clarify any of these views or be of assistance, please contact Eric Anthony, ISSCR's Director of Policy at eanthony@isscr.org.

⁴ OECD (2018), "Gross domestic expenditure on R&D (GERD) as a percentage of GDP", in *Main Science and Technology Indicators, Volume 2018 Issue 1*, OECD Publishing, Paris, <https://doi.org/10.1787/msti-v2018-1-table2-en>.