

EAMBES

Position paper on the European Commission Green Paper - From Challenges to Opportunities: Towards a Common Strategic Framework for EU Research and Innovation funding

Rationale

The present document summarises the position of the European Alliance for Medical and Biological Engineering and Science (EAMBES) on the European Commission Green Paper - *From Challenges to Opportunities: Towards a Common Strategic Framework for EU Research and Innovation funding*, which introduces major changes to the EU support to research and innovation.

EAMBES welcomes this document, as it aims at making participation easier, increasing scientific and economic impact and providing “better value for money”. EAMBES particularly supports the emphasis on Health and Wellbeing of EU citizens and on the EU economy, which highly benefit of Health Technologies.

Preamble

EAMBES is an alliance of scientific societies and academic institutes focussing on Biomedical Engineering research and innovation. EAMBES is the only alliance representing the European academic community in the field of biomedical engineering.

Biomedical Engineering is a discipline that helps to investigate, understand, improve and support human health. It aims at developing new technologies to prevent and diagnose diseases, predict health-outcomes of any medical intervention, support care and monitor diseases. Biomedical Engineering should not be mistaken for genetic engineering; it is best-known to the public for products such as pacemakers, artificial hips, ultrasound scanners, computer tomography or intensive-care monitoring equipment – and these represent only a fraction of what biomedical engineering can deliver to help us being healthier and active.

In its recommendations to the European Commission, EAMBES considered the original meaning of “innovation”: etymologically, it means “making something new”, improving it. Innovation is not necessarily a product or a service, but a process that relies on research.

With these recommendations, EAMBES wants to help in identifying how to best support Biomedical research and development, in order to eventually improve patients’ quality of life, ensures the highest possible safety levels and contribute to healthcare systems sustainability.

Key recommendations

1. Organise the administrative and reviewing procedures in line with the principles expressed in the “**Trust Researchers**” declaration, which EAMBES endorses: <http://www.trust-researchers.eu>.
2. Modulate procedures so that the effort required to apply for and manage a grant is proportional to the size of the grant.
3. Reward researchers, institutions, and consortia achieving excellence by introducing appropriate grant renewal mechanisms. Reward the ability to achieve and deliver results, not the ability of making promises.
4. Create renewal mechanisms to enable a) a progressive selection and concentration of clouds of small projects into a sustainable international consortium, which would have the critical mass required to

address grand societal and medical challenges, and b) an appropriate support to research consortia along the entire innovation chain.

5. Develop and implement improved measures for identifying and contacting potential partners, in order to set-up a consortium fitting the requirements of a given call.
6. Ensure that panels evaluating grant applications in this multidisciplinary area consist of experts with relevant background and experience, familiar with both health care and technology.
7. Recognise that an important way to address societal challenges, which are often based on health and care issues, is to invest in health & care technology research. Recognise that one of the most fundamental knowledge required in this field to turn R&D results into innovation is Biomedical Engineering. This encompasses a variety of sub-domains, including biomaterials, biomedical implants, and biomedical devices, in addition to medical imaging, biomedical instrumentation, etc., as well as a variety of algorithms, processes and systems for improving medical practice and health care delivery.
8. Support all relevant phases of innovation in health & care technology, such as basic research, applied research and transfer research. All phases are interdependent – so innovation can only be achieved if the whole chain receives the support it needs.
9. EU funding should cover the full innovation cycle and focus on the “missing mile”, the gap between the completion of a research project and the provision of sufficient evidence to attract private investments. Specific actions must be designed to address this gap – including targeting pre-clinical validation and early clinical evaluation of new technologies.
10. Create mechanisms supporting start-ups and academic spin-offs, support Seed Investment for start-up ventures. Most of the European Commission’s strategies revolve around the idea of transferring research results to existing enterprises for exploitation. However, the translation of research results into socio-economic value most frequently happens through the creation of start-ups – usually spin-offs of an academic institution.
11. EAMBES supports greater emphasis on SMEs, in order to ensure greatest commercial and health-care impact of biomedical engineering research output. However, many health-care technologies operate in niche markets - in which excessive requirements on the involvement of a small number of relevant SMEs in a specific area may be detrimental; alternative commercial counterparts should be accepted in specialist areas.
12. EAMBES is favourable to an appropriate level of concentration on national and regional funding programs - especially on grand challenges such as active and healthy ageing. However, this should not involve additional layers of bureaucracy. It seems more appropriate to earmark a portion of the regional development funds to target R&D and Innovation on specific grand challenges defined at European level, leaving at the local level the actual management of the resources.