The European Molecular Biology Laboratory (EMBL) fully agrees with the statement that further basic research will play an instrumental role in better understanding risk factors and causes, as well as defining new ways to detect, prevent, and treat cancer. Recently speaking on behalf of the Cancer Mission Board during an ITRE hearing, C. Chomienne recognised that basic research will have a crucial role in beating cancer, as the Board established ‘Increase Knowledge’ as one of four fields of action. EMBL urges the Board Mission to set aside enough funding for basic research under the ‘Increase Knowledge’ field of action, to ensure the Mission can have a substantial impact.

It is also EMBL’s opinion that the Cancer Mission will be an important delivery mechanism of the Beating Cancer Plan, but it should not be the only one: Horizon Europe funding calls under the Health Cluster should support basic research.

While initiatives at Member State level are obviously positive, coming together as one, under EU guidance, in order to avoid wasted resources (financial and human) would be meaningful. Setting up a repository of EU research projects would go a long way in ensuring that data can be pooled to understand the various biological mechanisms behind the different cancer types and that research is not focused on single cancer types.

There is a need for better regulation (or clarification of GDPR) regarding cross-border data exchange between research scientists, medical practitioners, and industry. To move forward, large data sets are needed, and data exchanges should be fostered and encouraged, and not impeded upon. European-wide infrastructure that enables researchers and clinicians to share data would be critical in this aspect and advance progress in understanding cancer genomes. It would also be beneficial to recognise the role that patients could play in helping to advance research, and the data they could share to do so.

EMBL would like to stress the importance and benefit of large-scale research projects, such as the Pan-Cancer Analysis of Whole Genome (PCAWG), a collaboration bringing over 1300 scientists and clinicians from 37 countries together. PCAWG involved the analysis of more than 2600 genomes from 38 different tumour types, and in doing so created a huge resource of primary cancer genomes. On top of the most recent discoveries, the PCAWG project equips scientists around the world with a comprehensive resource for cancer genomics research. This includes the raw genome sequencing data, software for cancer genome analysis, and multiple interactive websites exploring various aspects of the Pan-Cancer project data. PCAWG is a well of open data resources for the scientific community to drive forward cancer research and exemplifies the benefits of collaborative, large-scale research projects.