



Oncopolicy Forum 2011: Promoting innovative cancer research in Europe

While significant progress has been made in cancer research, resulting in a better understanding of biological processes, the translation of discoveries into concrete benefits for patients has proved slower than expected. **Julio Celis**, Chair of the ECCO Policy Committee, said that the blame was largely due to a lack of coordination and common vision across Europe in fighting cancer.

Opening the session, Celis reiterated ECCO's philosophy that "every cancer patient deserves the best", adding that scientific discoveries can be publicised through the organisation of scientific meetings, such as the European Multidisciplinary Cancer Congress. ECCO is proud to lead activities within the EU-funded project, the European Partnership for Action against Cancer (EPAAC) to address the fragmentation of cancer research in Europe. The aim is to achieve coordination of one third of cancer research from all funding sources by 2013. While the EU is currently developing its next research framework programme (Horizon 2020), ECCO is working together with the Alliance for Biomedical Research in Europe (BioMed Alliance), the European Academy of Cancer Sciences, the EU-funded 'network of excellence' the EurocanPlatform, the European Chronic Disease Alliance, and the EU-funded Eurocancercoms project, to provide EU policymakers with evidence-based recommendations on infrastructures needed to boost cancer research in Europe. The Oncopolicy Forum, he added, had a valuable role to play in considering such issues.

Former Director-General of the German Ministry of Education and Research, **Peter Lange**, began his presentation by illustrating inequalities in cancer mortality across Europe in 2008. Lange questioned whether such differences were due to reimbursement of healthcare costs in the individual countries or other factors. The main theme of Lange's address was to consider a structure that could better support European research. The four key players involved in such a platform, he pointed out, would be research centres, clinics, large scientific information facilities such as biobanks and databases and industry.

Standardisation of procedures is required in order to allow all stakeholders to communicate clearly, with a need for the introduction of translational mechanisms to allow basic research discoveries to enter both the healthcare and industry arenas. The resulting research infrastructures should not be stand-alone activities, but rather should be embedded in larger research structures.

The success and sustainability of such platforms will ultimately be decided by the willingness of Member States to donate national funding to the project, with a need to ensure "foreseeable and reliable funding".

The advantages of such structures, said Lange, would be the creation of an improved environment for co-operation and co-ordination, faster research outcomes, avoidance of research inequalities and increased efficiency.

One of the primary road blocks in cancer research, said **Kurt Zatloukal** from the Biobanking and Biomolecular Resources Research Infrastructure (BBMRI), is access to high-quality biological samples, indicating the need for better coordination of access to these limited resources.

In the past issues have included lack of coordination of research initiatives (with projects only funded for three to five years), and lack of clear direction as to what happens next to resources such as genes and cell lines. In the emerging European landscape of coordinated research agencies, common platforms will be needed to facilitate the exchange of information across different funding programmes, and to coordinate specimens, molecular data, knowledge, and diagnostic therapeutics.

The ESFRI, a pan European infrastructure involving more than 222 institutions from 33 countries, hopes to provide a common access point for resources and services with long-term sustainability. Altogether €140 million has been allocated for implementation, with resources including evidence-based quality indicators, data exchange, transfer of samples and interoperability.

While initiatives for coordinated research agendas across Europe have already started, said Zatloukal, there is still a need “cross-talk” between all the different funding programmes including those involving education and training.

Ruedi Aebersold, Professor of Molecular Systems Biology at ETH Zurich, stressed the concept of long-term sustainability in order to make research efficient and to maximise the return on the invested research funds. While arguments for increased financial input may be unrealistic in the current climate, he argued that greater efficiencies could be introduced by improving ‘black box efficiency’; i.e. optimising all the activities taking places between the input of finances into the research enterprise and its output of results. To illustrate this, Aebersold provided the example of proteomics, where each year millions are spent acquiring data yet no infrastructure has been put in place to enforce public deposition, resulting in unpublished data being largely lost and underexploited.

All too often the sustainability of research programmes depends on individual researchers, commented Aebersold. For example, the EUR 2 million per year US project, Peptide Atlas, coordinated by the Institute of Systems Biology in Seattle, is designed to capture and store proteomics data from the community and make it accessible back to the scientific community; however this worthy project came to a standstill when the Principle Investigator moved to Europe.

Financial investment needs to be placed in initiatives that provide sustainability and allow for the efficient use of resources. This includes minimisation of duplication and “me too” research; the support of sustainable programmes that capture output data and support for the development of more efficient technologies.

The only realistic way to reduce healthcare inequalities in Europe, said **Hans-Olov Adami**, from the European Academy of Sciences, is through large collaborative projects designed to address “big fundamental clinical questions”.

Research questions that needed addressing include prevention (e.g. tobacco and obesity control), screening (e.g. PSA testing), treatment (non-commercial studies of non-pharmacological interventions), and survivorship issues (around counselling and life-style interventions).

Adami, currently at Harvard School of Public Health, US and formerly at the Karolinska Institute, Sweden, felt Europe had several significant competitive advantages, including having the ‘upper hand’ in clear systems for population-based studies, and cost-effective enrolment of patients into studies.

Europe however, he said, needs to provide more “methodologic” training for investigators to inspire leadership and encourage investigator-initiated research. Long-term funding issues should be addressed, taking into account the fact that results of large clinical trials can take years or even decades to mature.

To provide “cutting edge translational research” at a high international level, German oncology researchers identified the need to join forces. Individual sites, it was felt, were not sufficiently competitive and there was a lack of coordinated efforts and critical mass. To this end, said **Otmar Wiestler**, the German Consortium for Translational Cancer Research was created.

Firstly, an international team of experts selected eight institutions across Germany and seven small partner sites for inclusion, with the German federal government providing long-term funding of €30 to €40 million per year. Partners were asked to develop and implement joint research programmes, with the focus placed on investigator-initiated trials and personalised oncology. Joint professorships were set up with the German government providing long-term institutional support and alliances with industry were encouraged.

Clinical communication platforms involved coordination of clinical cancer registries, biomaterial banks and the development of clinical training programmes. Furthermore, a school of oncology was created to provide clinical training in cancer research, as well as a specialised curriculum for PhD programmes and exchange programmes for junior scientists.



The German experience, said **Wiestler**, could potentially serve as a model for other European countries, with the consortium being highly committed to joining forces with other European partners. Relations have already been initiated with Cancer Research UK and the EU-funded project, EurocanPlatform.

The EU-funded initiative, Transcan, said **Maria Ferrantini** from the Ministry of Health, Istituto Superiore di Sanita in Italy, evolved from EurocanPlus, a feasibility study set up to explore the coordination of cancer research in Europe. Transcan, which started in January 2011, is a network of 26 publically-funded organisations from 20 European countries with the aim of addressing inequalities in cancer research among European countries. By concentrating transnational resources TRANSCAN expects to provide a critical financial and scientific mass for tackling large-scale problems, relevant for improving translational cancer research in each Member State or Associated Country as well as overall in Europe.

One intention of Transcan, said Ferrantini, is to map the nature and extent of cancer research funding in Europe using CSO codes for individual projects. The aim is to identify strengths, weaknesses and opportunities for coordinated funding of cancer research.

Actions to address inequalities in cancer research included joint translational calls for coordinated funding of multinational translational cancer research projects aimed at integrating basic, clinical and epidemiological cancer research. Promoting the participation from countries usually under-represented in European projects is also an essential element of Transcan.

Future activities will include analysis of Transcan partner organisations to identify gaps and collaborative opportunities, and the involvement of additional countries and funding organisations including charities. Long-term sustainability plans for the future will be forwarded to policy-makers at national as well as European levels.

President of the European Academy of Cancer Sciences, Alexander M.M. Eggermont, led the panel discussion, opening with an electronic vote with the audience to the question “What should EU policy-makers prioritise to address cancer research inequalities?”:

- 22.7% of delegates voted to increase collaborations between health and research ministries to define research priorities that impact health care delivery;
- 18.2 % voted to facilitate sustainability of European research projects moving from piecemeal short-term initiatives to something more sustainable;
- 18.2% voted to create sustainability and efficient research infrastructure including a virtual European Cancer centre;
- 18.2% voted to create a ‘European Institute of Health Research’;
- 13.6% voted to create efficient procedures to coordinate and stimulate cross border collaborations;
- 9.1% voted to stimulate industry/academia collaborations.

Discussing the vote, **Ruedi Aebersold** said from his perspective the most efficient way forward would be to give investigators opportunities to pursue their interests and allow them to do so in a collaborative fashion. No funding mechanism currently exists in Europe, however, that allows this to take place.

To reduce inequalities **Maria Ferrantini** felt it was important to promote collaboration across funding organisation in different countries and identify priorities.

Sustainability, said **Otmar Wiestler**, is essential, with mechanisms needed to support highly efficient and flexible multidisciplinary teams, and provide access to good infrastructure. One way forward, he suggested, would be for consortia from European countries to join forces and generate European efforts.

In the US, said **Hans Olov-Adami**, the National Institutes of Health (NIH) and the National Cancer Institute (NCI) have traditionally been more willing to provide long-term support and full funding, than European organisations. However, current financial pressures have resulted



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in these bodies becoming more conservative, providing an opportunity for Europe to get ahead and accelerate its activities. The difference between the US and European funding is that US funding organisations cover indirect costs, allowing university administrators to invest finance to make their institutions competitive.

In a comment from the audience, **Michel Coleman** from the London School of Hygiene and Tropical Medicine said that since it had been possible for Europe to organise collaborative research in communicable disease (such as the European Centre for Disease Prevention and Control in Sweden), would it not be equally achievable to organise a European centre for research in non-communicable diseases?

In response to a comment that if European physicists can combine forces at CERN – the European Organisation for Nuclear Research, was it not possible for oncologists to undertake similar initiatives, **Otmar Wiestler** said this was likely to prove more difficult since there was no tradition of agreeing on strategic priorities in the biomedical field.

Drawing the session to a close, **Julio Celis** said there was a need to look to the future and develop more strategic structures, establish priorities and develop a single European voice. Such strategies, he added, would be needed to secure funding in the current financial climate where there were many competing priorities for funding. In the development of a new vision for a 'European Institute for Cancer Research', Celis hoped the audience would continue to provide input.

If you have any comments about any of the issues raised in this report or would like further information, please contact ECCO Public Affairs: EccoPublicAffairs@ecco-org.eu