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# WORLD HEALTH SUMMIT: RESEARCH FOR HEALTH AND SUSTAINABLE DEVELOPMENT

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**GLOBAL HEALTH EUROPE**  
A Platform for European Engagement in Global Health

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## Introduction

Opening the Symposium the Co-Chair of Global Health Europe, Stephen Matlin (Institute of Global Health Innovation, Imperial College London), spoke about *Policy interfaces of the Global Health Research and Innovation System*. He noted that both Angela Merkel and Francois Hollande had referred to research in their welcoming messages to the World Health Summit<sup>1</sup> and had emphasized that meeting people's aspirations for health and health equity required a special kind of symbiosis between policy, research and practice, ensuring that there are adequate research resources and coherent and coordinated structures and processes in place. Taking this vision of a unified effort to achieve better health and health equity as a starting point, the Global Health Europe Symposium would look at the policy domain and the domain of research development and innovation, asking about both the nature of policies, frameworks, structures and settings that are needed for effective research and innovation for global health; and the important role of research and innovation in informing policy and action for global health; while bearing in mind the many barriers that exist across the interface between these domains and asking how these can be overcome.

Matlin observed that it was only relatively recently that Mahoney and Morel<sup>2</sup> had called for the construction of a global health innovation system, a "*missing architecture*" that was urgently needed to help overcome critical health failures (including failures in science, the market and public health systems) by providing valuable guidance in planning and management of innovation at different

levels. Mahoney and Morel had stressed the need to develop the global health innovation system to open the floodgates to innovation and ensure that significantly greater numbers of new products for diseases of the poor will be brought to the market within the next couple of decades. Importantly, they had proposed that the architecture of the global health innovation system should be integrated to become more than the mere sum of its parts – forming an overarching system that provides a long-term strategic vision, offers best practices and policies adapted to particular needs and environments.

As background to the Symposium's discussion on how the exchanges between the policy domain and the research and innovation domain could help to achieve this vision of integrated effort offered by Merkel and Hollande and by Mahoney and Morel, Matlin introduced some of the key components and mechanisms of a Global Health Research and Innovation System (GHRIS), referring to a model<sup>3</sup> which he had published in 2009. This had presented the GHRIS as including a complex array of actors providing resources (which in 2005 amounted to over US\$160 billion per year<sup>4</sup>) for global health research and development. Directly or via intermediaries, these resources lead to the creation of products, processes, and knowledge relating both to technological and social areas of innovation. Some of them are generated in the private sector and governed mainly by commercial interests, while some take the form of global public goods, mainly generated in the public sector – both ultimately impacting on health and health equity to varying

degrees in all countries. The entire system operates in an external environment of push and pull mechanisms and is subject to positive and negative feedback mechanisms that operate between various elements.

He noted that this is inevitably a complex system: as Albert Einstein reputedly said, *“everything should be made as simple as possible – but not simpler”*; and that there is a need to better understand this system if we are to make effective use of it. This requires both an understanding of the

relationships among the components – including the aspects of policies for research and how research influences policies – and also it requires mechanisms for monitoring and measuring what is happening. To paraphrase an observation made by Lord Kelvin, the 19<sup>th</sup> century physicist, *“if you can’t measure it, you can’t improve it”*. At present, we have only fragmentary data on some aspects of the GHRIS, including incomplete metrics on financial flows to research and development and on health status, problems and needs in different settings.

## Panel presentations and discussion

The panel presented four different perspectives on aspects of the Global Health Research and Innovation System and on the interplay between policy and research.

**Line Matthiessen-Guyader** (Head of the Unit of Infectious Diseases and Public Health in the European Commission's Directorate General for Research and Innovation) presented the latest picture on the progress of Horizon 2020. Proposals for Horizon 2020 by the European Commission (EC) are, currently under consideration by the Council and Parliament of the European Union (EU) as the replacement for Framework Programme 7 (FP7), which is one of the largest research programmes in the world. FP7 has an overall budget of € 55 billion and the EC has proposed € 80 billion for Horizon 2020 which will run 2014-2020, but a proportionate increase in the health component (€ 6 billion in FP7) has not been suggested. The € 80 billion indicated for Horizon 2020 integrates funding for two other initiatives (the Competitiveness and Innovation Framework Programme and the European Institute of Innovation and Technology) that are separately financed under FP7.<sup>5,6</sup>

While the process of finalizing Horizon 2020 is still under way, Matthiessen-Guyader's presentation illustrated a number of ways in which the policy and research domains have intersected in the formulation of this key European strategy, which overall aims at responding to the economic crisis to invest in future jobs and growth, addressing

people's concerns about their livelihoods, safety and environment and strengthening the EU's global position in research, innovation and technology. Thus, the three priority areas selected for Horizon 2020 – excellent science, industrial leadership and societal challenges – reflect a combination of science- and policy-driven objectives:

- **Excellent science:** The paramount objective of supporting excellent science is framed within policy objectives of strengthening the European Research Council, attracting and retaining research talent, and ensuring that researchers have access to the best infrastructures.
- **Industrial leadership:** The 'Europe 2020' growth strategy<sup>7,8,9,10</sup> includes the flagship 'Innovation Union' programme (re-focusing R&D and innovation policy on major challenges, while closing the gap between science and the market to turn inventions into products).<sup>11,12</sup> The policy approach in Horizon 2020 aims at making investments in key technologies, stimulating more private investment in R&D and enhancing access to risk finance and support to small and medium enterprises (SMEs).
- **Societal challenges:** Within an overall portfolio of € 31.7 billion for addressing six areas of societal challenges, € 8 billion has been proposed for health, demographic change and wellbeing. To meet the challenges, it is acknowledged that breakthrough solutions come from multi-disciplinary collaborations, including social sciences & humanities and that

promising solutions need to be tested, demonstrated and scaled up. Based on evidence of key concerns, priority areas have been selected for particular attention, including both non-communicable diseases (cancer, chronic and degenerative diseases are gaining importance globally) and infectious diseases (which remain a global problem), where actions are wanted at the level of the global research community and while new treatments are required for many of these diseases there is also a pressing need to keep healthcare costs stable and healthcare systems running. Beyond these goals is a priority concern that the EU must catch up with global health innovation leaders and retain its biomedical industry, for which it is held that Horizon 2020 must contribute to strong public-private collaboration

As well as listing about 20 priority topics for action within 'health, demographic change & wellbeing' (including improving health promotion and disease prevention, transferring knowledge to clinical practice, better use of health data, improving support for policy making and regulation, active ageing) the EC's proposals for Horizon 2020 include making collaborative projects simpler to establish and more inclusive in nature; providing special support (€ 5 billion) for SMEs; and renewed support for the European and Developing Countries Clinical Trials Partnership (EDCTP).<sup>13</sup> Based on the successes of the Innovative Medicines Initiative,<sup>14</sup> plans for developing public-private partnership for innovative health research are in the pipeline and legislative proposals will be presented after Horizon 2020 gains approval.

**John-Arne Røttingen** (Visiting Professor, Harvard School of Public Health; Professor of Health Policy, University of Oslo; Chair of the WHO Consultative Expert Working Group (CEWG) on Research and Development: Financing and Coordination) presented some of the key findings of the CEWG's report, which was published in April 2012.

The CEWG report is particularly concerned with the pathway that links funding for R&D with health priorities in cases where commercial markets are not strong enough to drive the necessary investments in innovation, including diseases predominantly found in low- and middle-income countries (LMICs)<sup>15</sup> and areas such as new antibiotics<sup>16</sup> to counter growing drug-resistance problems. Røttingen noted that recognition of the problem of innovation failure in the absence of strong markets is now widespread<sup>17,18</sup> and there is growing acceptance of the need for new approaches which may require decoupling the financial return on investment from the use of the product.<sup>19,20</sup>

To address these concerns and to provide a comprehensive global policy for R&D financing, coordination and monitoring, the CEWG report recommends a global R&D Convention. This would comprise a package of interventions including open knowledge innovation (open approaches and equitable licensing, milestones and end prizes, patent pools, direct grants); financing commitments and pooled funding (requiring a global mechanism to ensure its operation) and - reflecting Lord Kelvin's observation on the need for measurement - a global R&D observatory function to gather and analyse data to monitor and feed into the policy process. A contribution formula based on GDP was suggested, but the precise details of responsibilities and commitments would need to be the subject of international negotiation and a step on the way was the convening of an open-ended meeting of member states by WHO<sup>21</sup> in November 2012. Systematic and sustainable solutions were needed, driven by collective political leadership and multi-lateral or poly-lateral cooperation that took a global public good approach and avoided framing in the narrower context of aid/development assistance. Røttingen noted that Europe had the potential to play a more significant role and that it was important to avoid a proliferation of single initiatives and to achieve a concerted effort in one direction.

**Francisco Songane** (former Minister of Health of Mozambique; former Director of the Partnership for Maternal, Newborn & Child Health at WHO; Chair of Forum 2012) spoke about *Integrating Research Agendas for Global Health*, providing a perspective based on his first-hand experience of working to achieve improved health in lower income countries. He began by noting that there were a number of perspectives on why addressing global health was a priority, including health security threats; the need for coordination and cooperation to solve problems; economic consequence; equity issues; solidarity; and geopolitical factors. He highlighted the current lack of a commonly agreed agenda, as a result of which there was much room for improvement in terms of division of labour and no effective anchoring point, while the primacy of country priorities is affected by their dependence on external funding and capacity building at the country level has been poorly addressed. A global research agenda was needed that would help define the priorities to be addressed and the process to reach consensus on the priorities, serve as a motivating driver (so far the MDGs have been a proxy bringing everyone together in solidarity to overcome the challenges, but they lack comprehensiveness) and assist in moving away from a scenario where the research topics are determined by the institutions/initiatives providing the funding. Research priorities must be decided by consensus by various partners and coordination was needed – perhaps with WHO as the anchoring point to pull together various partners. Some kind of overall steering group was necessary to agree on a process that would ensure synchronisation between the research agenda for global health and the countries' priorities; capacity building in countries, enabling them to be active agents in the process; and harmonization with cooperation development programmes in order to ensure an integrated approach. The research agenda should be framed in the context of the new paradigm of research for health,<sup>22,23</sup> not simply health research. It should ac-

knowledge the importance of Ministries of Science and Technology and the social determinants of health,<sup>24</sup> engaging multiple stakeholders and building on Forum 2012.<sup>25</sup> The purpose of the global research agenda must be finding solutions and Songane proposed some steps for action, involving creation of a provisional working group to coordinate the consultation. Upcoming opportunities for consultation and harmonization with ongoing processes included the Second Global Symposium on Health Systems Research in Beijing<sup>26</sup> and the Open Ended Meeting of WHO member states in Geneva<sup>21</sup> to discuss the CEWG recommendations.

**Klaus-Michael Debatin** (Chairman, Department of Pediatrics, Ulm University) is a Member of the Senate of the German Research Foundation (DFG).<sup>27</sup> The DFG is represented on the governing body of the recently created Global Research Council – a virtual organization comprised of the heads of science and engineering funding agencies from around the world. The Council is concerned not just with health but with all areas of research, and has a particular focus on international collaborations to address societal challenges. At its inaugural global summit in May 2012, the Council endorsed a high-level Statement of Principles for Scientific Merit Review, to provide a framework for increased international research cooperation and to convey accepted international standards for science funding agencies.<sup>28</sup> Speaking at the conclusion of the meeting, US National Science Foundation Director Subra Suresh<sup>29</sup> said *“This global summit is the first step toward a more unified approach to the scientific process. Science can rise above economic and cultural differences to help develop trust and clear the path for agreements in other areas. Global scientific collaboration expands the pool of knowledge that belongs to everyone and serves as a tool to improve health, security and opportunity throughout the world. Good science anywhere is good for science everywhere.”* The DFG will host the 2013 meeting of the Global Research Council

and Debatin commented on the DFG's roles in funding people, projects and structures as an example of ways in which the Council may choose to operate. These include a combination of engagements in both the scientific and political arenas, with activities that include global funding of research in all disciplines; support of research cooperation, young scientists and equal opportunity for women and men; and counselling of parliament and politicians and connection of the science community to industry and the international science community. Within the DFG, health and medicine get most funding.

Issues raised in the discussion between the panel and audience included:

#### **Horizon 2020**

- There was a challenge in how to include global health in Horizon 2020, given its current rather narrow focus on a few diseases and initiatives like EDCTP. With the global health landscape changing, global health needed to be viewed more broadly than just health security threats like SARS and should embrace problems we are all facing.<sup>30</sup>

#### **R&D Convention**

- The process for developing priorities in the coordination of research under an R&D Convention was a crucial area – it needed to be related to health needs. This will be among the elements discussed at the November meeting. Priority setting for the Millennium Development Goals<sup>31</sup> (MDGs) and the post-2015 Sustainable Development Goals<sup>32</sup> was seen as a different process, involving decisions about what needs to be done after research has provided relevant evidence.
- WHO regional offices have conducted consultations on the CEWG report and national offices have been asked to do the same, but not many have done this. It was important to see input from all arenas and all stakeholders, including engagement with politicians and others.

#### **Policies and processes for research and its impact**

- Processes were needed for making research results available, especially when funded from public money.
- There was need to consider how interventions developed would be delivered, when high-income countries faced fiscal challenges and low- and middle-income countries experienced challenges of infrastructure and capacity. Responses included thinking beyond the development of new drugs that might be difficult for LMICs to afford, but instead considering how to use existing drugs more effectively, targeting specific diseases. To ensure affordable development pathways, consortia should be formed at national/international levels running clinical trials, supported by public funding. For LMICs, it was important to have medicines that are both cheap and used in the right way.<sup>33</sup> Low-income countries need capacity building to conduct research and provide products.<sup>34</sup>
- How can international consortia be developed and structured for the health needs of LMICs, more towards the applied end of the health research domain? In the case of EDCTP, sixteen EU countries had discussed and agreed what they needed to do together with sub-Saharan African countries. EDCTP it is structured so that 75% of funding goes to LMICs in sub-Saharan Africa, with a heavy emphasis on strengthening capacities, building on what was already there.
- Ownership of research results was a vital factor. Under Horizon 2020 rules, the EU does not own the results, which remain with the scientists that develop the research, so funded researchers need to make agree among themselves how they will deal with intellectual property rights (IPR). In DFG funded projects, IPR is allocated according to law of the universities, with both inventors and universities participating.

In his concluding remarks, Stephen Matlin revisited important aspects of the GHRIS that had been highlighted during the meeting. He noted that there were a number of definitions of global health in current use but many took the same perspective that Global Health Europe had adopted, that global health concerns *“factors transcending national boundaries and governments - determining the health and human security of people across rich and poor countries, and of future generations”*.<sup>35</sup> Regarding issues of priority setting, there was now a move towards delinking who funds and who sets the priorities. Traditionally it was often the scientists who set research agendas when overall funding levels had been determined and there were now proposals to create a sectoral steering board for health in Horizon 2020<sup>36</sup> However, if the goal-oriented focus of global health were to be accommo-

dated, it was vital to ensure that priorities were informed by policy needs in addition to science-driven goals and by the perspectives of end users. Similar questions need to be asked of the future Global Health Council. If there is a global mechanism, who sets the priorities and how will a balance be achieved between the science goals of researchers and the utility of the results to meet societal needs? This was also important in relation to taking a “research for health” approach which emphasised that research was not just “blue skies” but was for a purpose, and required deliberate policies and structures to be instituted to ensure that trans-disciplinary research was funded and fostered. At the level of the whole global system, there was an urgent need to establish better mechanisms for the governance of research and innovation and for priority setting that was informed by both policy and evidence.



## Key messages

- Further effort is needed to improve the worldwide system of research and innovation for global health – in particular, aspects relating to governance, financing, coordination and monitoring. Several current initiatives have the potential to play central roles in this effort – including Horizon 2020, the Global Research Council and the global R&D Convention proposed by the WHO Consultative Expert Working Group (CEWG) on Research and Development: Financing and Coordination.
- Critical to the success of these efforts will be ensuring that:
  - research policies are informed by evidence of health need, oriented to achieving health equity and strongly guided by principles of affordable access to knowledge and products generated;
  - the results of global health research are made more readily available to policy makers and the public through more extensive and effective knowledge translation;
  - a comprehensive research agenda is developed for global health, for use by policy makers, funders and researchers;
- the process of priority setting for global R & D is done with wide stakeholder participation, including engagement between researchers, funders and policy-makers and with the involvement of low- and middle-income countries;
- capacities of low- and middle-income countries are strengthened and utilized to engage in research, development and innovation for health and in policy development and priority-setting regarding research, development and innovation, both at national and global levels;
- consortia conducting research and innovation for global health are expanded and engage diverse players, including the public and private sectors, ensuring that health needs and priorities of poorer as well as richer populations are met;
- to underpin all of the above: comprehensive global metrics are developed and used regarding resourcing of research and innovation for global health, as proposed by the CEWG in the creation of a global observatory function.

## About the Symposium sponsor

Global Health Europe is a European global health policy think tank hosted by Global Health Programme of the Graduate Institute of International and Development Studies, Geneva. ([www.globalhealtheurope.org](http://www.globalhealtheurope.org)).

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