

More medicines for neglected and emerging infectious diseases

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Countries in the Organization for Economic Cooperation and Development (OECD) account for about 80% of gross expenditure in research and development globally,¹ but their collective health research output has not led to new medicines for many of the infectious diseases that afflict developing countries; human african trypanosomiasis, leishmaniasis, schistosomiasis, Chagas disease, lymphatic filariasis and onchocerciasis.² Development and delivery of medicines for such diseases face significant challenges, including cost, safety, stability, formulation and resistance. Low returns on investment combined with high developmental risks discourage business from engaging in this type of research. The Global Forum consistently estimates that only 10% of global health research is devoted to conditions that account for 90% of the global disease burden.³

The OECD recently held a high level forum in the Netherlands to increase international momentum on research, development and delivery of medicines, vaccines and diagnostics for neglected and emerging infectious diseases. This forum included government officials both from OECD and developing countries and representatives from nongovernmental organizations, academia and industry. The *Noordwijk Medicines Agenda* describes the general consensus of this meeting surrounding problems, goals, and work that needs to be undertaken to improve the availability of medicines for neglected and emerging infectious diseases.⁴

The Forum recognized that in addition to humanitarian reasons for fighting infectious diseases in developing countries, OECD countries have a self-interest in combating infectious diseases. Pathogens can spread far from where they first developed due to increases in trade, international tourism and climate change. Severe Acute Respiratory Syndrome (SARS) exemplified how an infectious disease may quickly transcend borders,⁵ triggering important economic ripple

effects globally, even in countries with few cases.⁶

The Forum considered how to increase the availability of new health technologies and how to reduce the cost of doing so. Participants underscored successful advances made by Product Development Partnerships (PDPs)⁷ in the discovery, development and delivery of medicines for neglected diseases. Many participants voiced strong support for the objectives and approach of the chemical compound screening process as done by the Special Programme for Research and Training in Tropical Diseases (TDR). They pointed out the economies of scale that a virtual drug discovery network of researchers worldwide could achieve. WHO/TDR's success suggests how cooperation through a model of open innovation^{8,9} might be broadened to address the major noncommunicable diseases in markets where medicines are likely to become increasingly fragmented due to genomics and targeted therapies. There was broad agreement on the need to garner long-term, sustainable financing for PDPs, although there was no consensus on which means should be used to ensure this. Participants also noted the importance of using for-profit business models, to complement PDPs, in the development of new medicines, vaccines and diagnostics for neglected diseases.

Meeting the cost of scaling-up PDP investments needs to be accompanied by more accurate forecasting of demand for medicines required for neglected diseases,¹⁰ as this would reduce the risk to investors and potential innovators and could create stronger incentives to service these markets. Participants made it clear that many health issues in developing countries cannot and will not be solved by developments in health technologies alone. Nevertheless, such technologies are important and efforts are needed to create the innovation environment that will rapidly deliver new medicines for all types of disease.

Participants discussed policy mechanisms designed to spur innovation in

medicines for neglected infectious diseases, i.e. "push" and "pull" incentives.¹¹ The Forum articulated a coherent, cross-ministry, political message about the need for improving the availability of medicines for neglected and emerging infectious diseases. OECD is considering several streams of analytical work relevant to these discussions with a view to providing a foundation for evidence-based policymaking, including: exploring the potential value of collaborative mechanisms for intellectual property rights (IPRs), (such as patent pools or other intellectual property and data management entities); pursuing the viability of a global, virtual drug development network drawing on existing initiatives (e.g. WHO/TDR and PDPs); and exploring alternative policy mechanisms to reward innovation. ■

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