Special Program for Research and Training in Tropical Diseases (TDR)

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Responsible Network and Sector: HDNHE
Recipient Agency: World Health Organization
Web Address: http://www.who.int/tdr

Financial Arrangements for FY07 (Amount in US $ Million)

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
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<tbody>
<tr>
<td>Total Budget</td>
<td>39.00</td>
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<tr>
<td>DGF Funding Request</td>
<td>2.00</td>
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<tr>
<td>DGF Percentage</td>
<td>5%</td>
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Objectives and Expected Outcomes

The UNICEF/UNDP/World Bank/WHO Program for Research and Training in Tropical Diseases (TDR) was started in 1975-76 with the two-fold objective of research and development of new and improved tools for the control of major tropical and neglected diseases and the strengthening of national research capabilities in countries where these diseases are endemic. The main diseases covered were: all forms of leprosy (there are at least 6 different types of leprosy), the two categories of leishmaniasis that are most severe, all schistosomiasis diseases, all trypanosomiasis diseases, several types of filariasis, all malaria types, Chagas Disease and the various Onchocerciasis types. TDR supports over one hundred TDR medical research institutes in IBRD and IDA countries and as such can be compared to the CGIAR for agricultural research, albeit at a smaller scale. In order to maintain its leading position in the research and development (R & D) of new technology and the training of researchers from disease-endemic countries, a new strategic vision (2005) promotes closer interaction with health systems and disease control programs, capacity strengthening, and full utilization of scientific and technological advances in the biomedical, social and information sciences. In addition, the disease portfolio has been expanded to include more specifically diseases of the poor, such as tuberculosis, dengue, Loa-Loa and others, including HIV/AIDS. By investing in the research of these diseases, largely neglected by the scientific and pharmaceutical research institutions in OECD countries because of their concentration in poorer countries, the program's R & D has led to the development and implementation of new insights and control tools which aid in reducing the global disease burden in developing countries and supporting the MDG objectives with regard to maternal health, malaria, tuberculosis, HIV/AIDS and other infectious diseases. Hence, the primary beneficiaries are the poorest, most disease-endemic countries and their populations.

Main Components

The components of TDR's work program can be classified within seven results areas: (i) new basic knowledge about the biological, social, economic, health systems, behavioral determinants, and other factors important to effective control of infectious diseases generated and accessible at national and international levels; (ii) new and improved tools developed for use in infectious disease prevention, treatment and control (e.g., drugs, vaccines, diagnostics, epidemiological control tools, environmental prevention and control tools); (iii) new and improved intervention methods for applying tools at the clinical medical and community health levels in poor countries; (iv) new and improved policies for large-scale implementation of existing and new prevention and control strategies, and guidance required for application in national disease control settings; (v) research partnerships established, and crucial support for research and product development capacity building in low- and middle-income disease-endemic countries provided; (vi) new and original scientific information, research guidelines and instruments, and advice accessible to partners and client countries and research partners worldwide; (vii) additional resources for research, product development, and capacity building efficiently mobilized and managed.

Performance Indicators

The following are examples, of output indicators for the program. (i) field trials of methods, new drugs & other technologies take place under TDR's Intervention Development and Implementation Research (IDE) work program area (ii) discovery & development of new drugs, vaccines and diagnostics for the TDR target diseases, under Product R & D; (iii) implementation trials of new technologies; (v) capacity-building of scientific partnerships for research & new product development for tropical and neglected diseases of the poor.
Progress and Achievements

The 4th independent external review of the TDR program was started last year and the draft evaluation report has just been finalized (May 2006) and will formally be submitted to the TDR Board in five weeks time (June 2006). As part of this exercise, a TDR Management Review was completed and shared with the Bank and the other co-sponsors (UNICEF, UNDP and WHO) last year. TDR has taken the Management Review very seriously and should be commended for vigorously endorsing it. Similarly, a TDR Governance Review was carried out under auspices of the cosponsors (incl. the Bank) and the TDR Board. A new TDR Medium-Term Research Strategy has been developed in conjunction with the cosponsors and cooperating agencies, which was submitted to last year's TDR Board meeting in 2005. TDR is committed to significantly increasing tropical and neglected disease research based in disease-endemic low- and middle-income countries, integrated into their health and education national and international policies and ensuring their sustainability. Recent achievements include: (i) training and promotion of re-entry of researchers to their scientific home institutions; (ii) strengthening of individual and institutional research capacity in developing countries; (iii) regional R & D grants schemes; (iv) fostering South-South research networks; and (v) TDR supported science and technology expansion for drug discovery related to natural products (e.g. traditional medicines).

TDR also continues to oversee, support and fund global research in the fields of tropical disease genomics, policy, prevention and control. This work has led to achievements including: (i) The sequencing of the full genome of the malaria vector Anopheles Gambiae, and the genome sequencing of the malaria parasite Plasmodium Falciparum; (ii) The identification of new proteins of relevance for vaccine discovery, and identification and characterization of malaria and trypanosome targets; (iii) Capacity building in disease endemic countries for use of genome data; (iv) New drug products for the prevention, treatment and control of malaria, leishmaniasis, African trypanosomiasis, and onchocerciasis; (v) New pharmaceutical therapeutic procedures such as multi-drug therapy for leprosy and vector control methods against the blackfly and vectors of Chagas disease; (vi) Further and sustained development of the PfCP2 (phase 1 and 2) vaccine against malaria and a phase 1 vaccine candidate against leishmaniasis; (vii) Adoption by the global malaria community (e.g. RBM, WHO, World Bank, UN, bilaterals, Gates funded programs, etc.) of the TDR tested strategy for home management of malaria.

Partners

UNICEF, UNDP, WHO, official bilateral donors, corporations, foundations etc.

Governance and Management

TDR is independently governed by three bodies: the Joint Coordinating Board (JCB), the Standing Committee (SC), and the Scientific and Technical Advisory Committee (STAC). The JCB is made up of thirty members, which include representatives from more than twenty-five governments (with emphasis on developing countries), the four cosponsoring agencies, and other cooperating parties. The Standing Committee consists of the four cosponsors: the Bank, UNDP, UNICEF and WHO, as well as the chairperson on the JCB and STAC. The STAC consists of 15-18 of the world's most leading medical scientists (including Nobel laureates), selected on the basis of their professional and scientific expertise in the endemic countries concerned and the relevant research community (the Chairman of STAC currently is Professor Peter Ndumbe, Dean of the Medical Faculty in Yaounde, Cameroun). TDR publishes an annual report, a website, a newsletter, and multiple other technical and scientific publications. TDR is housed in Geneva and has about 27 professional staff members.

Exit Strategy

Because of the time needed to develop new therapeutic agents (worldwide average R & D period for new pharmaceuticals is around 15 years at a cost of around 900 million US$ per new effective drug), and the specific epidemiological features of some diseases, TDR has an open-ended time frame. The Bank has been involved with TDR since its inception, and its decision to begin contributing financially was made in recognition of the serious health and development impact of the major tropical and infectious diseases, and with full understanding that combating them would take a long-term commitment. Through its internal review mechanism the program "exits" from specific diseases once cost-effective tools become available. Examples of diseases from which TDR has effectively exited include smallpox, poliomyelitis, measles, framboesia (yaws), and to some extent onchocerciasis. An independent evaluation of TDR is expected to be complete by the end of 2006.