

Covering years 2003-2004

TDR/GEN/SR/o4.1

TDR Summary Report 2004



UNICEF/UNDP/World Bank/WHO
Special Programme for Research & Training in
Tropical Diseases (TDR)



UNICEF



UNDP



World Bank



World Health Organization

Indicator table

Detailed information about these figures can be found on the CD inserted inside the back cover.

Strategic Indicators

	Achieved		Target
	2000-2001	2002-2003	2004-2005

NEW KNOWLEDGE

Number of new and significant scientific advances	458	500	300
Number of patents resulting from TDR funded research and development	4	5	5
Number of outstanding advances in scientific knowledge	7	12	5

NEW AND IMPROVED TOOLS

Number of new and improved tools, such as drugs, vaccines, receiving regulatory approval and/or label extensions or, in the case of diagnostics, being recommended for use in controlling neglected tropical diseases	0	3	5
Number of new and improved epidemiological and environmental tools being recommended for use in controlling neglected tropical diseases	1	0	2

NEW & IMPROVED INTERVENTION METHODS

Number of new and improved intervention methods validated for the prevention, diagnosis and treatment of infectious disease or for rehabilitation of populations exposed to or affected by infectious diseases	4	0	5
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NEW AND IMPROVED POLICIES AND STRATEGIES

Number of new and improved public health policies and strategies for which the effectiveness has been determined, and evidence on effectiveness made available to decision-makers	3	2	2
Number of new and improved policies and strategies for enhanced access to proven public health interventions developed, validated and recommended for use	3	2	3

PARTNERSHIPS AND CAPACITY BUILDING

Number of R&D partners engaged	609	872	700
Number of MSc degrees completed	19	10	10
Number of PhD degrees completed	27	49	49
Number of persons trained in short courses	n.a.	657	800
Number of research institutions in low income disease endemic countries strengthened	n.a.	4	6
Proportion of partners who are from disease endemic countries out of the total number of partners engaged	59.9%	69%	65%
Proportion of total new and significant scientific advances produced by scientists from disease endemic countries	36.7%	49%	45%

TECHNICAL INFORMATION, GUIDELINES, INSTRUMENTS AND ADVICE

Number of research instruments and guidelines for infectious diseases developed and published	7	13	8
Number of global research priority-setting reports for neglected infectious diseases published	0	2	4
Mean monthly number of page views to the TDR website	51,808	133,968	200,000
Number of unsolicited requests for research guidelines and instruments	n.a.	65,825	2,000

RESOURCE MANAGEMENT

Resources for research, product development, and capacity building priorities mobilized	US\$ 56.0 million	US\$ 71.3 million	US\$ 100 million
Resources for research, product development, and capacity building efficiently managed	67-22-11	59-28-13	68-21-11
Resources for research, product development, and capacity building efficiently disbursed	3.8	2.3	6

Foreword

It is with honour and satisfaction that TDR presents this brief Summary Report to you, which covers the output of the 2002-2003 biennium and thus interfaces with our more detailed biennial reports¹. This is the first time TDR has attempted to comprehensively present its work in this short and factual way. Our ability to do so has been enhanced by our move to a results-based planning and management approach that utilizes output-based reporting with key indicators, targets and milestones. These indicators have been validated over the last few years with the assistance of our Scientific and Technical Advisory Committee; they allow for a more rigorous assessment and validation of the scientific achievement and health impact of TDR's work.

In this report we have selected a few of our key partnership achievements of the 2002-2003 biennium to give the reader an impression of the scope of TDR's research and capability strengthening activities and their impact. Many of these highlights have resulted from research that has been in the TDR pipeline for several years, emphasizing the need for TDR to develop and maintain a strong portfolio of research activities across the full spectrum of research endeavour, from innovative laboratory driven research, through product R&D, into the area of implementation research. We also present a few high impact projects from our current portfolio. This provides a perspective on potential achievements to which TDR will significantly contribute, with our partners, by the end of 2005.

The 2002-2003 highlights and the high impact products anticipated by the end of 2005 range from upstream basic research on African sleeping sickness, where new drugs and diagnostics are desperately needed, through drug development successes for leishmaniasis, to downstream implementation research in the case of malaria and river blindness, where new methods of home management and community based treatments can usefully complement and support resource constrained health systems.

Increased funding from various sources has resulted in the emergence of many new initiatives over recent years, and today TDR finds itself in a much more complex environment, with many more players, than when this Special Programme was created almost 30 years ago. The prominence afforded health research has changed dramatically, most visibly demonstrated by the central role that health plays in the Millennium Development Goals. This development is very positive but also reflects the undiminished need for solutions to the health problems faced by far too many poor people in the developing world. It also means that many organizations must increasingly work together to ensure optimal coordination of their activities.

We in TDR are confident that our Programme has a solid foundation to meet the challenges of this complex environment. We have a solid mission, a solid past record of achievement, a solid basis for governance, and a robust research strategy and structure based on partnership, upon which to build.

The recent decision by UNICEF to become a co-sponsor of TDR, in addition to UNDP, the World Bank and WHO, has particular significance. It makes TDR stronger, both in its governance structure and in its ability to partner implementation research at the country level. With the continued support and input of our many stakeholders, TDR will continue to seek and develop research that can play a prominent, effective and central role in delivering practical outcomes to alleviate the suffering due to diseases that affect poor people in developing countries.

We welcome any comments on the nature of our work, and on the content and style of this new type of report. We also look forward to enhanced and profitable partnerships with our many stakeholders to improve the quality, quantity and impact of tropical disease research.

Rob Ridley
Director TDR

¹ The most recent of these: TDR:
Sixteenth Programme Report.
Progress 2001-2002.
TDR/GEN/03.1
The next such report
(Progress 2003-2004) to due
in June 2005.

Some highlights of TDR results 2002-2003

A full account of all TDR outputs from the biennium 2002-2003 can be found on the CD inserted inside the back cover.

New basic knowledge

The mosquito genome

One of the biggest enemies of humankind is also one of the smallest in size. The *Anopheles gambiae* mosquito kills more than one million people a year through its transmission of malaria. As coordinator of a multinational consortium of laboratories and organizations, TDR facilitated a partnership to deliver the complete genome sequence of *Anopheles gambiae*. TDR has promoted broad access to these genome data for developing country scientists through the distribution of a CD-ROM. With this new knowledge, scientists all over the world have access to new resources and are now looking for ways to develop new tools and methods to prevent malaria transmission.

New and significant scientific advances

Every day, year round, a scientist or group of scientists publishes new scientific research supported by TDR. In 2002-2003, this amounted to 500 peer reviewed scientific articles. Some of these advances were relevant to particular diseases in the *TDR disease portfolio*, while others cut across diseases and represented advances in diagnostics, drugs, and knowledge about insect vectors, or about social and health systems.

New and improved tools

First oral drug for leishmaniasis (kala azar)

Miltefosine was registered in 2002 as the first oral treatment for visceral leishmaniasis, also known as kala azar.

Over 500 000 people are infected every year with this disease, and millions are at risk of infection. Current treatment requires hospitalization and daily injections with drugs, many of which have toxic side-effects.

TDR facilitated the development and registration of this new drug within six years in partnership with Zentaris, a German pharmaceutical company, and the Indian Council for Medical Research. Training local scientists and institutions to carry out large-scale clinical trials was central to this development.

Miltefosine is currently undergoing further assessment to see if it can safely and effectively provide the basis of an easy-to-administer, cost-effective, out-patient based treatment.

New drug for malaria

Many of the current drugs for treating malaria are becoming less effective due to development of drug resistance, and a pipeline of new drugs is therefore needed. The latest new drug, registered in 2003, is Lapdap™ (chlorproguanil-dapsone), which was developed in a partnership that included TDR, several research institutions in developed and developing countries, and GlaxoSmithKline (GSK), following initial studies sponsored by the Wellcome Trust. Further studies are being carried out to assess Lapdap in 'real-life' situations. TDR and GSK are also working with the Medicines for Malaria Venture to develop a fixed-dose combination of chlorproguanil-dapsone and artesunate in order to delay development of resistance.

Rapid tests for syphilis

In collaboration with partners, and as part of the Sexually Transmitted Diseases Diagnostics Initiative, TDR conducted laboratory and field trials to evaluate rapid, point-of-care tests for syphilis detection. The evidence generated enabled the World Health Organization (WHO) to include several validated syphilis diagnostics tests in its Procurement Scheme at negotiated prices, and could prove to be a tremendous boost to syphilis control programmes worldwide.

New and improved policies and strategies

New diagnostic tool speeds up the fight against onchocerciasis (river blindness)

Ivermectin treatment for onchocerciasis can, on rare occasions, result in severe pathologies and death if given to people with a high intensity of infection by another parasite, *Loa loa*. Such highly infected people are only found in communities with a high prevalence of *Loa loa*, but in the areas where ivermectin treatment is needed, the prevalence of loiasis is hardly ever known. A simple new diagnostic tool named RAPLOA has now been developed for rapid community diagnosis of loiasis. Initially developed and field-tested by scientists in Cameroon and Nigeria, RAPLOA was successfully validated in the Congo and the Democratic Republic of the Congo (DRC). Rather than employing any sophisticated technology, the tool consists entirely of a short questionnaire designed to estimate the community prevalence of the *Loa loa* parasite, also known as 'eyeworm'. RAPLOA is now being used by the African Programme for Onchocerciasis Control (APOC) for large-scale mapping of loiasis in areas of Central Africa that are targeted for treatment. Ivermectin treatment is normally conducted by communities themselves, but where the prevalence of loiasis is high, ivermectin treatment can only be given under intensified medical surveillance.

Elimination strategies for lymphatic filariasis

Lymphatic filariasis disables millions of people in Asia, South America and Africa, rendering them unable to work and constituting both a health and economic burden to communities. TDR studies that have been under way for several years are now providing evidence of what is required in terms of coverage and duration of mass treatment to interrupt transmission of, and potentially eliminate, this disease.

Home management of malaria

Active participation of family and community is the key to a new approach for home management of malaria (HMM). TDR-derived and supported activities have developed an approach that has demonstrated reduction in mortality of up to 40% and a halt in progression to severe malaria of 54%. The HMM approach is now part of malaria control strategy in 80% of African malaria endemic countries.

Partnerships and capacity building

R&D partners and trainees

Almost 900 partners were involved in TDR research in 2002-2003, ranging from academic research institutions and not-for-profit foundations, to governments and private pharmaceutical companies. It is significant that 69% of TDR's partners in this period were from disease endemic countries. In addition to undertaking research directly with partners from developing countries, more than 700 scientists were trained in specific short courses, or received Master's or Doctoral degrees from universities around the globe with support from TDR.

Technical information, guidelines, instruments and advice

TDR sets standards in developing countries

More than 10 000 copies of the TDR *Operational guidelines for ethics committees that review biomedical research*, produced in the English, Spanish, French, German, Russian and Thai languages, have been requested. Other benchmark-setting publications being requested by the thousands include those on *Good Laboratory Practice*, and *Standard operating procedures for clinical investigators*, underlining how vital this work is to capacity building in the health sector. Interestingly, there is a major demand for these publications from developed countries as well as from developing countries. In all, more than 65 000 publications on a wide range of issues were requested from the Programme during the biennium.

High impact products for the 2004-2005 biennium

Malaria

Treatment for very young children

Most of the deaths due to malaria occur in children in their first year of life. The antimalarial lumefantrine-artemether (marketed by Novartis under the trade name Coartem) is the only fixed dose artemisinin combination therapy currently available. TDR has undertaken clinical studies in partnership with Novartis to establish if the drug can be safely and effectively used in children as small as 5 kg. The goal is to obtain, by late 2004, approval from the regulatory authorities for extended use of this drug.

Severe malaria outside the health care environment

Malaria can strike children very rapidly and can kill within 24 hours. Many become so ill that they lose consciousness, cannot take medication, and die before their family reaches help. This is one reason why one out of five children in sub-Saharan Africa dies of malaria before the age of five. Rectal artesunate is being developed to help change this situation. Administered rectally under supervision close to the home, the drug could find significant use and value in providing cover for the patient until he/she reaches a medical centre. Key data and regulatory decisions are anticipated in 2005.

Tuberculosis

Testing for drug resistance

Valuable time and lives are lost treating patients with ineffective drugs as more and more tuberculosis becomes resistant to the current drugs used to fight this major killer disease. An evaluation of existing methodologies to detect drug resistance in resource poor settings is under way by TDR in collaboration with the Foundation for Innovative New Diagnostics (FIND). Results are anticipated before the end of 2005. If results are promising, drug-testing methods will be planned in 2-4 high burden countries so that treatment with ineffective drugs can be avoided.

Sleeping sickness

Towards better diagnostics

Outcome of treatment in severe, late-stage sleeping sickness is currently determined/diagnosed by spinal tap – a painful, risky and difficult procedure to perform, especially in remote settings. A TDR coordinated evaluation of genomic information is under way to identify potential diagnostic testing methods. Preliminary results assessing the feasibility of improved approaches are anticipated before the end of 2005.

Tsetse fly genome

A TDR-convened group of partners is currently assessing the feasibility of undertaking complete sequencing of the genome of the tsetse fly, the vector of African sleeping sickness. If feasible, a genome project could be initiated in 2005, opening the way to improved methods of vector control for this disease.

Dengue

Effective vector control strategies

Dengue is transmitted by mosquitoes, and the disease can often have its most severe impact through epidemics that affect poor populations in urban areas. The species of mosquitoes responsible for transmission of dengue breed in tins, containers, open canisters and other items that can catch and retain water. Research into the most effective way to target potential breeding areas is under way. It is anticipated that the results, available in 2005, could lead to more efficient, cost-effective and sustainable vector control programmes.

Leishmaniasis

Large-scale use of miltefosine

A series of studies under way in India will inform on the efficacy and safety of miltefosine when used in large-scale con-

trol programmes. In addition, information will be gathered on mechanisms for drug delivery through public and private health systems. This work, together with other developments, will inform authorities of the feasibility of eliminating visceral leishmaniasis as a public health problem.

Studies are also initiated to assess the potential of miltefosine use in South America and Africa. Data on these activities are likely to be available after 2005.

Development of paromomycin for visceral leishmaniasis

Working with the Institute for One World Health, development work is being conducted towards obtaining regulatory approval of paromomycin for treatment of visceral leishmaniasis.

Schistosomiasis

Old drugs – new ways

Control programmes have only one drug – praziquantel – to fight schistosomiasis, also known as bilharzia. With no new drugs under development, better use must be made of the existing drug that, as currently used, may fail to cure in up to 40% of cases. Studies are under way to assess the utility and safety of administration of praziquantel at a higher dose, alone and in combination with oxamniquine (a drug which is no longer commercially available). The results of the studies should be available in 2005, and could have an impact on treatment policies and guidelines.

Syphilis

Diagnosis in the field can save babies

Half a million babies die from syphilis in sub-Saharan Africa every year.

In countries with a high prevalence of HIV, an HIV-positive mother will often be treated with some hundreds of dollars worth of antiretroviral drugs to prevent mother-to-child transmission of HIV, only to have her baby die from syphilis within the first few weeks of life because syphilis had not been diagnosed and treated. New rapid diagnostic tests costing less than 50 cents will make it cheap and simple to diagnose and treat syphilis in primary health care settings. TDR is conducting projects in Haiti and Tanzania to determine cost-

effective strategies for integrating syphilis into programmes for the prevention of mother-to-child transmission of HIV. These strategies will save many lives and will inform programme planners as WHO works with countries to achieve the Millennium Development Goal of reducing mortality under five by 75% by 2015.

Cutting across diseases

Integration of disease control strategies

Current efforts to address concomitant treatment of onchocerciasis, lymphatic filariasis, schistosomiasis and intestinal helminth infections within the same population are being affected by lack of basic pharmacological information on the behaviour of the drugs when administered simultaneously. In order to address this, TDR has conducted several clinical studies. The final report is due before the end of 2004.

A multi-country study has been launched to determine to what extent the community-directed treatment (ComDT) strategy, developed by TDR and widely used for ivermectin treatment of onchocerciasis in Africa, can be used for integrated delivery of multiple interventions, ranging in complexity from vitamin A and insecticide-treated bednets, to DOTS treatment for TB and home management of malaria. First results of this study are anticipated in 2005.

Health sector reform and tropical diseases

With financial and capacity-building support from TDR, health policy and systems studies have been undertaken in a range of disease endemic countries. The results of these studies, providing new insights into the opportunities and threats posed by health sector reforms to the control of tropical diseases, will be published as a supplement of a peer reviewed international journal in 2005.

Strengthening capacity in disease endemic countries

A critical mass of scientists and institutions in disease endemic countries is required to sustain the research needed to effectively control diseases of public health importance. In 2004-2005, TDR anticipates training about 800 scientists in focused short courses. Other TDR support will result in the strengthening of six research institutions, while about 10 and 50 students respectively will complete Master's and Doctoral programmes.

TDR partnerships in 2002-2003

A strong comparative advantage of TDR is its ability to convene and build partnerships to work towards the objectives of the Programme that have global reach. The almost 900 research partnerships managed during the past biennium

drew on researchers and institutions from 96 countries, who advised on, and/or undertook, use-inspired research to help find new and better ways to combat diseases of poor and marginalized populations.

Countries of research partners in 2002-2003

Argentina • Australia • Bangladesh • Belgium • Benin • Bhutan • Bolivia • Brazil • Burkina Faso • Cambodia • Cameroon • Canada • Chad • Chile • China • Colombia • Congo • Costa Rica • Cote D'Ivoire • Cuba • Dem. Rep. of Congo • Denmark • Dominican Republic • Ecuador • Egypt • Eritrea • Ethiopia • France • Gabon • The Gambia • Georgia • Germany • Ghana • Greece • Guatemala • Guinea-Bissau • Haiti • Honduras • India • Indonesia • Iran, Islamic Rep. • Ireland • Israel • Italy • Jamaica • Japan • Kazakhstan • Kenya • Lao People's Dem Rep • Liberia • Madagascar • Malawi • Malaysia • Maldives • Mali • Mauritania • Mexico • Mongolia • Morocco • Mozambique • Myanmar • Nepal • The Netherlands • New Zealand • Niger • Nigeria • Norway • Pakistan • Panama • Paraguay • Peru • The Philippines • Puerto Rico • Rep. of Korea • Russian Federation • Senegal • South Africa • Sri Lanka • Sudan • Sweden • Switzerland • Syrian Arab Republic • Thailand • Togo • Tunisia • Uganda • UK • United Rep. Tanzania • Uruguay • USA • Uzbekistan • Venezuela • Viet Nam • Yemen • Zambia • Zimbabwe

Main pharmaceutical company partners in 2002-2003

TDR recognizes the need to build partnerships that bridge disease control with academia and industry, and the public with the private sector. During 2002-2003, TDR partnered

a significant number of pharmaceutical companies to advance product research and development for tropical diseases. These included:

Main pharmaceutical company partners in 2002-2003

- Artecef BV (the Netherlands)
- Aventis (France)
- Bayer (Germany)
- Chemical Diversity Labs (USA)
- Chirotec (UK)
- Corixa (USA)
- GlaxoSmithKline (UK)
- IDA (the Netherlands)
- Jomaa Pharmaka (Germany)
- JPMW (a partnership of 14 Japanese pharmaceutical companies)
- Knoll Pharmaceutical Company (USA)
- Lionex Diagnostics and Therapeutics GmbH (Germany)
- Lupin (India)
- Novartis (Switzerland)
- Paratek (USA)
- Rapid Biosensor Systems Ltd (UK)
- RCC (Switzerland)
- RP Scherer (USA)
- Sanofi Synthelabo (France)
- Scanpharm (Denmark)
- Shin Poong (South Korea)
- SPECS (the Netherlands)
- Tibotec (Belgium)
- Wyeth (USA)
- Zentaris GmbH (Germany)

Financial contributions (in US\$)

	2000-2001	2002-2003
African Programme for Onchocerciasis Control (APOC)	900,000	2,803,000
Australia	433,560	114,860
Aventis Pharma SA	393,962	1,491,038
Belgium	2,377,029	1,779,337
Bill & Melinda Gates Foundation (USA)	2,000,000	4,025,000
Burroughs Wellcome Fund	12,000	–
Canada	1,837,666	1,832,855
China	110,000	110,000
Cuba	1,990	3,979
Denmark	5,088,552	3,579,023
Euro Health Group	–	39,723
Foundation Open Society Institute	–	50,000
France	135,030	–
Germany	767,740	1,603,069
GlaxoSmithKline PLC	–	40,000
Global Forum for Health Research	500,000	500,000
India	50,104	50,282
Infectious Disease Research Institute (USA)	–	667,778
Institute for One World Health	–	534,386
International Development Research Centre (CAN)	59,376	90,247
International Federation of Anti-Leprosy Associations	14,457	–
International Federation of Pharmaceutical Manufacturers Associations (IFPMA)	50,000	50,000
Iran (Islamic Republic of)	29,963	20,000
Ireland	240,601	457,401
Italy	268,623	340,882
Japan	650,000	1,400,000
London School of Hygiene and Tropical Medicine	–	773,438
Luxembourg	1,032,688	1,338,115
Malaysia	100,000	50,000
Medicines for Malaria Venture (MMV)	–	4,673,683
Medecins Sans Frontières (France)	100,000	–
Mexico	20,000	20,000
Netherlands	3,098,356	5,683,054
New Zealand	40,510	98,670
Novartis Pharma AG	–	323,358
Nippon Foundation (JPN) (formerly Japan Shipbuilding Industry Foundation)	–	100,000
Norway	5,659,018	6,702,027
Onchocerciasis Control Programme (OCP)	460,976	225,000
Oswaldo Cruz Foundation (BRA)	149,576	149,960
Pan American Health and Education Foundation (USA)	–	922,486
Rockefeller Foundation (USA)	200,000	25,000
Spain	82,422	117,768
Sweden	4,603,662	5,395,908
Switzerland	1,682,911	2,084,117
Thailand	52,680	53,407
Turkey	10,000	10,000
United Kingdom of Great Britain and Northern Ireland	4,512,272	1,141,875
United States of America	9,200,000	6,705,000
Wellcome Trust (UK)	–	29,000
United Nations Children's Fund (UNICEF)	–	100,000
United Nations Development Programme	500 000	–
World Bank	5,028,700	5,155,300
World Health Organization	2,060,240	2,262,668
Roll Back Malaria (RBM)	2,488,785	1,324,211
Miscellaneous	7,542	21,185
Total contributions to TDR	57,010,991	67,068,090

The Joint Coordinating Board, JCB 27, 2004

The JCB is the top governing body of TDR. Its principal role is to coordinate the interests and responsibilities of all parties cooperating in TDR. The JCB meets annually to review TDR's activities, evaluate progress, and determine TDR's budget.

JCB chairperson:

Dr J. Larivière,
Canada

JCB vice-chairperson:

Dr B. Sadrizadeh,
Islamic Republic of Iran

4 co-sponsors

- UNICEF
- UNDP
- World Bank
- WHO

3 cooperating parties selected by the JCB

- Brazil
- The Islamic Republic of Iran
- Sweden

12 governments selected by TDR resource contributors

- Belgium
- Canada
- Denmark
- Germany
- India
- Japan
- Luxembourg
- Malaysia
- Netherlands
- Norway
- Switzerland
- United States of America

12 governments selected by WHO regional committees

- Cameroon (AFRO)
- Cape Verde (AFRO)
- Cuba (AMRO)
- Panama (AMRO)
- Bahrain (EMRO)
- Kuwait (EMRO)
- Armenia (EURO)
- Georgia (EURO)
- Myanmar (SEARO)
- Thailand (SEARO)
- Cambodia (WPRO)
- Mongolia (WPRO)

Other members/observers participating in JCB 27

- African Programme for Onchocerciasis Control (APOC)
- Bangladesh
- China
- Council on Health Research for Development
- Drugs for Neglected Diseases initiative
- Egypt
- European Commission
- France
- Global Forum for Health Research
- International Development Research Centre (IDRC)
- International Federation of Pharmaceutical Manufacturers Associations (IFPMA)
- Malta
- Medicines for Malaria Venture (MMV)
- Mexico
- Organization de Coordination pour la Lutte contre les Endémies en Afrique centrale (OCEAC)
- Rotary International
- Russian Federation
- Spain
- Syrian Arab Republic
- Turkey
- United Kingdom of Britain and Northern Ireland
- United Nations Environment Programme (UNEP)
- WHO Regional Office for Africa
- WHO Regional Office for the Americas
- WHO regional Office for the Eastern Mediterranean
- WHO regional Office for South-East Asia

The Scientific and Technical Advisory Committee, STAC 2004

The STAC consists of 15-18 scientists, selected on the basis of scientific or technical competence. Members serve for a period of three years and may be reappointed.

Members for the year 2004

- Prof. G Mitchell (Chairperson), Australia
- Dr Gijs Elzinga, The Netherlands
- Prof. Bernhard Fleischer, Germany
- Dr Maria C Freire, USA
- Prof. N K Ganguly, India
- Dr Maria G Guzman, Cuba
- Prof. Mary Ann D Lansang, The Philippines
- Dr Geneviève Milon, France
- Prof. Peter Martins Ndumbe, Cameroon
- Dr Niels Ornbjerg, Denmark
- Prof. Erney Plessmann de Camargo, Brazil
- Prof. Michael R Reich, USA
- Dr Gill Samuels, United Kingdom
- Prof. Nancy Gore Saravia, Colombia
- Prof. Yoshifumi Takeda, Japan
- Prof. Marcel Tanner, Switzerland

TDR is a programme that funds and promotes international scientific collaboration. For almost 30 years, TDR has been targeting a wide range of diseases that primarily affect the poor. The Programme sets priorities in health research, identifies needs and opportunities, and acts on these through basic research, discovery research, implementation research, and research capacity building in disease endemic countries.



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