MIM/TDR Workshop in Africa

A one-day workshop on Research Capacity Development in Africa was held on the last day of the African Malaria Conference in Durban, South Africa, under the coordination of the MIM/TDR Task Force on Malaria Research Capability Strengthening in Africa. The workshop was designed to discuss the needs, opportunities and different experiences for malaria research capability strengthening in Africa and to review methodological aspects related to development of research grant applications on malaria.

A total of 180 participants were registered, including junior scientists and postgraduate students, interested in enhancing their competitiveness in the area of protocol development. Around 20 experienced investigators kindly helped to facilitate the discussions. The presentations and discussions focused on key issues related to malaria research project design and project implementation in different areas of expertise based on real examples.

The agenda included presentations from the Wellcome Trust, the US National Institutes of Health, and TDR, and explored the needs, opportunities, and mechanisms of funding for malaria research and research training in Africa, especially those activities based on North-South collaboration. Members of established research institutions in Africa, the Malariabo Research and Training Centre (Mali), the Postgraduate Institute for Medical Research and Training (Ibadan) and the National Institute of Medical Research (Tanzania), described their experiences in developing research groups and international partnerships.

Six working groups, two in French and four in English, covered the areas of basic research (laboratory research), drug and vaccine trials (preparing protocols for evaluating a new product or a new indication for an available product), community-based interventions (proposals that involve a large number of participants such as bednet studies, chemoprophylaxis, vector control) and socioeconomic research (health systems research, health-seeking behaviour and studies on cost-effectiveness of interventions).

Protocols for malaria vaccine trials need to be carefully developed and monitored

The major objective of the working groups was to provide informal and practical discussions to strengthen the participants’ capacities to prepare and submit good grant proposals. Among the topics discussed were: the definition of research questions, adequate scientific justification, coherence between objectives and proposed methodology, analytical approach, and elaboration of a balanced proposal regarding objectives, timelines and budget. The workshop proved to be very useful for providing...
MIM/TDR workshop
Continued from page 1

The MIM/TDR Task Force on Malaria Research Capability Strengthening in Africa met for a second round of reviews of applications for malaria research proposals based on partnerships. As in the last year, proposals were based on scientific and capacity building collaboration between at least two African partners (one established and one emerging group) and one non-African group from a developed country. The Task Force reviewed 43 new proposals, representing 12 African countries, 8 European countries and the USA; 12 progress reports; and 3 final reports, corresponding to one-year project development grants. As in 1998, the most popular topics were chemotherapy and drug resistance, parasite biology and diversity, vector control studies, evaluation of natural products as antimalarials and insecticides, and evaluation of control strategies. The proposals were reviewed on a competitive basis by subject area considering a strategic funding to (a) observe the geographical distribution of projects and possible inclusion of countries not yet supported, (b) support only projects which promote the concept of networking and complementary scientific collaboration and capacity building. The evaluation of progress reports took into consideration the individual participation of each partner institution. Four new proposals and two project development grants were recommended for funding, including three Ph.D. and five M.Sc. students. Twelve of the 15 ongoing grants were renewed. In order to extend networks and promote exchange between less developed African sites it was proposed that the next meeting would consider applications from independent emerging research groups which wish to link to already funded projects through research and training activities. This approach will be reflected in the next call for applications. The new projects to join the MIM/TDR network are:

- Akogbeto, MC. Network to study factors conditioning evolution of pyrethroid resistance in *Anopheles gambiae* s.l. Organisation de Coordination de la Cooperation pour la Lutte contre les Grandes Endemies (OCCGE), Cotonou, Benin.
- Meda, HA. Bioequivalence of two quinine formulations to treat childhood malaria: intravenous versus intrarectal administration. OCCGE, Centre Muraz, Bobo-Dioulasso, Burkina Faso.
- Oketcho-Rabah, HA. Research and development of new botanical antimalarial drugs in East Africa. University of Nairobi, Kenya.
- Sanogo, E. Relation between malaria transmission intensity and clinical malaria, immune response and plasmodic index. Centre National de Lutte Contre le Paludisme (CNLP), Ouagadougou, Burkina Faso.

For further information, please contact Fabio Zicker, Manager, MIM/TDR Task Force, World Health Organization, 1211 Geneva 27, Switzerland - E-mail: zickerf@who.ch - Fax (+41) 22 791 4774 - Tel (+41) 22 791 38 05

MMV: gearing up

In the last issue of *TDR news*, the initiation of a venture to discover new drugs for the treatment of malaria - the New Medicines for Malaria Venture (MMV) - was described.

The concept behind this endeavour centres around two key points. Firstly, it is recognized that a partnership between industry and public sector agencies is essential if we are ever to arrive at a sustainable situation of regularly introducing new affordable antimalarials for use in disease endemic countries - MMV was born out of discussions with both the pharmaceutical industry and several public sector agencies, including WHO/TDR. Secondly, it is recognized that drug discovery and development is an expensive and risky business, and that it will be necessary to sustainably support several projects with adequate funds (up to several million US dollars per annum) in order to provide a good chance of getting a drug. MMV now has sufficient funds to support several projects.

Since the last issue of *TDR news*, progress has been made towards getting the first projects off the ground. A request for letters of interest was issued at the end of 1998 in several high ranking scientific journals, which attracted over 100 applications. An Expert Scientific Advisory Committee, consisting of members from both industry and academia, has been formed to help evaluate the projects, and has met to grade applications before undertaking more detailed evaluation. It is planned to initiate the first projects in 1999. Many of the partnerships applying to MMV have a strong industry or biotechnology component, providing significant grounds for optimism that a sustainable professional drug discovery programme can be initiated that will lead to drugs specifically targeted at populations in disease endemic areas.

Robert Ridley, manager of TDR’s Drug Discovery Research, is acting as Chief Executive Officer (CEO) of the Venture until the selection of a full time CEO. He is being assisted in his TDR drug discovery work by Richard Pink, who has a strong background in drug discovery with Hoffmann-La Roche.
TDR’s top scientific body meets
during the meeting. They reflected the
tial public health impact), were made
committee selected according to poten-
from the Final Report Series of TDR
Committees and emphasizing the post-
Pathogenesis and Genome Steering
mittee on Functional Genomics’, reflect-
STR) has become the ‘Steering Com-
Research is now known as ‘Interven-
behavioural research unit.  Applied Field
it will include a socioeconomic and be-
‘Basic and Strategic Research’ (STR); it
Applied Field Research is now known as ‘Intervention Development and Evaluation’ (IDE); it will be managed by a new committee formed of investigators and control experts. Additionally, the earlier ‘Parasite Genome Committee’ (in STR) has become the ‘Steering Committee on Functional Genomics’, reflecting closer collaboration between the Pathogenesis and Genome Steering Committees and emphasizing the post-genome agenda.

Four technical presentations, selected from the Final Report Series of TDR (best final reports from each scientific committee selected according to potential public health impact), were made during the meeting. They reflected the

comparative advantage and catalytic function of TDR. In the first, Steven Williams, of the Filarial Genome Resource Center, Smith College, USA, talked about the Filarial Genome Project and the identification of new drug targets and vaccine candidates. Under this project, over 6000 genes have now been identified. Mapping studies are well under way and functional genomic programmes have been initiated. The training and involvement of scientists from endemic countries being an important goal, scientists from Egypt, India, Indonesia and Uganda have received advanced training in DNA sequence analysis, database management, bioinformatics, cDNA and genomic library construction, and genome mapping.

Second was the presentation by Philip Ngai on ‘The role of technology transfer in the development of the Hong Kong Institute of Biotechnology Limited’. This private, non-profit organization aims to be a trailblazer for the biotechnology industry in Hong Kong SAR. The Institute first received a Partnership Grant from TDR in 1996 for work on manufacture of recombinant vaccines for parasitic diseases, and is now beginning to serve biotechnological development

activities in Hong Kong and the region - in areas such as Good Practice training in pharmaceutical manufacturing, and production of clinical trial (Phase I/II) grade material for regional and global use.

Third was the presentation by Sharon Fonn, from the University of Witwatersrand, South Africa, on ‘Health workers for change and the implications for prevention and control of tropical diseases’. Health Workers for Change is a series of workshops, which address provider-client relations - a vexed area of health service development - and seek to improve the quality of care, particularly for women. In two multicentre studies (in a number of African countries and Argentina), the series has proved robust and useful. Health workers enjoyed, and were invigorated by, the workshops, even in low resource settings; and provider-client relations, facility-level functioning and aspects of staff interrelationships all improved.

The fourth presentation, by Fabio Zicker from TDR, representing his former research group at the Federal University of Goias, Brazil, was on ‘Treatment of Trypanosoma cruzi

Continued on page 4
Rolling off to a quick start

WHO’s Roll Back Malaria (RBM) movement (see TDR news No. 58) has got off to a quick start along the road towards reduced malaria burden - by half by 2010, with further reductions in subsequent years. The main emphasis is on making sure that treatment is available at or near the home.

In close alliance with national authorities and other partners - the World bank, UNICEF, UNDP, other agencies and NGOs - six rapid in-country consultations were undertaken in late-1998 and early-1999, during which innovative approaches to increasing the resources available for rolling back malaria were explored. The movement is now building on this, in sub-regional consensus-building and inception meetings. Here, government officials and representatives of partner organizations are examining how best to address the malaria and health system situations, identifying mechanisms (with participation of research institutes) and key issues (e.g. policy with respect to drugs or bednets, or epidemics), so that countries can begin to put RBM into practice.

So far, inception meetings have taken place in Viet Nam (for the Mekong sub-region) and Alexandria (North Africa and Yemen) in March; in Abidjan (West Africa), Nairobi (East Africa and the Horn), Yaoundé (Central Africa) and Maputo (Southern Africa) during April, and in Delhi (South Asia) during May 1999. Others will shortly be held in the Amazon region, and Central America, and in Central Asia. The rest of 1999 will be a period of momentum building at country level. During this time, the different groups will consider how they can participate in the movement and what progress they can expect, particularly over the next two years; how to promote RBM action at national and local levels; how to build viable partnerships, if not already existing; and how RBM can be incorporated into, and contribute to improvements in, the health sector. Above all, they will look for common approaches and monitoring.

It is anticipated that, by the year 2000, RBM movements will be supported by national authorities and partners in at least 30 countries; baselines against which in-country groups can monitor subsequent progress will have been established, and the scenarios developed during the preparatory phase in late-1999 will have grown into activity plans.

Of the professional networks through which technical support will be offered, seven, mostly pertinent to Africa, had met by January of this year - these were the networks on drug and insecticide resistance; access to, and quality of, drugs; mapping of malaria and health care; prevention of epidemics; malaria in complex emergencies; needs assessment; and home management. The network on implementation of bednets will meet in October; and technical networks in other regions (outside Africa) will begin to function soon.

The RBM movement will also be supporting research and development. For instance, the New Medicines for Malaria Venture (MMV), a public/private partnership for development of new antimalarial drugs (targeted at populations most affected by the disease) established in October 1998, works under the umbrella of RBM. Investigations on the economic implications of malaria have also begun. Negotiations on public sector financing and low-cost production of malaria diagnostics have been initiated in collaboration with TDR, as have discussions with TDR and interested parties to support research and development of malaria vaccines.
Using malaria genome information

The *Plasmodium falciparum* genome project (sponsored by the US Department of Defense, Burroughs-Wellcome Fund, the Wellcome Trust and NIAID/NIH) is advancing at a great rate. The malaria research community can confidently expect to have access to almost all the principal data for identifying genes within the next 12-18 months, when the shotgun-sequencing phase of the project has been completed. Although it will take a further 2-3 years before a fully annotated representation of the genome of *P. falciparum* is available, it is time to consider the post-genome agenda that will derive from this project - to consider the tools that can be developed using the information.

To this end, several funding agencies have sponsored a series of workshops - covering microarrays, bioinformatics and genetic tools. The third in the series (genetic tools), in January of this year, was organized jointly by TDR and the European Union and held at the Novartis Foundation. It concentrated principally on the development and application of transfection technologies (how to get foreign DNA into the parasite, and how to get it integrated into the parasite DNA) in a number of *Plasmodium* species. Transformation of the malaria parasite will be capable of addressing many important biological questions such as erythrocyte invasion pathways, cytoadherence, and drug-resistance mechanisms. It will also enable better assessments to be made about drug targets and vaccine candidates.

During the workshop, current methodologies in malaria were looked at, as well as those of non-malarial systems (yeast, *Toxoplasma*, *Leishmania*). Some of the issues that remain to be overcome had been raised at an earlier meeting*; however, the workshop allowed the scientific and technical problems to be discussed in far greater depth. Particular issues that remain include:

- improving the efficiency of transformation (how easily we can get foreign DNA into the parasite).
- need for selectable markers (such as drug resistance markers, that enable us to select the parasites that have foreign DNA incorporated from those that don’t).
- how to turn genes on and off.
- the need for more work into better DNA vectors, to take foreign DNA into the parasite.

A number of organizational issues also remain to be overcome if the true value of the genome is to be fully realized. These will resolve if consortia and partnerships are developed to generate common tools and provide support to the scientific community. Several of the issues were addressed:

- it was felt that the worldwide nature of the malaria genome project should be maintained and that consortia should be global in nature - thus funding must be coordinated and directed appropriately.
- at the moment, to attempt to systematically delete all *Plasmodium* genes is impractical. It was suggested that knock-outs could however be carried out on a thematic basis rather than through a global approach - this will also aid the transfer of technology and allow for better phenotypic analysis of the resulting recombinant lines.
- data and reagents from consortia should be rapidly accessible by the research community and there should be ready access to tools as they are developed.

The scientific and technical challenges ahead - to better understand the biology of the parasite and utilize this information for the development of new tools such as drugs, vaccines and diagnostics remain immense. However, the progress being made in functional genomics in other species, such as yeast, *Drosophila* and *Caenorhabditis elegans*, provides ideas and mechanisms for proceeding. Genomic information and technologies for the study of gene function stand ultimately to have a huge impact on malaria control.


Separation of *P. falciparum* chromosomes in pulse-field gel. Lane 1: yeast standard (*S. cerevisiae*); lane 2: *P. falciparum* strain K1; lane 3: *P. falciparum* strain T9/96 K+.
A similar workshop to the one held recently in Ghana (see TDR news No. 58) - to train Asian physicians/scientists in Good Clinical Practice (GCP) to enable them to be clinical monitors for TDR supported clinical trials - took place in Wattana Village Resort and Mae Sot Hospital, Mae Sot, Thailand, April 5-10, 1998. This workshop was held jointly by WHO/TDR, UNAIDS, the Clinical Pharmacology Unit, Faculty of Tropical Medicine, Mahidol University, Thailand, and Pasteur Mérieux Connaught (PMC-France).

Twenty-one physicians and five scientists from eight countries - Thailand, Philippines, Cambodia, Viet Nam, Japan, India, Nepal and China - participated in the workshop, of which 11 were ultimately to be considered as potential clinical monitors for TDR.

Prior to the practical session, the participants were introduced to the concepts of product discovery and development, clinical trials (planning, design and conduct) and ICH (International Conference on Harmonisation of Technical Requirements for Registration of Pharmaceuticals for Human Use) GCP. One whole day was spent on Standard Operating Procedures for Clinical Monitors (produced in TDR).

The highlight of the workshop was the practical session, which reflected the actual activities of a Clinical Monitor. Three full days of practical work began with the planning and developing of clinical investigations, continued with assessing the site for potential studies, and concluded with an actual monitoring visit. Participants developed informed consent and case report forms (CRFs) for a given protocol, the contents of which were later discussed in depth, and conducted a pre-trial visit to Mae Sot hospital to assess the site for Phase II clinical trials (antimalarial pharmacokinetics) and/or Phase III trials (comparative antimalarial trials in adult patients with falciparum malaria). At the end of the site assessment, each participant gave a report.

As in the workshop held in Africa, GCP concepts were well accepted by all participants but ethical hurdles remained to be overcome. The biggest difficulty in conducting GCP trials in developing countries is to implement the standard informed consent procedures required by GCP. In fact, few patients can fully understand all the details about the study they are participating in, and there is little evidence that informed consent, as currently practised, provides protection against exploitation of the patient - the most effective measure against this seems to be careful scrutiny by the ethical committee(s)(IEC) or Institutional Review Board (IRB). This does not mean that ethical committees can replace informed consent procedures, but rather that the emphasis should be more on the function of the IEC/IRB than on the specific details of the informed consent form. In disease endemic countries (DECs), the IEC/IRB needs to take full responsibility for examining the experimental design, procedures to be employed, expertise of the investigators, and anything else important for protection of the patient. The IEC/IRB needs also to decide how consent is to be obtained, how detailed an explanation should be given to the patient, and how to ensure, as far as possible, that this explanation is understood in the context of the local culture.

Unfortunately, IECs/IRBs in DECs rarely satisfy the requirements of GCP guidelines. There is considerable variation in the composition and methods of working of ethical committees in these countries, and often the IRB cannot function fully independently as most of its members work in the institution concerned and may have conflicts of interest - as when a project belongs to the head of the Institution and members of the IRB feel compelled to approve the proposal.

Ethical standards for clinical research should be more or less the same every-where, no matter how big the differences in local beliefs and customs. Patients/subjects participating in research anywhere should have the same rights, and their welfare must be a top priority for researchers.

It is becoming more and more evident that we should pay attention to strengthening the IECs/IRBs in developing countries rather than try to pretend that all subjects participating in trials are fully aware of what is going on and that informed consents are fully valid. Usually, there is no procedure for monitoring the process of informed consent, but we should not be happy only to see participants’ signatures at the bottom of informed consent forms. All studies must be ethical and the basic rights of all subjects participating in a trial must be protected. This could be achieved through an effective IEC/IRB, where differences in local practice are acknowledged but standard ethical considerations remain.

Follow-up to the workshop will therefore be to strengthen the ethical committees in Asian countries to satisfy GCP requirements. A seminar on this activity is planned for August 2-4, 1999, in Bangkok. Participants will be IEC/IRB members from DECs. The Ministry of Public Health of Thailand will host the seminar in collaboration with WHO/TDR and SmithKline Beecham Biologicals.

For any drug trial, informed consent is essential for GCP, but it remains a problem for DECs.
In sickness or in health:
Joint Research Management Committee: a successful collaboration between TDR and the Ministry of Health in China

Guo Jiagang, Institute of Parasitic Diseases, Chinese Academy of Preventive Medicine, Shanghai, China

The Chinese Infectious and Endemic Diseases Control Project on Schistosomiasis, funded with US$ 153 million through the International Development Association World Bank Loan (US$ 71 million) and the Government of the People’s Republic of China (US$ 82 million), began in 1992 as a 5-year programme and was later extended to six. The project was executed by the Central Government Ministry of Health Office of Endemic Diseases Control and the Health Bureau in each of eight endemic provinces. The objective was to reduce the prevalence and intensity of schistosomiasis infection in humans and animals through interruption of transmission by mass chemotherapy and mollusciciding in high endemic areas and selective chemotherapy in medium and low endemic areas.

As part of the control project, a parallel, comparatively small, operational research programme was set up in collaboration with TDR. This programme was led by a Joint Research Management Committee (JRMC) with 11 members - seven experts from China and four international experts co-opted through JRMC - who provided guidance, reviewed research proposals, and distributed funds for specific research projects.

Between 1992 - 1997, a total of 245 projects were approved for funding out of more than 800 proposals submitted, the funding amounting to US$ 3 million. Most proposals were from the provinces; only a few were from national institutes and universities. All those approved were thoroughly examined and supervised by the Ministry of Health (MOH). As of April 1999, a total of 137 projects have been completed, 35 of which have been deemed of such quality and importance that special awards for the principal investigators have been recommended. Ten of these projects were presented at the JRMC final conference held in April in Wuhan, China.

During the existence of JRMC, seven workshops and a symposium were sponsored together with the MOH to help investigators formulate better research proposals and improve their abilities to select suitable study topics, design studies and assess the outcomes. Through these workshops, the quality of research has gradually improved, thanks to the continued analysis and revision of proposals. More than 20 qualified young researchers who were sent abroad for advanced studies, afterwards successfully initiated operational research projects. Opportunities for researchers to communicate with foreign experts have also increased; while improved design capabilities have led to better research approach, which itself has led to better schistosomiasis control. JRMC has thus made a contribution to improving the research and management of schistosomiasis control.

As a result of JRMC-sponsored activities, 278 theses have been published, 25 projects have been awarded prizes in interprovincial competitions and seven projects have generated patents. Most notable among the achievements are the advances in immunodiagnosis, including establishment of a National Reference Centre with provincial serum banks, use of artemisinin derivatives for prevention of schistosomiasis, methods for the surveillance of cercaria-infected water, and cost-benefit analysis of different strategies; in addition, a national schistosomiasis survey was carried out to evaluate the control project. Some research findings have already been integrated into control activities at the national level. For instance, when artemether was used as prophylaxis during the great floods of the Yangtze river in the summer of 1998, only very few health workers became infected with schistosomiasis despite constant contact with infected water. The results have stimulated international research on the use of artemether for prevention of S. mansoni and S. haematobium infections.

A less visible but perhaps more important outcome is the general contribution made by JRMC to the scientific culture, which has infused into control activities throughout the endemic areas. Building on 50 years of experience of schistosomiasis control in China with improved standards of research has allowed the impact of the disease to finally begin to ease. The traditional mode of isolated research has been broken down and novel disciplines such as health economy, social medicine and health education have been introduced into the field of schistosomiasis control. Workshops, training abroad and symposia have provided opportunities for outside contact and exchange, opening up prospects for improved schistosomiasis control through international collaboration. New techniques and methodology have been developed and implemented in the field within a short space of time, and new strategies have been tested and validated. Control approaches, combining both long- and short-term effects, have been designed.

It can be concluded that JRMC represents a new form of management of scientific research in China. For six years, the talents of promising researchers have been recognized and developed, resulting in a large, educated, trained, scientific workforce. These young scientists already play important roles in schistosomiasis control and research, and as they mature as researchers, their capacity for high-level study will help to streamline schistosomiasis control. This scenario reflects the creative and enthusiastic work of numerous professionals throughout the Chinese schistosomiasis network as well as the experience and hard work of the JRMC and the sustained expert input from TDR.

Errata: Eflornithine treatment

Apologies to our readers for two errors in the announcement about eflornithine treatment in TDR news No.58, page 6. It is the cost of treatment with eflornithine which has halved, not the cost of the drug as indicated by the title. Relapsing cases are those who have failed to be cured after treatment, not those who have become re-infected as indicated in the piece.
New WHO publications

**Control and Surveillance of African Trypanosomiasis**


This book provides a state-of-the-art review of what is currently known about African trypanosomiasis and the measures available for its treatment, surveillance, and control. Reflecting the consensus reached by an international group of experts, the report responds to the many obstacles confronting efforts to control the disease, such as the difficulty of detecting cases at an early stage, the need for laboratory confirmation of diagnosis, problems with current treatment, and why there is no vaccine. Throughout the report, an effort is made to identify the specific lines of experimental and operational research needed to improve control at least possible cost. There are sections devoted to clinical features, the parasite, the vector, treatment, epidemiology, tools for the implementation and evaluation of control programmes, training and research needs, as well as practical information e.g. treatment schedules, use of geographical information systems, and cost calculations for comparative analysis of different detection and treatment strategies.

Price: Developed countries: Sw.fr.23 / US$20.70 - Developing countries: Sw.fr.16.10

Available in English; French and Spanish in preparation.

**WHO Expert Committee on Specifications for Pharmaceutical Preparations**

Thirty-fifth Report

Technical Report Series, No. 885

This book provides a progress report on a number of WHO activities intended to support a comprehensive approach to the quality assurance of pharmaceutical products. It contains international guidelines and recommendations which, although of global relevance, are of particular importance in countries attempting to establish or strengthen a regulatory framework for pharmaceutical products. All recommendations share the ultimate goal of helping regulatory authorities safeguard the health of patients by protecting them from substandard or counterfeit products.

Amongst other things, the publication contains guidelines for Good Manufacturing Practice, including supplements to these on training of persons responsible for the release of batches of finished products for sale, and on manufacture of pharmaceutical excipients. Also included are guidelines for inspection of drug distribution channels as a means of ensuring that quality drugs reach patients, and a framework for promoting good pharmacy practices in community and hospital pharmacy settings.

Intended to assist drug regulators, those drafting legislation, and decision-makers, the guidelines should prove of immediate value to small national drug regulatory authorities with limited human and other resources.

Price: Developed countries: Sw.fr.35 / US$31.50 - Developing countries: Sw.fr.24.50

Available in English; French and Spanish in preparation.

**Quality Control Methods for Medicinal Plant Materials**

ISBN: 92 4 1545 10 0

This manual provides a collection of recommended test procedures for assessing the identity, purity, and content of medicinal plant materials. Intended to assist national laboratories engaged in drug quality control, the manual responds to the growing use of medicinal plants, the special quality problems they pose, and the corresponding need for international guidance on reliable methods for quality control. Recommended procedures - whether involving visual inspection or the use of thin-layer chromatography for qualitative determination of impurities - should also prove useful to the pharmaceutical industry and pharmacists working with medicinal plant materials.

Price: Developed countries: Sw.fr.35 / US$31.50 - Developing countries: Sw.fr.24.50

Available in English and French; Spanish in preparation.

These books are available from MDI/WHO

Please order from:

World Health Organization - Marketing and Dissemination - CH-1211 Geneva 27 - Switzerland

Direct fax: (+41) 22 791 4857 - E-mail:bookorders@who.ch

---

Call for proposals: Gender Sensitive Interventions

The overall aim of the Task Force on Gender Sensitive Interventions is to develop a conceptual framework and practical guidelines for incorporating gender considerations into tropical disease control policies and programmes. The Task Force therefore seeks projects that will contribute to this aim and, in particular, invites researchers to submit proposals for the following:

- Studies that develop and test methods for identifying potential gender inequities in the way tropical disease control programmes and services are designed, delivered, received and evaluated.
- Studies to develop and evaluate interventions that incorporate a gender perspective in tropical disease control.

The deadline for applications is 1 November 1999.

For further information, please contact Patricia Hudelson, Manager, Task Force on Gender Sensitive Interventions, TDR, World Health Organization, 2211 Geneva 27, Switzerland - E-mail: hudelsonp@who.ch - Fax (+41) 22 791 4774 - Tel (+41) 22 791 35 87

---

Interventions intégrant la distinction homme-femme

Le but général du Groupe spécial sur les interventions intégrant la distinction homme-femme consiste à développer un cadre conceptuel et des recommandations pratiques pour qu’il soit tenu compte des spécificités hommes-femmes dans les politiques et les programmes de lutte contre les maladies tropicales. Aussi le Groupe spécial est-il à la recherche de projets qui lui permettront d’atteindre ce but, et en particulier invite-t-il les chercheurs à soumettre des propositions dans les domaines suivants :

- Études visant à élaborer et tester des méthodes permettant d’identifier les inégalités potentielles entre hommes et femmes dans la façon dont les programmes et services de lutte contre les maladies tropicales sont conçus, distribués, reçus et évalués.
- Études visant à développer et évaluer des interventions qui tiennent compte des spécificités hommes-femmes dans la lutte contre les maladies tropicales.

Date limite de dépôt des propositions :

1er novembre 1999.

Veuillez contacter Patricia Hudelson, Administrateur, Groupe spécial sur les interventions intégrant la distinction homme-femme, TDR, Organisation mondiale de la santé, 2211 Geneva 27, Switzerland - E-mail: hudelsonp@who.ch - Fax (+41) 22 791 4774 - Tel (+41) 22 791 35 87
Research Training Grants in 2000

TDR invites applications for the award of Research Training Grants (RTGs), to be initiated in the year 2000, from nationals of developing disease endemic countries, who work in developing countries and whose research interests are related to one or more of the TDR target diseases. RTGs are awarded on a competitive basis for studies leading to a postgraduate degree, or for acquiring specialized skills.

TDR’s first priority are applicants from Least Developed Countries and countries with less developed research capacity. A target of 35-40% has been set for the selection of candidates from these countries. To achieve gender balance, applications are especially encouraged from women. Currently, over 35% of successful applications are from women, and TDR would like to increase this percentage. In general, applications from researchers requesting support for training in their own country or region are given priority; over the past decade, the percentage of applicants funded for local or regional training has increased from 25% to 75%. Applicants requesting local/regional training may also include a short attachment abroad (about 6 months) to acquire skills related to their thesis research not available within their own country. Applications are welcomed from individuals working in ministries of health with responsibility for planning, executing and/or evaluating disease control programmes related to TDR target diseases. Finally, preference is given to applicants under the age of 35 years, as our experience has shown that younger scientists follow a more productive research career path after their training.

The Call for Applications may be obtained from ‘TDR Communications’ by e-mail from <tdrnews@who.ch>, or via the Internet at <http://www.who.ch/tdr>.

Bourses de formation à la recherche en 2000

Le programme spécial (TDR) adresse cet appel de candidatures pour l’attribution de bourses de formation à la recherche (RTG) - qui débuteront en l’an 2000 - aux ressortissants de pays d’endémie en développement (DEC) qui travaillent dans un pays en développement et dont les recherches concernent une ou plusieurs des maladies-cibles du TDR. Ces bourses, qui sont mises au concours, donnent accès à des études préparant à un diplôme postuniversitaire ou une spécialisation.

La préférence du TDR ira aux candidats originaires de pays parmi les moins avancés et des pays aux capacités de recherche les moins développées. La cible de 35-40% a été fixée pour l’octroi de bourses aux candidats de ces pays. Dans un souci d’équilibre entre hommes et femmes, les candidatures féminines sont particulièrement encouragées. Actuellement, plus de 35% des bourses sont attribuées à des femmes et le TDR souhaiterait augmenter ce pourcentage. Les candidatures de chercheurs souhaitant étudier dans leur propre pays ou région sont généralement prioritaires; au cours de ces dix dernières années, le pourcentage des bourses accordées pour une formation locale ou régionale est passé de 25 à 75%. Les candidats souhaitant suivre une formation locale/régionale peuvent aussi demander un bref séjour complémentaire à l’étranger (+/- 6 mois) pour étudier une discipline en rapport avec leur recherche mais non enseignée dans leur pays. Les personnes qui travaillent pour le ministère de la santé et sont chargées de la planification, de la mise en œuvre et/ou de l’évaluation de programmes de lutte contre une ou plusieurs des maladies en rapport avec les maladies-cibles du TDR peuvent faire acte de candidature. Enfin, la préférence est accordée aux candidats de moins de 35 ans, l’expérience ayant montré que les chercheurs plus jeunes sont ensuite des chercheurs plus productifs.

L’appel de candidature peut être obtenu sur demande à l’unité “Communications” du TDR - OMS - 20, Avenue Appia, 1211 Genève 27, Suisse, par courrier électronique tdrnews@who.ch ou sur internet http://www.who.ch/tdr.

New Research Capability Strengthening Grant forms

The Research Capability Strengthening (RCS) programme area now has simplified forms for submission of applications for Research Capability Strengthening Grants and Re-entry Grants. The updated forms, and RCS and other TDR workplans, are available from ‘TDR Communications’, by e-mail from <tdrnews@who.ch>, or via the Internet at <http://www.who.ch/tdr>. In addition, Guidelines for Ethical Clearance and an Ethical Clearance Checklist are also available and should be reviewed carefully. Incomplete or late applications, or applications without appropriate ethical consideration, will be subject to rejection or delay. The appropriate RCS secretariat for each grant format is listed on the RCS workplan, and these staff are available to answer questions or provide comments on draft proposals prior to formal submission.

Nouveaux formulaires de subvention de renforcement du potentiel de recherche

La composante Renforcement du potentiel de recherche (RCS) a simplifié ses formulaires de candidature concernant les subventions de renforcement du potentiel de recherche et les bourses de Formation à la recherche.

Les formulaires actualisés, ainsi que les plans de travail de RCS et du TDR peuvent être obtenus à l’unité “Communications” du TDR - OMS - 20, Avenue Appia, 1211 Genève 27, Suisse, par courrier électronique tdrnews@who.ch ou sur internet http://www.who.ch/tdr. En outre, des principes directeurs applicables à l’approbation des projets au plan de l’éthique ainsi qu’une liste récapitulative, sont aussi disponibles et devront être pris en considération. Des formulaires incomplets ou envoyés avec retard, ou des offres de candidatures qui n’auraient pas été approuvées au plan éthique, risquent de se voir refusées ou d’entraîner des retards. On trouvera dans le plan de travail de RCS, la liste des fonctionnaires compétents pour chaque type de formation et à qui l’on pourra s’adresser pour toutes questions ou commentaires concernant les propositions avant de les soumettre officiellement à l’OMS.
Chile and Brazil to be certified free of transmission of Chagas disease

The Eighth Meeting of the Intergovernment Commission of the Southern Cone Initiative met in Tarija, Bolivia, from 16-18 March 1999. Government representatives from the ministries of health of Argentina, Bolivia, Brazil, Chile, Paraguay, Peru and Uruguay were present at the meeting, as well as representatives from multilateral and bilateral agencies such as UNDP, the Inter American Development Bank (IDB), and the Canadian International Development Agency (CIDA).

The epidemiological and entomological data discussed at the meeting indicate that Chile and Brazil will be certified free of vectorial and transfusional transmission of Chagas disease in 1999 and 2000 respectively. In Chile, the overall infestation rate for the country has been reduced from 3.2% in 1994 to 0.9% in 1998, a reduction of 72%. In 1998, just 113 houses were found to be infested and only 55 T. infestans insects were captured in the whole country! Also in 1998, the infection rate in 0-10 year olds was 0.38%, a reduction of 94% compared to the 5.9% found in 1982 (see graph). An independent commission will visit the country in November 1999 to certify the interruption of transmission.

In Brazil in 1998, the prevalence of human T. cruzi infection in 7-14 year olds was 0.04% as compared with 0.17% in 1997. There has been a 99.1% reduction since 1980, when age seroprevalence rates first became available for the country (see graph). Serological tests in a limited number of 0-4 year olds in 1998 indicated that seroprevalence in this age group is 0.0% - which is evidence that vectorial transmission of Chagas disease has been interrupted. If these results are confirmed, this would be a major accomplishment in the history of public health - representing an enormous effort by an endemic country to liberate its people from a source of suffering and disability. Only 485 T. infestans insects were captured by the control programme in the whole country in 1998 (whereas ten years ago, three times as many insects would have been found in a single house) - an average of 1 insect per 10 000 houses surveyed, i.e. an infestation rate far below the minimum required for effective transmission of the parasite in humans. The international commission in charge of evaluating interruption of transmission will visit Brazil next year to certify the country as free of transmission.

![Graph: Interruption of transmission Brazil and Chile 1980 - 1998](chart)

Source: Ministries of Health, Brasilia and Santiago, 1999
### Steering Committee and Task Force Meetings

<table>
<thead>
<tr>
<th>Meeting Date</th>
<th>Deadline for proposals</th>
</tr>
</thead>
</table>

#### Basic and Strategic Research

<table>
<thead>
<tr>
<th>Task Force</th>
<th>Meeting Date</th>
<th>Deadline for proposals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parasite Genome (GENOME)</td>
<td>20-23 Sep 99</td>
<td>20 Jul 99</td>
</tr>
<tr>
<td>Pathogenesis (PATHO)</td>
<td>20-22 Sep 99</td>
<td>20 Jul 99</td>
</tr>
<tr>
<td>Molecular Entomology (BCV)</td>
<td>06-08 Sep 99</td>
<td>06 Jul 99</td>
</tr>
<tr>
<td>Immunology of Mycobacterial Diseases (IMMYC)</td>
<td>Apr 2000 *</td>
<td>Feb 2000 *</td>
</tr>
</tbody>
</table>

#### Product Research and Development

**Drugs Discovery Research (DDR)**  
Apr 2000 * | Feb 2000 *

**Vaccines Discovery Research (VDR)**  
May 2000 * | Mar 2000 *

#### Intervention Development and Evaluation (IDE) (formerly Applied Field Research)

**Intervention Development and Evaluation (IDE) (formerly Applied Field Research)**  
Feb 2000 * | Dec 1999 *

<table>
<thead>
<tr>
<th>Task Force</th>
<th>Meeting Date</th>
<th>Deadline for proposals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insecticide Impregnated Bednets (NETS) ***</td>
<td>Sep 99 *</td>
<td></td>
</tr>
<tr>
<td>Severe Malaria (SEVERE)</td>
<td>Mar 2000 *</td>
<td></td>
</tr>
<tr>
<td>Malaria Home Management (HOME-MGT)</td>
<td>Dec 99</td>
<td></td>
</tr>
<tr>
<td>Gender Sensitive Interventions (GENDER) ***</td>
<td>Sep 99</td>
<td></td>
</tr>
<tr>
<td>Community Directed Treatment of Filariases (COMDT)</td>
<td>Sep 99 *</td>
<td></td>
</tr>
<tr>
<td>Applied Research on Chagas Disease (CHA)</td>
<td>Jul 99</td>
<td></td>
</tr>
<tr>
<td>Chemotherapy of Leprosy (THEMYC)</td>
<td>Dec 99 *</td>
<td></td>
</tr>
</tbody>
</table>

#### Research Capability Strengthening

<table>
<thead>
<tr>
<th>Task Force</th>
<th>Meeting Date</th>
<th>Deadline for proposals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malaria Research Capability Strengthening in Africa (MIM)</td>
<td>06-11 Mar 2000</td>
<td>6 Dec 2000</td>
</tr>
</tbody>
</table>

*Tentative  ** IDE Task Forces may call for specific research proposals at any time of the year according to their workplans  *** Renewals only
TDR Information and Workplans

(Please tick boxes for documents you wish to receive)

Language: ☐ English ☐ French

☐ TDR’s Management Structure  ☐ Drug Discovery Research
☐ Applied Field Research in TDR  ☐ Vaccine Discovery Research
☐ Strategic Research in TDR  ☐ Intervention Development and Evaluation
☐ TDR’s Product Research and Development  ☐ Gender-sensitive Interventions
☐ Product Research and Development  ☐ Malaria-Home Management
☐ Research on Drug Resistance and Policies

TDR Workplans

Basic & Strategic Research
☐ Parasite Genome
☐ Pathogenesis
☐ Molecular Entomology

Product Research and Development
☐ Applied Research on African Trypanosomiasis
☐ Leprosy
☐ Immunology (IMMYC)
☐ Chemotherapy (THEMYC)

Research Capability Strengthening
☐ Grant information and workplan

Information for potential applicants
☐ Schistosomiasis research grants

To our readers

We are unfortunately unable to accept for publication in TDR news announcements (for meetings, new programmes, institutions, publications, etc.) which readers send us. Announcements which relate to research on tropical diseases would clearly be of interest to our readers. However, because of limited space in the newsletter, we regret that we can publish only those concerning events in which TDR is directly involved.