

News and Notes

LEPRA creates new fund in memory of Dick Rees

LEPRA staff, together with over a hundred others from the leprosy world, commemorated the death of Dr Dick Rees with a memorial service at the National Institute for Medical Research in London in February. Dr Rees played such a central role in the leprosy field that LEPRA and its Executive Board have decided to honour his memory by instituting a fund which will allow us to support those working in leprosy to undertake useful training in the UK or elsewhere. In addition to the support already provided to Medical Elective Students from this country, the fund will enable one person each year to undertake a longer period of study aimed at strengthening their capacity to contribute to anti-leprosy work in their country. The new fund will be called the Dick Rees Memorial Fund.

WHO publication: ‘Tuberculosis Control and Medical Schools’

WHO/TB/98.236 of the above title is a Report of a workshop, Rome, Italy 29–31 October, 1997 (paperback, 53 pages). Following a Foreword by Sir John Crofton, Emeritus Professor of Respiratory Diseases and Tuberculosis, University of Edinburgh, United Kingdom, the *Abstract* reads as follows:

The Global Tuberculosis Programme of WHO responded to the World Health Assembly’s resolution (WHA 48.8) for change in medical education and medical practice by setting up a workshop on ‘Tuberculosis Control and Medical Schools’. The workshop, held between 29 and 31 October 1997 in Rome, was attended by 25 participants from 16 countries of the six WHO Regions, and whose disciplines covered microbiology, clinical chest medicine, infectious disease, radiology, public health and medical education. Most of the participants currently hold or have held leading positions in medical schools and/or in National Tuberculosis programmes.

Considering the large spectrum of responsibilities that future doctors should assume, and in line with the evolution of health systems worldwide, discussion was held on what the doctor’s position should be in tuberculosis control.

A list of required knowledge, skills and attitudes essential for a doctor to manage tuberculosis was agreed. Various options in educational strategy were considered, the first choice being a comprehensive module integrating all aspects of tuberculosis and tuberculosis control. Taking also into account the accommodation of learning needs relative to other important public health concerns, participants stressed the importance of proper evaluation of practical skills and attitudes before graduation.

To initiate, achieve and sustain the required changes in the medical curriculum and in medical practice, the workshop recommended that a ‘task force for tuberculosis’ be set up in each medical school. The remit of this task force should extend eventually into medical practice and post-graduate training in close association with the Ministry of Health, the National Tuberculosis Programme, medical professional organizations and other national bodies, organizations and/or institutions in the community.

At all stages, the task force should recognize the importance of partnership in the process of change in health care delivery, medical practice and medical education and should seek to create appropriate partnerships.

It was recommended that WHO should be a catalyst and a resource for developing task forces at regional and country levels.

Towards the closing pages, the *Recommendations* are the following:

- 1 In each medical school a task force for tuberculosis should be set up in order to produce changes in the curriculum which will ensure that the graduates have the knowledge, skills and attitudes essential to the proper management of tuberculosis in the individual patient as well as in the community.
- 2 The task force of the medical school should be comprised of representatives of all those groups involved in teaching e.g., Bacteriologist, Histopathologist, Chest Physician or Infectious Disease Physician or General Physician with expertise in tuberculosis, Radiologist, Public Health Physician or representative of the National Tuberculosis Programme and representatives of the medical students.
- 3 The task force should use this document as the basis for its deliberations and plans of action for improving the curriculum for tuberculosis and the evaluation of the graduates.
- 4 The task force should encourage partnerships between medical schools, Government Health Authorities, Medical Professional Associations and concerned organizations and groups in the community in achieving, sustaining, evaluating and updating the changes in medical education and medical practice.
- 5 These partners should extend their remit to include continuing post-graduate education, practice guidelines, and performance assessment for doctors as well as the organization of health care locally and regionally.
- 6 WHO should act as the catalyst for these plans for change. Ministers of Health, National Tuberculosis Programme Coordinators/Managers, Deans of medical schools, presidents of relevant medical professional associations and relevant NGOs should be sent this report with a covering letter from WHO. WHO Regional Offices will identify and inform other key personnel and organizations, at country and regional level.

These recommendations should, if translated into action, result in improved detection of patients with smear positive tuberculosis, improved cure rates and reduction of the proportion of resistant and multi-drug tuberculosis.

These important recommendations, with great emphasis on the creation and maintenance of 'task forces' in all medical schools, clearly deserve serious consideration. Although this report was not published until 1998, it may not be too soon to say that feedback on progress, including success or failure, with regard to these recommendations, would be valuable. We would be glad to hear from readers, especially those working in, or connected with medical schools.

Editor

Donors fail to meet commitments

Developed nations have failed to come up with the funding they promised for reproductive health programmes in the developing world. Population Action International (PAI), an NGO specializing in reproductive health, says that developing countries agreed to meet one-third of the total costs of the 20-year programme for the developed world, which was drawn up at the 1994 Cairo International Conference on Population & Development. In total the donor nations agreed to provide US\$5.7 billion by the year 2000. However, only \$1.4 b has so far been paid.

PAI's new study—'Paying their fair share? Donor countries and international population assistance'—profiles 20 major donor nations and concludes that only a few of them (Denmark, the Netherlands, Norway and Sweden) have either reached or are close to meeting their funding goals. The US and Japan account for \$2.4 billion of the \$4.3 billion shortfall.

One of the report's authors says, 'More than three million women and men die each year from reproductive health-related causes, including HIV/AIDS, and nearly all of them are in developing

countries. Reproductive health needs are growing, due to the AIDS epidemic and the record numbers of young people entering their childbearing years. These are facts that donor community cannot ignore.'

Report of WHO/TDR Scientific Working Group on the Utilization of Genomic Information for Tropical Disease Drug and Vaccine Discovery: Geneva 18–20 February, 1998

This 75-page document (TDR/Genomics/98.1) comes from the *UNDP/World Bank/WHO Special Programme for Research and Training in Tropical Diseases*. The Summary reads as follows:

The meeting reported in this document brought together scientists, administrators and managers from both academia and industry, and from both North and South, to discuss the impact of genomics on the future of drug and vaccine discovery in tropical diseases.

The meeting was timely given the status of functional genomic research into infectious disease pathogens and three of the four components of TDR's mission, namely: (i) to stimulate strategic research, particularly in the areas of genome research and pathogenesis, on tropical disease pathogens; (ii) to promote research capability strengthening in disease-endemic countries; and (iii) to promote the discovery and development of new products (drugs and vaccines) against tropical diseases.

The meeting programme and discussion searched for ways in which the tropical disease scientific community, and TDR, could link the scientific advances in functional genomics, currently occurring in both academia and industry, into a coherent strategy for promoting stronger drug and vaccine discovery research for tropical diseases.

The meeting was divided into five main sessions:

- Sequencing and bioinformatics
- Tools to assist with analysis of genomic information
- Strategic application of tools for drug discovery
- Genetic manipulation of organisms to assess gene function
- Strategic application of tools for vaccine discovery

A round table discussion of these topics focused on several main themes:

- The need for further sequencing efforts
- Appropriate scientific and managerial strategies for functional genomics
- Converting genomic information into drug and vaccine discovery projects
- Training and research capability strengthening in functional genomics

Several key conclusions were drawn from this discussion:

- There is a continuing need to promote genomic sequencing efforts
- There is a need for TDR, together with other agencies, to promote the appropriate curatorship of sequence information and its annotation
- There is a need for TDR, together with other agencies, to create repositories of reagents to assist functional genomic research
- There is a need for TDR to actively promote activities in functional genomics
- There is a need for TDR to fund the development of new and improved technologies that will facilitate functional genomics research in its target diseases
- Within TDR, there is a need to ensure effective coordination between genomic research, pathogenesis research and drug and vaccine discovery
- There is a continuing need to engage with industry where possible and appropriate to maximise the translation of genomics research into appropriate product R&D
- There is a need for appropriate training and institutional strengthening in disease endemic countries in functional genomics, especially bioinformatics

- TDR should investigate the role it has to play in promoting appropriate partnerships in the field of bioinformatics.

This document signifies the importance of functional genomic research for tropical diseases. We hope it will serve as an initial source document for scientists and administrators who are involved, or wish to become involved in this field, and hope that it may help identify appropriate contacts for further discussion between interested individuals.

Many people outside the TDR secretariat contributed to the success of the meeting and the preparation of this document. In addition to those attending, speaking and chairing sessions, the rapporteurs deserve a special note of thanks. All contributors are listed in the appendices documenting the meeting programme and the list of participants. Special mention should go to Jennie Blackwell, who helped tremendously in the initiation, planning and organizing of the meeting.

Anybody wishing further information or wishing to offer suggestions on the general topic of TDR genomic and post-genomic research should contact Dr Boris Dobrokhotov (dobrokhotovb@who.ch) or Dr Robert Ridley (ridley@who.ch).

Deciphering the biology of *Mycobacterium tuberculosis* from the complete genome sequence

The above is the title of a publication of very considerable importance which appeared in *Nature*, Volume 393 on 11 June 1998, by S. T. Cole of the Unité de Génétique Moléculaire Bactérienne, Institut Pasteur, Paris, France and 41 co-authors from centres in the United Kingdom, the USA and Denmark.

The *Summary* reads as follows:

Countless millions of people have died from tuberculosis, a chronic infectious disease caused by the tubercle bacillus. The complete genome sequence of the best-characterized strain of *Mycobacterium tuberculosis*, H37Rv, has been determined and analysed in order to improve our understanding of the biology of this slow-growing pathogen and to help the conception of new prophylactic and therapeutic interventions. The genome comprises 4,411,529 base pairs, contains around 4,000 genes, and has a very high guanine + cytosine content that is reflected in the biased amino-acid content of the proteins. *M. tuberculosis* differs radically from other bacteria in that a very large portion of its coding capacity is devoted to the production of enzymes involved in lipogenesis and lipolysis, and to two new families of glycine-rich proteins with repetitive structure that may represent a source of antigenic variation.

And the *Introduction*:

Despite the availability of effective short-course chemotherapy (DOTS) and the Bacille Calmette-Guérin (BCG) vaccine, the tubercle bacillus continues to claim more lives than any other single infectious agent. Recent years have seen increased incidence of tuberculosis in both developing and industrialized countries, the widespread emergence of drug-resistant strains and a deadly synergy with the human immunodeficiency virus (HIV). In 1993, the gravity of the situation led the World Health Organisation (WHO) to declare tuberculosis a global emergency in an attempt to heighten public and political awareness. Radical measures are needed now to prevent the grim predictions of the WHO becoming reality. The combination of genomics and bioinformatics has the potential to generate the information and knowledge that will enable the conception and development of new therapies and interventions needed to treat this airborne disease and to elucidate the unusual biology of its aetiological agent, *Mycobacterium tuberculosis*.

The characteristic features of the tubercle bacillus include its slow growth, dormancy, complex cell envelope, intracellular pathogenesis and genetic homogeneity. The generation time of *M. tuberculosis*, in synthetic medium or infected animals, is typically ~24 hours. This contributes to the chronic nature of the disease, imposes lengthy treatment regimens and represents a formidable obstacle for researchers. The state of dormancy in which the bacillus remains quiescent within infected tissue may reflect

metabolic shutdown resulting from the action of a cell-mediated immune response that can contain but not eradicate the infection. As immunity wanes, through ageing or immune suppression, the dormant bacteria reactivate, causing an outbreak of disease often many decades after the initial infection. The molecular basis of dormancy and reactivation remains obscure but is expected to be genetically programmed and to involve intracellular signalling pathways.

The cell envelope of *M. tuberculosis*, a Gram-positive bacterium with a G+C-rich genome, contains an additional layer beyond the peptidoglycan that is exceptionally rich in unusual lipids, glycolipids and polysaccharides. Novel biosynthetic pathways generate cell-wall components such as mycolic acids, mycocerosic acid, phenolthiocerol, lipoarabinomannan and arabinogalactan, and several of these may contribute to mycobacterial longevity, trigger inflammatory host reactions and act in pathogenesis. Little is known about the mechanisms involved in life within the macrophage, or the extent and nature of the virulence factors produced by the bacillus and their contribution to disease.

It is thought that the progenitor of the *M. tuberculosis* complex, comprising *M. tuberculosis*, *M. bovis*, *M. bovis* BCG, *M. africanum* and *M. microti*, arose from a soil bacterium and that the human bacillus may have been derived from the bovine form following the domestication of cattle. The complex lacks interstrain genetic diversity, and nucleotide changes are very rare. This is important in terms of immunity and vaccine development as most of the proteins will be identical in all strains and therefore antigenic drift will be restricted. On the basis of the systematic sequence analysis of 26 loci in a large number of independent isolates, it was concluded that the genome of *M. tuberculosis* is either unusually inert or that the organism is relatively young in evolutionary terms.

Since its isolation in 1905, the H37Rv strain of *M. tuberculosis* has found extensive, worldwide application in biomedical research because it has retained full virulence in animal models of tuberculosis, unlike some clinical isolates; it is also susceptible to drugs and amenable to genetic manipulation. An integrated map of the 4.4 megabase (Mb) circular chromosome of this slow-growing pathogen had been established previously and ordered libraries of cosmids and bacterial artificial chromosomes (BACs) were available.

Definitive guide to the United Kingdom charity sector

CaritasData Ltd, Kemp House, 152–160 City Road, London E1V 2NP (fax: 0171-250-3050; e-mail info@caritasdata.co.uk) are currently advertising their 1999 Guide to the top 3000 charities in the UK, together with a CD listing 10,000 charities. The promotional brochure describes these sources of information as essential to–

- identify grantmakers sympathetic to your cause
- contact key personnel in other charities
- compare your performance to the sector
- locate the top performing charities
- target known corporate donors
- pinpoint and approach professional advisers
- target thousands of named charity executives
- see how your company performed last year
- keep in touch with the sector
- study the top charity performers

New publication: 'Tuberculosis in Childhood'

Publishers from South Africa (see below) have just announced the availability of this book, with the following description:

Tuberculosis is today more prevalent in the world than ever before. Fast-growing populations in

countries with poor resources continue to be the breeding ground for the world's most wide-spread epidemic, which is further aggravated by co-infection with HIV/AIDS and the emergence of multi-drug resistant tuberculosis. Children represent a significant proportion of the case-load, and with the increasing demands on health care services in high-prevalence regions, special strategies to effectively diagnose and manage tuberculosis in this group are required.

In this book a comprehensive overview is presented of tuberculosis in childhood. Although special attention is given to dealing with the disease in high-prevalence situations in Southern Africa, its applicability is universal. Modern approaches to clinical and laboratory diagnosis, prevention and treatment are explained in practical fashion, which allows the book to be used as a manual in both the clinical and public health settings. On the other hand, fully referenced, state-of-the-art reviews on bacteriology, immunology, epidemiology and the pathogenesis of tuberculosis in children make it an ideal textbook for students in medical and related professions.

Further information: J. L. van Schaik Publishers, PO Box 12681, Hatfield, Pretoria, 0028, Attention Mary-Ann Foster Tel +27 12 342 2765, Fax +27 12 43 3563

Does anyone use the Internet?

The Internet information service HealthNet is now being operated in 23 sub-Saharan countries but it seems not to be widely used.

HealthNet is a major initiative run by the SatelLife organization. African health professionals with electricity, a telephone line and a suitable computer can use HealthNet to send and receive electronic mail and gain access to 'Websites' where they can look up information on health topics as required. Telecommunication links are made via satellite.

An Eritrean, Resoum Kidane, who is currently a student in the UK, contacted 130 health professionals and asked them what they knew of HealthNet. Those approached were either African health professionals taking postgraduate courses in the UK or subscribers to AHILA-NET, a discussion group, which also uses the Internet. Only 49 responded, of whom only 19 had ever heard of HealthNet. Most of the 19 were people working in libraries. Those health professionals who used HealthNet gave it a low satisfaction score, although health librarians rated it more highly. The information source most favoured by health professionals was *Child Health Dialogue*.

Mr Kidane believes the lack of information on tropical diseases and rural healthcare available through HealthNet is responsible for the unpopularity of the service. He would like to see HealthNet carry more appropriate information and for steps to be taken to enable health workers in rural areas to gain access to it.

- Mr Kidane's study, though based on a very small sample, raises important issues: can such a service reach the majority of front-line healthcare providers and does the information presently made available match the needs of those for whom it is intended? Readers views and experience would be welcomed.

Editor

More Topics in International Health: The Wellcome Trust

The following is taken from the latest edition of *Wellcome News*, Issue 17, Q4, 1998:

The Wellcome Trust has just released four new CD-ROMs in its 'Topics in International Health' series, covering leprosy, schistosomiasis, diarrhoeal diseases and tuberculosis. The CDs provide interactive and highly illustrated training modules for health professionals in the developing world.

Since the launch of the first four titles in the 'Topics in International Health' series in April 1998,

CD-ROMs have been acquired by more than 1000 users in 52 countries. Critical opinion has also been favourable—writing about the malaria disk in the September issue of *Parasitology Today*, Sylvia Meek commented: 'This CD-ROM is of a very high standard and should be an essential tool for all courses on malaria and for malaria-control programmes.'

One of the most satisfying aspects of the series' success is the integration of the disks into coordinated international disease control programmes. In November, Pfizer and the Edna McConnell Clark Foundation announced the setting up of the International Trachoma Initiative (ITI), which is dedicated to eliminating the world's leading cause of preventable blindness. The ITI's Program Director, Jeff Mecaskey, has taken delivery of 50 copies of the trachoma disc. Speaking from his New York office, Jeff explained how the 'Topics in International Health' series was a part of the strategy to help eliminate trachoma: 'The ITI has a commitment to evidence-based decision making, but we had to find a resource to enable our national and international partners to remain current with the latest thinking about trachoma and its control. We expect that the Wellcome Trust trachoma CD-ROM will do just that. Because it is self-directed learning, the CD-ROM will enable these partners—whether they work in Vietnam or Vienna—to develop a common body of knowledge tailored to their own specific needs.'

As with the first disks, the four newly published titles have all been produced at the Wellcome Trust by the Tropical Medicine Resource team. The content of the disks is designed, written and edited in-house in close collaboration with internationally respected subject experts and advisers. The result is a thoughtfully presented and scientifically rigorous collection of images and tutorials. The development of the series is a dynamic process and the newest titles have evolved in response to comments from users. The new disks include more computer animations and video clips than the first titles.

All eight disks in the 'Topics in International Health' series—malaria, trachoma, sexually transmitted diseases, sickle cell disease, leprosy, schistosomiasis, diarrhoeal diseases and tuberculosis—are available through the Wellcome Trust's publishing partner for this project, CABI Publishing: Tel: +44 (0) 1491 832111; Fax: +44 (0) 1491 829292.

Chris Coyer, Head of the Tropical Medicine resource.

Wellcome News is published 4 times yearly and is available free of charge: apply to Marketing Department, Wellcome Trust, 183 Euston Road, London NW1 2BE, United Kingdom. Fax: +44-171-611-8416. E-mail: marketing@wellcome.ac.uk.

New publication: 'Tuberculosis. An Interdisciplinary Perspective'

Imperial College Press describe this publication, due out in March 1999, as follows:

The fact that the World Health Organization has declared tuberculosis a 'global emergency' indicates the serious inadequacy of the ways in which the control methods at our disposal are used. Several books on tuberculosis have been published in recent years, but none have taken a deep and detailed look at the 'holistic' aspects of global tuberculosis control, even though international agencies are increasingly aware of the importance of the numerous factors other than the design and efficacy of therapeutic drug regimens. This unique book fills that gap. Although it deals specifically with tuberculosis, the principles outlined and discussed are relevant to many other areas of global medicine, including the ever-growing problem of HIV/AIDS.

The book is aimed principally at those involved in the design, establishment and management of disease control programmes at international, national and local levels, and also at a more general readership of epidemiologists, public health officers, community psychologists, and others interested in understanding the human dimension of disease control.

Contents include: the global burden of tuberculosis; the politics of tuberculosis: public health and human rights; current control strategies; the economics of diagnosis and management; sociocultural

dimensions; the impact of HIV; tuberculosis in ethnic minorities; gender issues; health sector reform; educational approaches to tuberculosis control.

Editors: John D. H. Porter (London School of Hygiene & Tropical Medicine), John M. Grange (Imperial College).

200 pp (approx.) Pub date: Spring 1999
1-86094-143-5 US\$42 £28

Further information and ordering: World Scientific Publishing (UK) Ltd, 57 Shelton Street, Covent Garden, London WC2H 9HE. Fax: +44-171-836-2020.

AIDS cases soar

World AIDS Day (1st December) saw the publication of new UNAIDS figures indicating that the number of people infected with HIV globally rose 10% during 1998. Sub-Saharan Africa remains the hardest hit region; nearly 12 million Africans have now died in the epidemic. Although AIDS hit southern Africa relatively recently, the most dramatic rise in infections is taking place in this part of the continent.

Amongst the issues discussed in the UNAIDS report is the role of war in the spread of HIV; before the conflict in Rwanda urban and rural infection rates were 10% and 1% respectively but now both exceed 11%.

Also notable is the widespread reluctance of Africans to be tested for HIV. For example, over 13,000 pregnant women in Côte d'Ivoire were offered testing as part of interventions to increase their chances of having a healthy baby, but fewer than half wanted to know their HIV status. Most Africans with HIV/AIDS are also reluctant to admit that they have the infection and, in one study, only 10% of people caring for family members with HIV at home were prepared to admit that they were infected. Dr Peter Piot, head of UNAIDS, said: 'One might think that in a country with a quarter or a third of the population infected people would become more open about the epidemic. Experience teaches us that this doesn't happen automatically. The silence needs to be broken'.

Other issues of great concern include the growing number of orphans and the rise infant mortality which is occurring in many African countries. The impact on adolescents and young adults is also serious; globally half of new infections are in 15–24-year-olds and 10% are in under-15s.

There are some hopeful signs. Condom use is increasing in several African countries; in Senegal the percentage of men under 25 using condoms with non-regular partners has gone up from 5% to 65% within 6 years; amongst women it rose from 5% to 25%. UNAIDS once again singles out Uganda as an example to the whole world for its openness on AIDS and its commitment to action on both prevention and care.

- The progress of AIDS has by no means been halted in the rest of the world. In some regions, for example Eastern Europe and Latin America, it is still largely confined to what UNAIDS calls 'marginalized groups'. However, in India it has moved from these groups, and from urban to rural areas, to be 'firmly embedded' in the population as a whole. In North America and western Europe new infection rates have levelled off but show no sign of declining. In these countries, however, the death rate has fallen dramatically as patients have access to expensive treatments that greatly prolong their lives.

A Directory of History of Medicine Collections, USA

The ninth edition of this Directory, 1999 has recently been compiled, listing information on collections in the USA, and including a few from other countries. The preface reads as follows:

The 93 collections described in this booklet provide research, reference, and interlibrary loan services to

scholars interested in the history of the health sciences, including medicine, dentistry, veterinary medicine, nursing, and pharmacy. While the directory is by no means exhaustive, it serves to draw attention to the depth and variety of history of medicine collections available to researchers. In the future, it is expected that more institutions will agree to be included in this annual publication.

The records on the following pages are arranged alphabetically by US state and city, followed by foreign collections grouped alphabetically by country. For each record, the Abstract field indicates the collection's scope of coverage and services provided. The Holdings field lists the substance of the collection and identifies guides to the collection. Information about the collections has been provided by the person named as Contact. Interested researchers should get in touch with the contact person for more details.

The directory is a print version of the History of Medicine component of DIRLINE[®] (Directory of Information Resources Online), a National Library of Medicine (NLM) database, which contains location and descriptive information about a wide variety of health and biomedical resources. Developed by NLM's History of Medicine Division (HMD), the DIRLINE[®] History of Medicine component aims to assist scholars and researchers in identifying useful medical history collections throughout the world. For further information about the DIRLINE[®] database, including how to access, please consult the DIRLINE[®] Fact Sheet at <http://www.nlm.nih.gov/pubs/factsheets/dirlinfs.html>.

We invite libraries, archives, and museums, which include in their collections holdings in the history of medicine, dentistry, veterinary medicine, nursing, and pharmacy, to become part of the DIRLINE[®] History of Medicine component. Participating institutions must be able to respond to relevant reference questions and, in the case of libraries, interlibrary loan requests.

To ensure that information is up to date, participating institutions are encouraged to keep their records current. New and revised data can be sent to the History of Medicine Division via mail, e-mail or fax.

Please contact: Elizabeth Tunis, History of Medicine Division, National Library of Medicine, Bethesda, MD 20894, USA. Tel: +1-301-402-6134, Fax: +1-301-402-0872, e-mail: elizabeth_tunis@nlm.nih.gov.

WHO target draws veil over leprosy

Sub-titled 'Efforts to eliminate the disease by 2000 do not take into account undiscovered cases', the following report of the Beijing Congress by John Gittings appeared in the *Guardian* newspaper (UK) of September 8th 1998:

The International Leprosy Congress opened yesterday in the Chinese capital with critical questions being asked about the World Health Organisation's goal of eliminating leprosy by 2000.

The WHO points to huge achievements since the beginning of the decade. Treatment with a cocktail of drugs known as MDT has reduced the estimated number of leprosy cases worldwide from 10–12 million in 1998 to 1.15 million last year.

But leprosy campaigners from non-governmental organisations complain that the WHO has 'manipulated data and moved the goalposts in order to claim success'.

They agree that fixing the target was important in mobilising international funds and support, but fear that interest will fade if the WHO announces that the target has been reached. Financial backing already depends heavily on private donors, headed by the Tokyo-based Sasekawa Foundation.

By 'elimination' the WHO means reducing the prevalence of leprosy to less than one case per 10,000 population. And by prevalence it means only cases which are being actively treated and are still infectious.

This leads to a statistical paradox. Because MDT treatment eradicates infection within a year, the number of registered cases is relatively low—it is now less than 900,000 worldwide. Yet the number of cases discovered each year is disproportionately high at nearly 700,000 in 1997.

Specialists suggest that this may be due to an incubation period of five to 10 years. But it could mean that there are many more unidentified sufferers than hitherto believed.

Professor Cairns Smith of the International Federation of Anti-Leprosy Federations said yesterday that more effort must be made to locate cases in vulnerable communities.

These include nomads, those who are geographically isolated, those who lack basic health care, those who are refugees or suffering from war or famine, and urban slum dwellers.

The WHO admits that even by its restricted definition some countries may have to 'continue and intensify activities beyond the year 2000 to reach their elimination targets'.

A campaign launched last winter in India to speed up the detection of unknown cases has produced alarming results. Although its coverage was not complete, it discovered 423,000 people suffering from leprosy. More than half were in the states of Bihar and Orissa.

In China, the host country for the Congress, there are now only 4000 cases under active treatment and fewer than 2000 new cases. But the vice-minister of health, Yin Dakui, admitted that leprosy control was still difficult 'in the remote, poor, mountainous and [ethnic minority] areas'.

There are more than 200,000 people who have been cured in China, of whom 120,000 are disabled.

International leprosy workers argue that the 'cured should still be part of the WHO statistics'. A specialist said: 'Drugs cannot eliminate the persistent effect of nerve damage after the patient has become non-infectious. There are probably five to six million worldwide who still have disabilities such as foot ulcers.'

Voluntary groups at the congress are lobbying hard for more involvement in anti-leprosy work by patients and former patients.

The IDEA organisation, which is based in the United States and runs work projects in several countries, including China, argues that sufferers should be encouraged to 'overcome their sense of helplessness and shame by taking a pro-active role'.

In a written presentation to the congress, the WHO said that if MDT treatment was maintained for the next five to 10 years, 'all transmission of the disease can be terminally interrupted', although it concedes that this may take longer in India.

India, however, is a huge part of the problem: it has more than 500,000 active cases: 60 per cent of the known global total.

FDA approves new anti-tuberculosis drug

The following appeared in the *British Medical Journal*, Volume 317, 4/7/98, page 11:

The US Food and Drug Administration has approved rifapentine (Priftin)—the first new antituberculosis drug to be licensed in 25 years.

Rifapentine is indicated for pulmonary tuberculosis but must be used in conjunction with other antituberculosis drugs. It is expected to increase patient compliance because it has a shorter treatment course than conventional drugs.

Current treatment regimens for active pulmonary tuberculosis require a minimum of 6–9 months of treatment with at least three drugs, which usually include isoniazid, rifampicin, and pyrazinamide. Treatment can last over a year in recalcitrant cases. Because the regimen is complicated and lengthy, patient compliance is problematic and treatment errors are common. These factors contribute to the emergence of multidrug resistant strains of tuberculosis.

Like rifampicin, rifapentine is given twice a week for two months in the intensive first phase of treatment, when daily isoniazid, pyrazinamide, and ethambutol are also required. However, in the next four months of treatment, one dose of rifapentine once a week is sufficient, as opposed to a twice weekly dose of rifampicin. Although this regimen still seems complicated, it is expected to increase compliance and reduce costs associated with directly observed treatment.

Clinical studies on rifapentine in which the drug was substituted for rifampicin in combination therapy showed that the drug was associated with a higher relapse rate than standard treatment, with 10% of patients taking the rifapentine combination relapsing, compared with 5% taking rifampicin. However, this higher relapse rate is expected to be offset by greater compliance.

The United States is the first country to approve rifapentine, but the largest market for the drug is likely to be in developing countries—however they may be unable to afford it.

Changes at WHO: 'Budget set to reflect new priorities'

The following is taken from the *British Medical Journal*, Volume 318, 23/1/99, page 212:

The director general of the World Health Organisation, Gro Harlem Brundtland, will next week ask the organization's governing body to approve radically overhauled spending plans reflecting her programme of reforms.

The WHO's executive board, which meets from 25 January in Geneva, will be presented with budget proposals for the years 2000–1 that require an increase of nearly one fifth in voluntary contributions by donors—that is, an increase in the amount paid over and above membership dues.

Dr Brundtland believes that the reforms already under way within the organization will attract further support from member states.

The proposed budget of \$1.8 bn for the next two years allocates \$19 m in extra funds to Africa and a smaller amount to the former Soviet republics. There is an overall shift in resources from headquarters and the six regional offices to activities at country level.

At headquarters, spending on communicable diseases continues to account for the biggest share of funds, at \$284,000, an increase of 37% on the last budget. But two much smaller areas of the WHO's work will attract the biggest increases in spending: non-communicable diseases, which doubles its budget to \$14,000, and data analysing activities known as evidence and information for policy, whose budget climbs by 44% to \$48,000. Three new, high profile initiatives to be spearheaded by Dr Brundtland—tobacco controls, malaria control, and health sector development—will each receive extra resources. Managerial and administrative costs have been cut.

The new budget is intended to be more transparent, reflecting the new structure of the WHO. Previously, member states found it almost impossible to work out how their money was being spent because the categories in the budget did not reflect the organisation's structure. Now, 52 disparate programmes have been turned into nine clusters, and these are linked to the budget.

AIDS strains Zambia

The annual cost of caring Zambia's AIDS patients will rise to US\$21 million by the year 2005, according to a recent study by the Central Board of Health. The costs, which are expected to rise from \$1.7 m in 1990 and \$12.9 m in 1995, will impose a strain on the government's budget and divert resources from other sectors.

Zambia's HIV prevalence rate is 20% and if it stays at that level until the year 2000 and then drops to 16%, as experts have predicted, then the number of HIV infected persons in the country (including children) will peak at about 1.1 million and stay at that level until 2010.

The Zambian government has agreed to test the efficacy of an 'AIDS drug' known as Herbiron Tisaniferon, ending a long stand-off with its inventor Professor Mulenga Lukwesa. The drug manufactured by MLN Laboratories of Lusaka will undergo tests but in the meantime Professor Mulenga has been told he can dispense his medicine as a 'herbal drug'. An outright ban on the drug was imposed in 1997 but a number of Zambian scientists have since said that they consider it to have shown positive results in the alleviation of diseases associated with AIDS/HIV, and against cancer, diabetes, arthritis, gout, and hypertension. The Head of Pharmacology at the University of Zambia, Dr Patrick Chikusu, said the drug might reverse trends that encourage the movement of HIV between cells. Dr Chikusu, who is also chief government pharmacologist, said state scientists would conduct trials to determine the drug's efficacy.

'Essential Drugs: Action for Equity'. WHO Action Programme on Essential Drugs

This publication from WHO (A4 size, 27 pages, WHO/DAP 92.5) begins with a 'charter for equity' in essential drugs:

- access for all people to necessary medicines

- prices which society and the individual can afford
- priority for drugs which meet the real health needs of the majority of the population
- fair distribution between cities and rural areas
- assurance that drugs are safe, effective and of good quality
- adequate training of all prescribers
- access to objective information
- real dialogue between patient and prescriber
- empowerment of consumers through education and information
- community involvement and participation
- development of drugs that meet health needs in the third world and not only those of rich countries
- responsible manufacture and export
- ethical promotion and marketing
- a stop to 'donations' of hazardous or ineffective products

The text goes on to describe: The Essential Drugs Concept; How Many Drugs do we Really Need?; The Work of the Action Programme; Key Elements of a National Drugs Policy; Using Drugs Rationally; The Action Programme & Research; Global Partners and Future Outlook. 'Further Reading' is as follows:

WHO PUBLICATIONS

(obtainable from WHO sales agents in each country or Distribution and Sales, WHO headquarters, Geneva)

The World Drug Situation, WHO, 1988

A comprehensive review of the many factors that influence the current availability and consumption of pharmaceuticals throughout the world.

Guidelines for Developing National Drug Policies, WHO, 1988

Addressed to policy-makers and administrators, this book identifies and explains the many complex factors to be considered when planning and carrying out a national drug policy.

The New Emergence Health Kit, WHO, 1991

Explains the historical development of the kit, details the contents and provides assessment and treatment guidelines for diarrhoea and respiratory infections.

Estimating Drug Requirements, WHO, 1989

A practical manual for course work or self study which describes, using working examples, how to estimate drug needs based on previous consumption and/or morbidity patterns.

Ethical Criteria for Medicinal Drug Promotion, WHO, 1988

Presents ethical criteria for the promotion of medicinal drugs, and constitutes a frame of reference for judging proper behaviour in drug promotion.

WHO Model Prescribing Information: Drugs used in Anaesthesia, 1989

Drugs used in Mycobacterial Diseases, 1991

Drugs used in Parasitic Diseases (2nd ed.), 1995

Drugs used in Sexually Transmitted Diseases and HIV Infection, 1995

Drugs used in Skin Diseases, 1997

Provides advice on the safe and correct prescribing of essential drugs in these specific fields.

Indicators for Monitoring National Drug Policies, WHO, 1994

Provides a comprehensive set of simple, objective and reliable indicators that allows assessment of countries' capacities to implement the elements of a national drug policy, monitor implementation and measure progress towards objectives.

Guide to Good Prescribing, WHO, 1994

The training manual gives step-by-step guidance to rational prescribing, explaining the principles of

drug selection and how to develop a set of drugs for regular use in practice. Numerous examples show how to select, prescribe and monitor treatment.

International Nonproprietary Names (INN) for Pharmaceutical Substances, WHO, 1996

The ninth cumulative list covering all currently proposed and recommended INN: a useful aid for drug manufacturers, prescribers and regulatory authorities who must work with generic names.

WHO Expert Committee on Specifications for Pharmaceutical Preparations, Technical Report Series No. 863, WHO, 1996

Sets out 12 international guidelines and other recommendations intended to assist national drug regulatory authorities and manufacturers in the quality control of pharmaceutical products.

The Use of Essential Drugs—Model List of Essential Drugs (Ninth List), Technical Report Series No. 867, WHO, 1997

Incorporates revisions to the Model List agreed upon by a WHO committee of experts, together with updated information on several other components of national drug policy.

UNPUBLISHED REPORTS AND GUIDELINES

In addition to WHO's priced publications in the field of pharmaceuticals, many offset documents, technical reports and guidelines covering subjects ranging from drug donations and financing to research studies and methodologies, are available free of charge directly from the Action Programme on Essential Drugs, WHO, Geneva.

PERIODICALS

Essential Drugs Monitor

Published twice a year in English, French, Spanish and Russian, by the Action Programme on Essential Drugs. It is available free of charge and provides information on national drug policies, rational drug use, supply, research, training and the development of national essential drug programme activities.

WHO Drug Information

A quarterly subscription publication, which communicates pharmaceutical information either developed or issued by WHO, or transmitted to WHO by research and regulatory agencies.

For further information, contact the WHO Representative in your country, or any of the WHO Regional Offices listed below:

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