



EDCTP

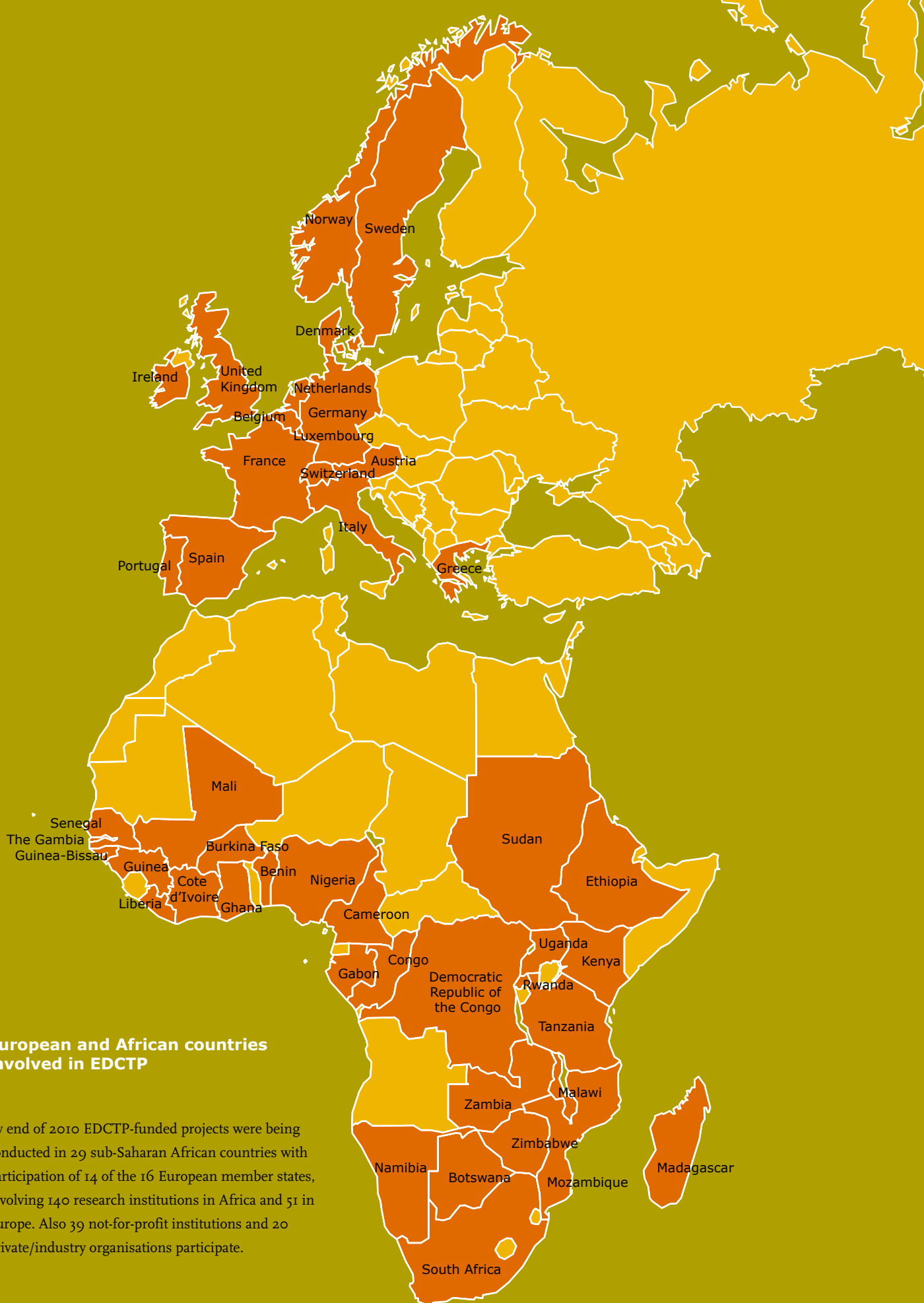
*European and Developing Countries
Clinical Trials Partnership*

Annual Report 2010

Innovation

European and African countries involved in EDCTP

By end of 2010 EDCTP-funded projects were being conducted in 29 sub-Saharan African countries with participation of 14 of the 16 European member states, involving 140 research institutions in Africa and 51 in Europe. Also 39 not-for-profit institutions and 20 private/industry organisations participate.



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Message from the Executive Director



To EDCTP the year 2010 picked up where 2009 left in that more calls were launched, grants awarded and new projects got underway. Furthermore, during the course of the year thirty projects were completed among them the Kesho Bora study (a 'better future' in Kiswahili), which looked into the prevention of mother to child transmission of HIV including during breastfeeding. The study that helped to formulate the WHO policy on the Prevention of Maternal to Child Transmission (PMTCT) of HIV showed that treating HIV-positive mothers with a combination of three antiretroviral drugs (ARVs) during pregnancy, delivery and the breastfeeding period significantly reduced the transmission of the virus to their babies. Among the other projects that were completed in 2010 include the multicentre clinical trials that compared the efficacy of four artemisinin-based combination drugs in the treatment of uncomplicated malaria in different regions of sub-Saharan Africa and a phase Ib clinical trial of a subunit tuberculosis vaccine that was conducted in Ethiopia. Results coming from these and many other studies that are now being completed will be used to inform health policy and contribute to further development of new or improved tools in the fight against HIV/AIDS, tuberculosis and malaria.

In the spirit of cementing the genuine African-European partnership of EDCTP, 18 November 2010 marked a very significant milestone. This was the first time that African policy makers directly represented several African constituencies at the EDCTP-EEIG General Assembly – the supreme body and the policy making organ of EDCTP. The African members of the General Assembly who attended this landmark meeting were Prof. John Gyapong, Director of Health Research Division representing WHO/AFRO Regional Health Ministries; Dr Olawale Maiyegun, the Director for Social Affairs of the African Union; and Dr Stanley Sonoiya, the Principle Health Officer of the East African Community representing African Regional Communities. The participation of African representatives at the General Assembly is important since it enables setting the agenda and priorities from the African perspective.

In 2010, several meetings were held in preparation for the renewal of the EDCTP programme. These included Connecting the Chain-II that brought together stakeholders from development and research agencies to explore how research and development programmes would complement each other in the context of the EDCTP programme. Furthermore, EDCTP stakeholders also held a consensus meeting that discussed and charted a broad strategy of the new EDCTP programme. This subsequently led to the drafting of a communication, which was submitted to the European Union Competitiveness Council under the Belgium Presidency. The communication outlines plans for EDCTP-II which include extension of activities to incorporate all phases of clinical trials, other neglected tropical diseases and where possible collaborative research with other developing countries outside the sub-Saharan Africa. It was agreed that the new programme should build on the successes of the current programme. Furthermore, the EDCTP Secretariat visited the newer EU member states to inform them of EDCTP and invite them to join.

It goes without saying that none of these achievements would have been possible without the tireless contributions from all partners comprising the EDCTP initiative. On behalf of the entire partnership I extend our thanks to all of you who have been involved with EDCTP and supported us through the years. The fight must go on.

Charles S Mgone
Executive Director

2010 in a nutshell



2010 was a year of established projects coming to fruition and the start of the last and highly promising research projects in the implementation of the first phase of the programme. At the heart of our activities, this year was a reflection on the future road to take through internal and external evaluation and discussion with our stakeholders. Our commitment to fostering partnership and collaboration was especially rewarded by the launch of two new networks of excellence, thus completing a set of four operational regional research networks.

Networks of Excellence in place for all regions

In the first quarter of 2010 EDCTP-funded networks of excellence were launched in Eastern Africa and Southern Africa. Now each region of sub-Saharan Africa has its own network. The goal of the East African Consortium for Clinical Research (EACCR) and the Trials of Excellence in Southern Africa (TESA) is to raise the quality of clinical research and practice in their regions.

The other networks of excellence funded by EDCTP are the Central African Network on Tuberculosis, HIV/AIDS and Malaria (CANTAM) and the West Africa Network of Excellence for Tuberculosis, HIV/AIDS and Malaria (WANETAM).

The regional networks unite institutions that collaborate based on their complementary individual strengths such as good practice for conduct of clinical trials (GCP and GCLP), data management and laboratory capacity. The networks facilitate collaborative research activities, training and mentorship schemes and further infrastructural development.

EDCTP: impact assessment and future plans

The process of evaluation of the EDCTP programme started in 2009 with the internal assessment commissioned to the Swiss Centre for International Health (SCIH) of the Swiss Tropical Institute (STI), followed by an independent external evaluation commissioned by the European Commission. These resulted in recommendations to broaden the scope of EDCTP, to increase its funding and to establish a common pot. Additionally the report advised to simplify the governance structure of EDCTP and to have more representation that is political at the level of the General Assembly for both European member states and African partners.

In 2010, the European Commission (EC) carried out an impact assessment on the current programme in order to guide the future direction of the EDCTP programme. Additionally, the EC conducted a public consultation aimed at collecting views and opinions of all interested EDCTP stakeholders. The questionnaire received in total 235 responses during the period of 8 April until 22 June 2010. The areas addressed were the scope of a possible new programme, the development of future policy options, the lessons learnt from the current programme and identification of key issues for future consideration. The majority of the respondents were in favour of continuation of EDCTP with a broadened scope of the programme.

On 9 June 2010, more than 60 representatives of European and African stakeholder organisations met to discuss the impact of the current EDCTP programme and its future. The meeting 'Connecting the Chain-II' was held at the University Foundation in Brussels, Belgium, and brought together research organisations and universities, policy makers, development agencies, Product Development Partnerships (PDPs), philanthropic organisations and other stakeholders in the fight against poverty-related diseases. The deliberations focused on the health development agenda in Africa, and on how to bridge the gap between research, policy and practice, between research and development cooperation.

Some of the major issues addressed were how to develop effective strategies for coordination of the efforts of research and development aid partners. Other questions were how to improve synergies between clinical research and capacity development for health systems, and how to strengthen governments to create good governance and good practice across research and aid. Translational research was also discussed, i.e. how to bridge the gap between product development and the actual delivery of new medicinal products to target populations. Finally, topics included the strategies for sustainable capacity building, including the utilisation and retention of expertise built within research and health care systems; and the role and relevance of centres or networks of excellence.

Between July and August 2010, an expert panel from the EC convened to contribute to the impact assessment of a renewal of the EDCTP programme. Given the Partnership's accomplishments so far, the panel held the view that the political and socioeconomic impact of the second EDCTP programme could be maximised by expanding its scope to phase I and IV clinical trials and to other neglected infectious diseases. To complement this process, the EDCTP Member States representatives organised a meeting under the Belgian EU Presidency to seek agreement on a proposal on a future phase of the EDCTP programme for the European Council and the European Parliament. This meeting included representation of the current EDCTP Member States and other Member States considering future participation.

Planning for the proposed next phase of EDCTP is currently in progress. This preparation draws on the current EDCTP results, the internal assessments and independent external reviews that have taken place, as well as on the valuable feedback from the completed public consultations on the EDCTP programme.

Additionally, in August 2010 EDCTP launched a joint call with the Member States to evaluate the impact of clinical trials in Africa. The purpose of the grant is to gain comprehensive insight into the impact of clinical trials on health services in sub-Saharan Africa, especially with regard to the quality of the services delivered to women and children. The Netherlands, UK, Sweden and Spain provided the funding for this call.

New clinical trials

EDCTP-funded clinical trial of new TB-drug SQ109 supported

In October 2010, Sequella, Inc. signed an agreement with the Ludwig-Maximilians-University (LMU) in München, Germany. LMU is to coordinate a grant for phase II clinical trials of SQ109. The study will recruit adults with pulmonary tuberculosis (TB) in seven sites



Hannah Akuffo, new Chair of the EDCTP General Assembly.

in Africa. EDCTP will grant € 12 million and Sequella committed to € 3 million in-kind and corporate funding.

The Pan African Consortium for Evaluation of Antituberculosis Antibiotics (PanACEA) will perform the studies, which will support international regulatory submissions. PanACEA is funded by EDCTP to conduct a series of collaborative clinical trials to evaluate different antituberculosis drugs including moxifloxacin, rifampicin and the new product SQ109. These aim to simplify and shorten tuberculosis treatment. Its members include TB experts from six European research institutions, twelve sub-Saharan African clinical trial sites and two pharmaceutical companies. The trials will take place in Gabon, South Africa, Tanzania, and Zambia.

EDCTP General Assembly

In January 2010, Prof. Hannah Akuffo became the new Chair of the EDCTP General Assembly. The General Assembly is the decision making body of EDCTP, in which all 16 participating European States are represented. She succeeded Dr Diana Dunstan, who chaired the Assembly between 2006 and 2009.

Hannah Akuffo was born in Ghana. Her main research interest is on the immunology of poverty-related diseases and she has extensive experience with Euro-African research cooperation and funding. Currently she heads the team of the Research Secretariat of the Swedish International Development cooperation Agency (Sida). Prof. Akuffo is a passionate advocate of research capacity building in low-income countries.

GA adds Deputy GA members

EDCTP simplified its structure by reducing governing bodies to three, namely, the General Assembly, the Partnership Board and the Developing Countries Coordinating Committee. As of 1 January 2010, the constituency of the European Network of National

Programmes was embedded within the GA, replacing the European Network Officers with Deputy GA members. This decision implemented one of the recommendations of the 2009 internal assessment.

Incorporating African representation

The General Assembly decided to include African representatives as associate members in order to strengthen African commitment to and involvement in EDCTP. The African representation consists of members from the African Union Commission of Social Affairs, the African Regional Economic Communities (currently the East African Community and the Economic Community of Central African States) and representatives to the African Regional Committee of Health Ministers (currently the Ministries of Health of Ghana and Zambia). Representation from the Regional Economic Communities and the Regional Committee of Health Ministers will rotate every two years to involve all Regional Economic Communities officially recognised by the African Union and all African Ministries of Health.

TB-vaccine AERAS-402/Crucell Ad35: phase II clinical trial started in Kenya in 2010

Aeras and Crucell jointly developed the tuberculosis vaccine candidate, AERAS-402/Crucell Ad35. In September 2010, a phase II clinical trial in infants started in Kenya. The main objective of the trial is to evaluate the safety and efficacy of the TB vaccine candidate in infants previously vaccinated with the Bacille Calmette-Guérin (BCG) vaccine, which is currently the only vaccine licensed to help prevent TB.

The first part of this clinical trial to be conducted in Kenya will establish the optimal dosing regimen. The second part of the trial, which according to plan will begin in Kenya, Mozambique, South Africa and Uganda in 2011 will evaluate the selected vaccination regimen.

A partnership that involves the Kenya Medical Research Institute (KEMRI) and the US Centers for Disease Control and Prevention (CDC) Research and Public Health Collaboration will conduct the phase II study of AERAS-402/Crucell Ad35 in Kenya. Significant support for this phase II comes from EDCTP including funding to develop the capacity of the KEMRI/CDC site to carry out vaccine trials. Participants from the Siaya District in Nyanza Province of Western Kenya have been enrolled.

HIV-1 vaccine MVA.HIVA: candidate to prevent mother-to-child transmission of HIV-1

In December 2010, enrolment started for two infant HIV-1 vaccine trials, known collectively as PedVacc. In this EDCTP-funded project, the Medical Research Council (UK) collaborates with researchers from Kenya, The Gambia, Sweden, Spain and United States of America.

The trials are taking place in The Gambia and Kenya and have a recruitment target of 120 healthy, HIV-negative infants born to healthy, either HIV-positive or HIV-negative mothers. These trials examine the safety of the novel HIV-1 vaccine MVA.HIVA in infants. The ultimate aim of this vaccine strategy in infants is to prevent mother-to-child transmission of HIV after birth.

The MVA.HIVA vaccine was previously tested in 13 studies in the UK and Africa, which involved 375 adult volunteers. There have been no serious adverse events related to this vaccine and it was confirmed to be safe and well tolerated.

Malaria vaccine GMZ2: AMANET launched phase II clinical trial in November 2010

In an EDCTP-funded project, the African Malaria Network Trust (AMANET) in November 2010 launched a multi-site phase IIb clinical trial of the candidate malaria vaccine GMZ2. The aim is to assess its safety and efficacy among young children with a high risk of getting malaria. The African countries participating in this trial are Burkina Faso, Gabon, Ghana and Uganda.

GMZ2 works by targeting the malaria parasite in the blood stage (merozoite), stimulating the body's immune system to produce antibodies that target Glutamate Rich Protein (GLURP) and Merozoite Surface Protein 3 (MSP3) receptors on the malaria parasite. 1870 children aged between one and five years from four participating sites in Banfora (Burkina Faso), Iganga (Uganda), Lambaréné (Gabon) and Navrongo (Ghana) are targeted for this trial.

The GMZ2 Consortium, which is funded by EDCTP, conducts the trial. The project has several work packages coordinated by AMANET to strengthen research capacity, networking and project management.

Malaria in pregnancy clinical trials making headway

Pregnant women are a group that is especially vulnerable to malaria. Four clinical trials were recruiting patients in 2010, through a grant to the global Malaria in Pregnancy (MiP) Consortium. The studies are evaluating new and improved interventions for the prevention and treatment of malaria in pregnancy. The results of this research will be used to inform WHO guidelines and drug policy in countries where malaria is endemic.

‘Our commitment to partnership was especially rewarded by the launch of two networks of excellence’





EDCTP calls and grants

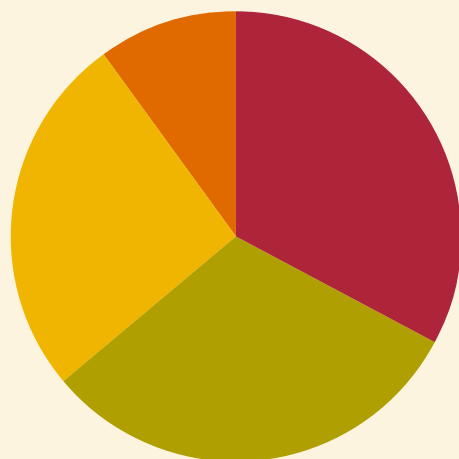
EDCTP funds multicentre-multinational projects that integrate clinical trials, capacity building and networking. Capacity building and African participation are mandatory in all EDCTP clinical trial activities in order to foster local ownership and scientific leadership in Africa. To strengthen the regulation, registration and ethical conduct of clinical trials, EDCTP supports the establishment and capacity development of National Ethics Committees (NEC) and Institutional Review Boards (IRB). In collaboration with the World Health Organisation, EDCTP contributes to strengthen the African national regulatory frameworks. EDCTP has also been instrumental in the establishment of the Pan-African Clinical Trials Registry (PACTR), the only African registry with the status of WHO primary clinical trial registry.

In 2010, five calls for proposals were launched that included 1 for stand alone Senior Fellowships; 1 for Senior Fellowships linked to EDCTP networks of excellence (NoE); 1 for strengthening Ethics Review capacity; 1 for Member States Initiated projects (MSI) and 1 as a Joint Call by Member States (JCMS) to evaluate the impact of clinical trials in Africa. By the end of 2010, EDCTP has funded (contract signed) 163 projects to a total amount of approximately € 311 M including cofunding. Of these projects, 54 are clinical trials (including four MSI projects): 24 on HIV/AIDS, 18 on tuberculosis and 12 on malaria.

Overview of EDCTP calls for proposals launched in 2010

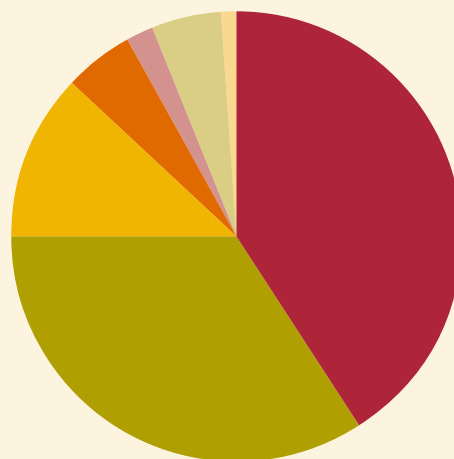
Call/Disease area	Budget	Launch date	Deadline	No. of projects approved
Senior Fellowships	€ 1.20M	15-02-2010	15-06-2010	3
Senior Fellowships linked to NoE	€ 0.80M	16-02-2010	15-06-2010	1
Ethics/Institutional Review Boards	€ 0.50M	16-02-2010	15-06-2010	15
MSI-projects	€ 2.50M	13-08-2010	13-12-2010	Pending
JCMS	€ 0.70M	13-08-2010	12-11-2010	Pending
Total budget	€ 5.70M			19+

Overview of distribution of funding by disease (€ 000)



■ HIV/AIDS	€ 61,090
■ Tuberculosis	€ 57,879
■ Malaria	€ 47,341
■ Non-disease specific	€ 17,907

Overview of distribution of funding by intervention (€ 000)



■ Drugs	€ 76,309
■ Vaccines	€ 63,220
■ Non-clinical trials specific	€ 21,685
■ Microbicides	€ 9,379
■ Network of excellence	€ 2,968
■ Diagnostics	€ 9,719
■ Surrogate markers	€ 937

HIV/AIDS



According to the 2010 Global Report by the United Nations Joint Programme in HIV/AIDS (UNAIDS), the number of new infections has fallen by 19% since 1999. Despite this important progress, sub-Saharan Africa remains the region most affected by HIV. By 2009 an estimated 22.5 million people with HIV were living in sub-Saharan Africa. This represented 68% of the global HIV burden. Moreover, this burden is aggravated by HIV/AIDS patients' vulnerability to tuberculosis. It is crucial to accelerate the development of new or improved interventions in order to alleviate the HIV burden.

Improving safety of breastfeeding by HIV-positive mothers

The Kesho Bora study – ‘A better future’ in Kiswahili – offers new hope to prevent HIV infection and death among infants in low-resource settings where many mothers with the virus breastfeed. The randomised controlled trial in antiretroviral (ARV)-naïve pregnant woman infected with HIV-1 was conducted in five sites in Africa. Led by Professor Marie Louise Newell from the Africa Centre for Health and Population Studies in South Africa, the study aimed to assess the efficacy and safety of triple antiretroviral compared with zidovudine and single-dose nevirapine prophylaxis in pregnant woman, which was the WHO recommended regimen.

In the study, women were randomly assigned to receive the triple antiretroviral combination or the treatment according to the WHO guidelines. The results showed that providing a combination of three ARVs to pregnant or breastfeeding mothers, is a safe and effective way to reduce HIV transmission to infants.

The findings of the Kesho Bora study have strongly influenced the revised WHO guidelines on prevention of mother-to-child transmission of HIV, and infant feeding. WHO now recommends to provide combination ART to all pregnant women with CD4 count at or below 350 cells per micro-litre and to provide ARV prophylaxis (either to the mother or to the child) for the entire duration of breastfeeding if the mother is not already on antiretroviral therapy (ART). Additionally, the National Department of Health of South Africa updated its clinical guidelines on prevention of mother-to-child transmission accordingly in April 2010.

HIV vaccine immunogenicity studies

The research outcomes of the HIV vaccine Immunogenicity Studies (HIVIS) and the HIV vaccine trial capacity building in Tanzania and Mozambique through continued exploration of optimal DNA

priming and MVA boosting strategies (TaMoVac), currently represent one of the most promising and possibly the most advanced candidate HIV vaccine under a joint European and African development programme. The HIVIS 03 study is now complete. By July 2010, 42 volunteers had received the second MVA boost, as the vaccine was deemed safe.

Dr Muhammad Bakari from the Muhimbili University of Health and Allied Sciences (MUHAS) in Tanzania has coordinated a project that especially aimed to consolidate in Tanzania the preparations for HIV vaccine trials in which European partners had invested. At the same time, this capacity had to be expanded to a south-south capacity building effort in Mozambique.

The HIVIS development effort has built on long-term grants from the Swedish International Development Agency (Sida) to support the development of DNA vaccines, on the HIVIS trials in Sweden and on the capacity building jointly supported by the government of Tanzania and the Tanzania-Sweden research collaboration programme (TANSWED) of Sida for laboratory and clinical infrastructure in Dar es Salaam and Maputo. EDCTP's support allowed extension of HIVIS 03 and the current funding of the TaMoVac I and TaMoVac II clinical trials. This vaccine, which is one of the most immunogenic currently under study, is a prime candidate for efficacy studies in the near future.

HIV-infected children: finding the right formulation

Lack of appropriate antiretroviral formulations has been one of the major constraints to scale up the treatment of HIV-1 infected children in resource-limited countries. EDCTP has funded two projects aiming to address this situation, the studies on Children with HIV-1 in Africa Pharmacokinetics Acceptability/Adherence of Simple Antiretroviral Regimens, the CHAPAS-1 and CHAPAS-3 projects.

The CHAPAS-3 study started in 2007. It aims to strengthen available second-line treatment for HIV-1

infected children. Dr Veronica Mulenga is leading the trial on 'Expanding the availability of fixed dose combination antiretroviral formulations for first-line treatment of HIV-1 infected children'. The study examines the pharmacokinetics of a new paediatric Lopinavir/ritonavir (LPV/r) sprinkle compared to paediatric LPV/r tablets and liquid. This is anticipated to be a useful second-line formulation appropriate for paediatric use. Screening started in Zambia in October 2010 and will start in Uganda in 2011.

Alongside the trial, CHAPAS-3 will address all aspects of clinical trial capacity building in Africa, including pharmacokinetic studies, statistical analysis, and cost-effectiveness analysis. It will also equip a cadre of young research scientists with multi-disciplinary skills to lead future paediatric HIV research and clinical trials in Africa.

CHAPAS-3 is a follow up of the successful CHAPAS-1 study. This trial started in 2005 and was completed in 2009. It had a major breakthrough. Prof. Chifumbe Chintu and his team studied the appropriate dosing of, and adherence to Triomune Baby/Junior. This is a fixed dose combination of stavudine (d4T), lamivudine (3TC) and nevirapine (NVP) in a new formulation specifically developed for children. CHAPAS-1 specifically aimed to address the then complete lack of appropriate first-line antiretroviral regimens available for children in developing countries.

The research team shared its preliminary pharmacokinetics data with the USA Food and Drug Authority (FDA) and the data contributed to the approval of Triomune Baby/Junior for use in HIV-infected children, in August 2007. This approval has allowed these two fixed-dose combination drugs to be supplied through the President's Emergency Plan for AIDS Relief (PEPFAR) and the Clinton Foundation programmes that supply ARVs in sub-Saharan Africa. Triomune Baby/Junior FDC drugs are now widely used in Zambia, Uganda and Zimbabwe and in other sub-Saharan African countries. The CHAPAS-1 trial findings also contributed to the WHO recommendations for optimal ratios of antiretroviral drugs in fixed drug combination solid formulas and have been used as input for the definition of an optimal weight band for these drugs in children.

Microbicides: novel biomarkers to measure safety

The need to develop additional HIV prevention tools, especially those that women can use, is urgent. Therefore, microbicides are developed for topical application inside the vagina or rectum to prevent infection with HIV. However, trials with early generation microbicides turned up unexpected safety issues. Research is further made difficult by the complexity of the microbicides clinical trials, e.g. the definition of validated surrogated endpoints for biological activity.

Recent research with antiretroviral based microbicides has shown promise in offering women protection against HIV. However, there is still a need to increase our knowledge of reliable biomarkers for phase I and II safety trials as an efficacious and safe microbicide has not yet been identified. In response to this EDCTP has funded a project to prepare for clinical trials on effectiveness and a study of safety biomarkers for microbicides as well.

Dr Janneke van de Wijgert from the Centre for Poverty-related Communicable Diseases (CPCD) of the Academic Medical Center (AMC), University of Amsterdam in the Netherlands leads a project to prepare for phase III effectiveness trials of microbicides. These are to be conducted in female populations with high incidence of heterosexually-acquired HIV. Clinical trial capacity has to be adequate as regards clinical, laboratory and data management infrastructure, ethical review and reproductive health referral systems. The project aims to prepare sites in Kigali (Rwanda) and in Mombasa (Kenya) for phase III clinical trials and to estimate HIV incidence by cross sectional and longitudinal cohort studies.

HIV incidence studies in Kigali and Mombasa were completed successfully in 2010. The capacity building through this project also established the reproductive health clinic at the Kigali Teaching Hospital, increasing treatment options for cervical cancer and infertility.

The Project Ubuzima, a not-for-profit initiative promoting reproductive health in Rwanda, is evaluating the Kigali HIV incidence data in preparation for potential future phase III microbicide trials.

Moreover, Project Ubuzima conducts two microbicide safety studies sponsored by the International Partnership for Microbicides (IPM). In addition, the Rwanda government is currently planning interventions for sex workers drawing on the consortium's experience.

The successful collaboration of institutions from Rwanda, Kenya, Belgium and the Netherlands, which this project established, will continue in the next few years under the EDCTP-funded biomarkers project led by Dr Kishor Mandaliya from the International Centre for Reproductive Health in Kenya (ICRH-K).

This study to which institutions from Africa, Europe and USA will contribute, samples a variety of study populations in Kenya, Rwanda, South Africa and Tanzania. The aim is to try and refine both clinical and laboratory methods in search of more reliable safety biomarkers. The expected outcomes are the identification of promising biomarkers that could be introduced in the next generation of microbicides safety trials. Baseline data on these biomarkers can be compared with future assessments in women who use candidate microbicide products.



Tuberculosis



Tuberculosis infected 9.4 million and killed 1.7 million people in 2009 including hundreds of thousands of infants and adolescents. There is an urgent need for simpler and shorter drug regimens that will treat all forms of TB; rapid and more accurate diagnostic tools that detect TB; and a vaccine or vaccines that will be effective in preventing the disease in people of all ages irrespective of immune status. In view of this EDCTP funds research that aims to accelerate the development of innovative tools against tuberculosis.

Capacity building for TB vaccine trials

The EDCTP-funded project coordinated by Dr Abraham Aseffa from Armauer Hansen Research Institute (AHRI) in Ethiopia focussed on capacity building. It brought together the three sub-Saharan countries of Ethiopia, Madagascar and Tanzania into a consortium to provide mentoring and financial support for PhD and MSc studies and other project activities. The European partners were from Belgium, Denmark, the Netherlands and the UK. The project was centred on a phase I clinical trial of a new TB vaccine candidate.

The project integrated the actual trial conducted at AHRI with capacity building that included scholarships for academic studies; courses in Good Clinical Practices (GCP) and Good Clinical Laboratory Practices (GCLP); laboratory upgrading; and investment in equipment. Significantly, this was the first phase I study of a TB vaccine conducted in Ethiopia as well as the first time the candidate vaccine H1 (Ag85B-ESAT-6 + IC31) was evaluated in Africa. In addition, the AHRI clinical trial laboratory has now been developed and upgraded to meet International Conference on Harmonisation/Good Clinical Practice (ICH-GCP) standards. The institute is now well prepared to conduct further phase I, II and III TB vaccine trials. AHRI is currently in the process of preparing for a phase II study of the same candidate TB vaccine (Ag85B-ESAT-6 + IC31) which is expected to start in 2011.

Since 2010, AHRI also works with WHO/TDR as a collaborating Clinical Trial Coordination Centre to facilitate capacity building for GCP clinical trials in the region. This is a good indication for the boost the EDCTP grant has provided to the clinical trial capacity of the institute. In addition, stronger collaboration is underway between the African institutions involved through participation in an EDCTP network of excellence, the East Africa Consortium for Clinical Research (EACCR).

The phase I safety and immunogenicity study was completed in April 2010 and showed promising results to be published soon. Following the promising results of the phase I study, EDCTP has proceeded to fund a phase II trial of the vaccine. This project that is led by Dr Mark Doherty from the Statens Serum Institute (Denmark), is a randomised, double-blind, multicenter trial that evaluates the immunogenicity and safety of two doses of the adjuvanted vaccine and uses two different vaccination schedules in tuberculosis skin test positive, healthy adolescents.

A new TB vaccine for African infants

Dr Anja van't Hoog from the Kenya Medical Research Institute in collaboration with the Centre for Disease Control (KEMRI/CDC) program Kisumu, in collaboration with organisations from Africa, Europe and USA, coordinates a project to strengthen the KEMRI research site in Western Kenya. The aim is to build the capacity for phase II and III TB vaccine trials according to the ICH/GCP standards.

The project developed an epidemiological study and clinical trial capacity building activities. These included two studies, which established, followed up and retained neonatal and adolescent (14-18 year old) cohorts. These observational cohort studies included no experimental interventions. The studies, which began in June 2007, took place in the Karemo division of the Siaya district in Kenya. The neonatal study built capacity to estimate the one-year incidence of TB disease as diagnosed by two sputum smears, positive for acid fast bacteria (AFB) and/or positive culture. The adolescent study estimated the optimal way to access an adolescent population in vaccine trials.

By May 2010, the adolescent cohort study had fully enrolled and the data analysis was completed in September 2010. The infant cohort study completed enrolment of 2,900 newborns in June 2010 and the follow up will continue until mid 2011.

The capacity building activities included good clinical practice training of all project staff and clinical research ethics training of 25 of them; courses that were organised by the Vienna School of Clinical Research. As part of the project, seven staff members are undergoing training, three for a PhD and four for a Masters Degree. A state of the art TB laboratory is operational since early 2010 and a clinical facility to enhance the diagnosis of paediatric TB was established in the Siaya District Hospital.

The capacity built in relation to the epidemiological studies has enabled the KEMRI/CDC site to participate in a multicentre phase II trial of a new TB vaccine (Aeras402/Crucell AD35) in African infants. This recombinant vaccine trial, which started in September 2010 is led by Professor Gregory Hussey of the University of Cape Town in South Africa. It is a phase IIb, randomised, double-blind, controlled trial on healthy BCG vaccinated, HIV uninfected infants.

The capacity building activities that take place within the project, aim to ensure that four sites in sub-Saharan Africa possess the necessary infrastructure to conduct phase IIB and phase III trials of new TB vaccines for the next 5 years. These centres are the South African Tuberculosis Vaccine Initiative (SATVI), South Africa; the KEMRI/CDC Field Research Station, Kenya; the Manhica Health Research Centre (CISM), Mozambique; and the Kampala Field Site of the Makerere University in Uganda. This project is currently progressing well and is expected to finish in August 2014.

The impact of rapid molecular diagnosis of tuberculosis

Improving the speed and accuracy of the diagnosis of tuberculosis is one of the priorities of the EDCTP programme. Recently, the development of rapid nucleic acid amplification assays for detection of TB has been an important advance. One of the tests is a cartridge-based, automated diagnostic test that can identify *Mycobacterium tuberculosis* (MTB) and resistance to

rifampicin (RIF) called the GeneXpert MTB/RIF. This test utilises a real-time polymerase chain reaction (PCR) amplification system that processes an integrated specimen and is designed for use at or close to the point of care.

An EDCTP Senior Fellow, Professor Mark Nicol and his team at the University of Cape Town have conducted a study on the impact of GeneXpert at clinic and patient level. In other studies, GeneXpert has shown high sensitivity in diagnosing TB in both smear-positive as well as smear-negative, culture-positive individuals including detection of the presence of rifampicin resistance. This cluster randomised study aims to determine the impact of rapid testing with GeneXpert MTB/RIF when compared to the routine diagnostic algorithm. The primary impact outcomes that will be assessed are the time between the first presentation to clinic of a patient with symptoms and the start of appropriate treatment for TB and, secondly, the proportion of patients in each arm with undiagnosed TB two months after the first TB test. The study has established working relationships with the Foundation for Innovative New Diagnostics (FIND).

The findings in the study to date indicate a potentially great impact of GeneXpert testing in improving the diagnosis of TB in settings of high HIV prevalence. The study is still underway with results expected in 2011. Nevertheless, the preliminary results contributed substantially to a report that was submitted to the WHO Strategic and Technical Advisory Group (STAG) for Tuberculosis that endorsed the use of GeneXpert to diagnose TB in December 2010. Additionally, the National Health Laboratory Service of South Africa is evaluating the possibilities of rolling out GeneXpert testing for routine services. The data from this study will be central to informing this policy decision.



Malaria



Malaria is a life-threatening disease caused by parasites that infected mosquitoes transmit to people through their bites. In 2008, there were 247 million cases of malaria and nearly one million deaths – mostly among children living in Africa. EDCTP's mandate is to evaluate and coordinate the malaria clinical research activities within the European national funding programmes to ensure these activities become a group effort in collaboration with other partners working in this area. The aim is to increase the number of European countries involved in clinical trials of malaria vaccines and treatments and to expand the collaboration with and among African countries, while at the same time to strengthen the capacity in African countries to conduct these trials in alignment with the agenda for malaria control and, where appropriate, elimination and possibly eradication.

Uncomplicated malaria in African children

Currently, artemisinin-based combination therapies (ACTs) are recommended by the World Health Organization as first-line treatment for uncomplicated *Plasmodium falciparum* malaria in all countries where the disease is endemic. There is, however, limited safety and efficacy data for these products, especially when repeatedly used as is often the case in health care practice.

In collaboration with institutes from Africa and Europe Prof. Umberto D'Alessandro and his study group in the Prince Leopold Institute of Tropical Medicine (Belgium) designed a clinical trial that compared the safety and efficacy of four different ACTs: amodiaquine-artesunate (ASAQ), dihydroartemisinin-piperaquine (DHAPQ), artemether-lumefantrine (AL), and chlorproguanil-dapsone plus artesunate (CD-A)- for single and repeat treatments of uncomplicated malaria in children.

This EDCTP project specifically evaluated the safety and efficacy of the 4 ACTs for the treatment of children with uncomplicated *P. falciparum* malaria. After the first active follow-up, the incidence rate of a second clinical episode of uncomplicated malaria was determined. The project evaluated the safety and efficacy of treating the second clinical episode of uncomplicated malaria with the same ACT that was used to treat the first episode.

These studies began in December 2005 and were carried out in ten research sites strategically located in seven African countries, representing different levels of malaria endemicity. Between July 2007 and December 2008, more than 10,000 children were screened for malaria of whom more than 4,000 were diagnosed with clinical malaria and included in this trial. The study recruited children aged 6-59 months old and randomised them to ASAQ, DHAPQ, AL or CD-A. In February 2008, the recruitment for the CD-A arm was stopped because of safety reasons. Children were actively followed up for 28 days and thereafter passively for the next six months. Preliminary results show that PCR-adjusted efficacy of DHAPQ, AL and ASAQ at day 28 was high and similar among the three treatments, while CD-A was less efficacious.

This study enhanced the capacity of the African institutions involved to conduct a Good Clinical Practice (GCP) and Good Clinical Laboratory Practice (GCLP) compliant clinical trial. As this is one of the largest trials so far conducted in sub-Saharan African on the safety and efficacy of ACTs, its results will have a major impact on treatment policies. The large safety data set will contribute substantially to the global database on ACT safety. More specifically, safety data on DHAPQ will be extremely helpful for national programmes, as the WHO has included this treatment in the list of recommended ACTs in 2010.

Malaria vaccine trials

Among the methods to control malaria, effective vaccines that provide strong and lasting immunity would be the most cost-effective interventions to introduce into public health services. Currently, EDCTP funds research and development of two malaria vaccines projects: MVA ME-TRAP/AdCh63 ME-TRAP and GMZ2.

The project led by the Malaria Vected Vaccine Consortium (MVVC) aims to carry out three clinical trials of AdCh63 ME-TRAP and MVA ME-TRAP vaccines. The phase Ib trial in Kenyan adults is being conducted at the KEMRI coastal research unit at Kilifi, Kenya. The phase I study in Gambian adults is being undertaken at the Farafenni field station and the Sukuta site near to Banjul in The Gambia. Following the successful completion of these two studies, a multicentre phase IIb clinical trial will take place at 2-3 sites in Burkina Faso, Kenya, The Gambia or Senegal. Currently, infrastructure is upgraded and staff is trained. The MVVC established a network connecting the consortium partners and maintaining contacts with existing networks. This process is to ensure that the less endowed sites are fully developed to conduct phase I and II trials.

The GMZ2 Consortium funded by EDCTP, is conducting trials of this candidate vaccine which is a fusion protein composed of *Plasmodium falciparum* Glutamate Rich Protein (GLURP) and Merozoite

Surface Protein 3 (MSP3). The vaccine is tested in a double-blinded trial with rabies vaccine as a control. The first vaccination was administered in November 2010 at the Medical Research Unit of the Albert Schweitzer Hospital (ASH) in Lambaréné, Gabon. The Gabon team has successfully completed immunisation of the first group of children and has shown the vaccine to be safe and immunogenic.

As in other EDCTP projects, this project also integrates capacity building with the clinical trial process. This includes infrastructure upgrading, short- and long-term training of staff and sharing of skills and resources through networking.

Malaria in Pregnancy: four clinical trials started recruitment in 2010

Four clinical trials were recruiting patients in 2010. The trials were cofunded by EDCTP through a grant to the global Malaria in Pregnancy (MiP) Consortium evaluating new and improved existing interventions for the prevention and treatment of malaria in pregnancy.

The first trial compares the standard intermittent preventive treatment (IPTp) with Sulfadoxine-Pyrimethamine (SP) regimen of 3 doses of SP in the second and third trimester. This regimen is combined with screening and treatment at scheduled antenatal clinic visits in the second and third trimester in pregnant women who sleep under insecticide-treated bed nets. The trial takes place at sites in four West African countries: Burkina Faso (Ziniare), Ghana (Navrongo), Mali (San and Kita) and The Gambia (Basse). By the end of 2010, researchers had recruited 1731 women in all sites.

The second trial compares IPTp using SP compared with IPTp using Mefloquine (MQ) in HIV non-infected pregnant women receiving long-lasting insecticide-treated nets (LLITNs). Among the currently available alternative antimalarial drugs, MQ offers probably the most comparable advantages to SP. This study is carried out at eleven sites in five African countries: Benin, Gabon, Kenya, Mozambique, and Tanzania. By

the end of 2010, 2,385 women were recruited at all sites.

The third trial is comparing IPTp with Mefloquine with IPTp using placebo in HIV-infected pregnant women receiving Cotrimoxazole for opportunistic infections and using LLITNs. This study is conducted in Kenya, Mozambique and Tanzania. By the end of 2010, the trial had enrolled 376 women in all sites.

The fourth safety and efficacy trial involves a head-to-head comparison of 4 artemisinin based combinations (Amodiaquine-Artesunate, Dihydro-artemisinin-Piperaquine; Artemether-Lumefantrine; and Mefloquine-Artesunate) when used for treatment of pregnant women with *P. falciparum* infection during the second and the third trimester. The recruitment sites for this trial are in Burkina Faso, Ghana, Malawi, and Zambia.

These studies will inform WHO guidelines and drug policies in countries where malaria is endemic. Moreover, all these research projects include a significant amount of capacity development for the research institutions. The infrastructure of fifteen research sites has been upgraded and training courses are also offered in GCP, GCLP, clinical trial methodology, research ethics, statistics data management and research project management. Jointly 11 training positions involving 4 Masters and 7 PhD scholarships have been awarded in this area.

Drug trials for the treatment of severe malaria

Severe malaria kills about a million African children each year. EDCTP funds clinical trials that aim to improve and simplify treatment of severe malaria in children. A project coordinated by Professor Peter Kremsner through the Severe Malaria in African Children (SMAC) network is taking place in The Gambia, Ghana, Gabon, Kenya and Malawi. The overall goal of this project is to develop to determine an improved and simplified regimen for treating severe childhood malaria.

First, a phase II randomised, double-blind study of the efficacy, safety, tolerability, and pharmacokinetics of intravenous artesunate in children with severe malaria was successfully conducted at the Albert Schweitzer Hospital, Lambaréné, Libreville in Gabon and Blantyre in Malawi. The results from this study have shown that treatment of severe malaria can be simplified to a once-a-day treatment with 4 mg/kg artesunate given in 3 intravenous injections over 48 hours instead of the

current complex regimen of 2.4 mg/kg given in 5 injections over 72 hours. However, intravenous drug administration is relatively complicated and requires skilled workers to administer, a constraint in many resource poor countries in sub-Saharan Africa. Therefore, a phase III multicentre study is under preparation to simplify the treatment even more through intramuscular administration.



Building African research leadership



EDCTP has developed a programmatic approach to clinical trials that identifies capacity development to be an integral part of research projects. To enable the successful undertaking of clinical trials – the Partnership’s core business – EDCTP invests in capacity development and networking. Currently, all integrated clinical trial projects have incorporated both short- and long-term training for African scientists.

By the end of 2010, EDCTP had funded Masters and PhD training for 101 African candidates. With the implementation of the strategy, that emphasises training in the integrated context of clinical projects, only 7 PhDs and 23 Masters Grants have been stand-alone scholarships. All other scholarships are part of the capacity building of integrated projects. EDCTP has also encouraged learning on the job, for example, by granting scholarships to 21 African scientists for the MSc in Clinical Trials (distance learning) offered by the London School of Tropical Medicine (UK). In this way, the candidates are studying and applying their knowledge to clinical trial projects in their host institutions in Africa at the same time.

Several EDCTP Senior Fellows are successfully establishing research teams. They contribute directly to building human capacity through their supervision of PhD and Masters Candidates. Senior Fellowships linked to the EDCTP-funded regional networks of excellence contribute to consolidate research capacity in regions where capacity is very limited, for example in the central African region. Additionally, Senior Fellowship grants have helped researchers from fragile states to conduct research and start up research teams. Senior Fellowship grants have also served as re-entry scheme, bringing African scientists back to Africa.

African Regulatory Authorities and Ethics Review capacity

Senior Fellowship Programme

Independently from the integrated clinical trials projects EDCTP runs a very successful Senior Fellowship Programme, fostering African science leadership. By the end of 2010, EDCTP had granted 29 Senior Fellowships and 5 Career Development Fellowships. It is likely that a further ten grantees will be selected in connection with the calls for proposals published in 2010. Five of the grantees have successfully completed their projects and the grants have clearly contributed to creating competitive research teams. In several instances, the grants have enabled Fellows to progress further in their research careers by competing for and winning larger grants.

Some of the grantees have received awards for outstanding performance in research. A South African scientist, Associate Professor Keertan Dheda, one of the Senior Fellows, received the 2010 Union Scientific Award at the meeting of the International Union against Tuberculosis and Lung Disease (IUATLD) for his expertise on the fields of diagnostics and drug-resistant tuberculosis. He was also successful in getting an EDCTP grant for an integrated project on TB diagnosis in which he is the Project Coordinator.

EDCTP has facilitated the assessment and strengthening of the national regulatory environment of various African countries. It has done so through training and by supporting the development of a common regulatory framework. It collaborated in this with the World Health Organization.

The first quarter of 2010 saw the successful completion of the initial activities of strengthening regulatory pathways and establishing the African Vaccine Regulators Forum (AVAREF). Furthermore, EDCTP works towards the creation of a reliable and dynamic database on ethics and regulatory capacity in Africa. Currently the Council on Health Research for Development is setting up this database with EDCTP funding. It is accessible through www.healthresearchweb.org.

By the end of 2010, EDCTP was supporting 38 ethics projects. Almost half of the projects support ethics training in Africa and Europe. In 18 countries, EDCTP has funded projects to establish, support and strengthen the ethic review capacity at both the institutional and national level. In particular, EDCTP funding has supported National Ethics Committees (NECs) in countries that had limited capacity in the field of ethical review, such as Benin, Gabon, Mozambique and Rwanda.

For example in 2005, Benin was one of the countries where health research was on the rise, but had limited capacity for ethics review and the Health Ministry had recently established a provisional ethics review committee. In 2007, EDCTP funded a project for the establishment and strengthening of the Benin NEC. The challenges faced by the ethics committee included lack of training of its committee members and poorly defined roles and responsibilities for the committee. The project was completed in 2010 with a sustainability strategy in place. It successfully provided the necessary infrastructure for the NEC Secretariat, which enabled the training of all NEC members to take place either in the country or in Kenya. It also enabled a large percentage of the Beninese researchers to receive training on the importance of ethics review.

Also in 2010, the first phase of the EDCTP-funded project to establish a National Ethics Committee in Gabon was completed. The project successfully established the Gabonese NEC and provided for the administrative structure, standard operating procedures, guidelines and training of its members. Similarly, the NEC of Gabon continues to operate with support from the Ministry of Health. The Gabonese NEC is now networking in the region and is embedded in the EDCTP Central African Network of Excellence for conducting clinical trials on TB, HIV/AIDS and malaria (CANTAM), connecting ethics committees as well as research centres in Gabon, Cameroon and the Republic of Congo.

PACTR: registration of clinical trials in Africa

In 2010 the Pan African Clinical Trials registry (PACTR), established in 2006 with initial funding from EDCTP, improved its web-based portal www.pactr.org and currently has online registration facility compliant with WHO standards. The WHO renewed PACTR's status as a Primary Registry in 2010 and this registry maintains direct linkage to the WHO International Clinical Trials Platform (ICTRP). The

South African Cochrane Centre (SACC) at the Medical Research Council (MRC) coordinates the registry.

The registry holds key administrative and scientific information about planned, ongoing and completed clinical trials in Africa. Information from the registry will help researchers, policy makers and funding organisations to identify where and by whom clinical trial work is conducted in Africa, the status of these trials and their adherence to ethical and regulatory requirements. Additionally, this registry is committed to increasing trial registration and awareness of the importance of registration, while helping to harmonise national registry efforts across the African continent. By January 2010, applications to PACTR had doubled since its official launch; by the end of the year the registry had received 67 new applications. The project coordinators have also actively promoted PACTR and clinical trial registration, with key publications in *The Lancet*, *The Journal of Evidence-Based Medicine* and *The South-African Medical Journal* in 2010.

As PACTR is the only African registry with WHO primary clinical trial status, it has also begun to work with national registries through the Pan African Clinical Trials Alliance (PACTA). This network created by WHO assists in establishing national registration systems. Moreover, PACTR participates in a WHO initiative to increase registration of child-focused trials. The South African Cochrane Centre will gather information on key researchers engaged in improving the health of children in Africa. Using PACTR as a framework, a prospective database of child-focused trials will be developed. The registry has already embarked on mapping past trial activity to assess the state of research related to African children's health.

**‘Senior Fellowship grants
have also facilitated
the return of
African scientists
to Africa’**



Building international networks



The EDCTP principle of requiring both multiple European member states and African countries to collaborate in projects, while also encouraging third-party participation, has been instrumental in the formation of various multinational consortia. Proactive support of networking within Europe and to some extent with the USA (north-north), within Africa (south-south) and between Africa and Europe/USA (north-south) has further strengthened research collaboration.

The north-north networking and the involvement of third-parties is also of great benefit to encourage organisations from Europe and other continents to collaborate jointly with sub-Saharan Africa. The collaboration between several European and North American organisations is one of the successes of EDCTP. Furthermore, EDCTP has been successful in overcoming traditional barriers to cooperation based on traditional affiliations. For European countries that have few or no research ties with Africa, EDCTP provides possibilities to establish and develop new research partnerships. Several EDCTP European Member States now venture into new research areas because of this collaboration.

Integrating European research programmes

The number of institutions participating in EDCTP-funded activities has significantly increased. Participation rose from 13 African countries and 20 African institutions in 2005 to 29 countries and 140 institutions by December 2010. In the same period, the number of European countries and institutions involved rose from 10 to 16 and 20 to 51, respectively.

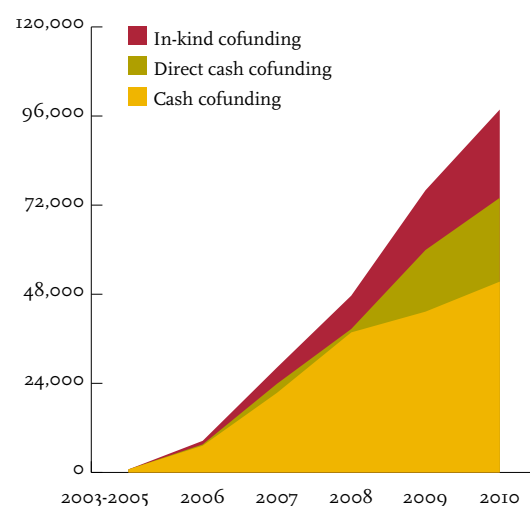
Prior to 2005, European Union Member States funded clinical trials on HIV/AIDS, tuberculosis and malaria from their national programmes, in partnership with historical collaborators in sub-Saharan Africa but rarely in any collaboration with the national programmes of other EU Member States. Through the activities of EDCTP, this situation has changed notably over the past years. Now a large proportion of all Member State funding of clinical trials on HIV/AIDS, tuberculosis and malaria is linked with that of at least one other EU Member State and through EDCTP. Over the past four years, EDCTP has been consistently successful in integrating the national programmes of EU Member States on these three diseases in jointly funded clinical trials.

Currently EU Member States are engaged in 68 joint programme projects in sub-Saharan Africa and 39 of these are EDCTP-funded. Of the clinical trials funded jointly by three or more EU Member States, 72% are EDCTP

initiatives. Furthermore, EDCTP-funded clinical trials now involve on average three participating European Member States and three African countries per project. Over one third of the projects involve four or more EU Member States whereas 15% of them involve five or more European Member States.

In order to identify and strengthen integration of European national activities EDCTP issued a call for Member States initiated (MSI) projects. The aim of this call is to increase integration of the national programmes, to support coordination and cooperation with African researchers and to establish sustainable clinical research capacity in Africa. In the last quarter of 2010, four of the five MSI proposals reviewed from the first call, received a grant. In August 2010, a second MSI call was launched. Six of the eight proposals received are currently under review. In this call, EDCTP will provide up to a maximum of 25% of the total funding of the eligible proposals and the participating Member States and third-parties provide the remaining 75%.

Total Member State eligible cofunding per type of contribution 2003-2010 (€ 000)



In 2010, the EDCTP-EEIG Member States contributed € 21.7 M to EDCTP-funded projects and activities. These contributions are divided into cash contributions to EDCTP (€ 8.1 M), direct cash cofunding to projects (€ 6 M) and in-kind contributions to EDCTP projects (€ 7.7 M).



African research and policy participation

EDCTP fosters African participation and leadership in the programme through African commitment and ownership both at the political and scientific level. EDCTP proactively engages with researchers, research managers, heads of institutions and senior government officials during EDCTP site visits in Africa and actively participates in various African forums. Over the past five years, the number of African principal investigators in EDCTP-funded projects has dramatically increased.

Currently there are 319 African scientists working on EDCTP projects as project coordinators or investigators, while 72 of them (22.5%) are female. Female scientists in the role of project coordinators or principle investigators reach approximately 30% of the 163 EDCTP-funded projects; 283 African scientists participate in clinical trials and Networks of Excellence projects. Others contribute as Career Development Fellows (5) or Senior Fellows (29) and 2 are working with the Clinical Trials Register.

By the end of 2010, African cofunding of EDCTP-funded projects had risen to about € 9.7 Million in both

in cash and in-kind. This figure, however, grossly underestimates the African cofunding effort as most projects did not specify this financial information in the past. More importantly, the majority of the African researchers receive their main salary from the hosting institutions or from African governments as a contribution to these projects. Moreover, African governments make significant contributions mostly to personnel costs, utilities and infrastructure and by facilitating the participation of consenting study subjects in projects.

EDCTP continues to collaborate with the different stakeholders in Africa. EDCTP engages with the African Union and the New Partnership for African Development (NEPAD). It also works closely with the African regional economic communities. Their health branches are represented at the EDCTP Developing Countries Coordinating Committee (DCCC) and the General Assembly. EDCTP also collaborates with the African AIDS Vaccine Programme (AAVP) and is actively involved in strategic meetings in support of HIV vaccine development and clinical trials organised by AAVP, WHO and UNAIDS. AAVP and EDCTP implemented a common advocacy plan. The Partnership also works closely with the African Network for Drugs and Diagnostics Innovation (ANDI).

Various African regional health organisations including the WHO/AFRO, the West African Health Organisation (WAHO), the Organisation for the Coordination of the Campaign against Endemic Diseases in Central Africa (OCEAC) and the East, Central and Southern Africa Commonwealth (ECSA) have representation in the DCCC.

African Regional Networks of Excellence

In the first quarter of 2010, two new EDCTP-funded regional Networks of Excellence were launched: the East African Consortium in Clinical Research and Practice (EACCR) and the Trials of Excellence for Southern Africa (TESA). The Networks of Excellence reflect the EDCTP strategy to connect and amplify clinical trial capacity in sub-Saharan Africa. Currently there are four operational regional networks. These include EACCR, TESA, the Central Africa Network on Tuberculosis, HIV/AIDS and Malaria for the conduct of clinical trials (CANTAM) and the West African Network of Excellence for TB, AIDS and Malaria (WANETAM).

The networks of excellence connecting African academic and research institutions are important as they train a new generation and encourage retention of African scientists. They provide a better environment for research and offer career opportunities in clinical research. The networks will improve the balance of clinical research capacity, ensuring that upcoming partners get special attention and assistance.

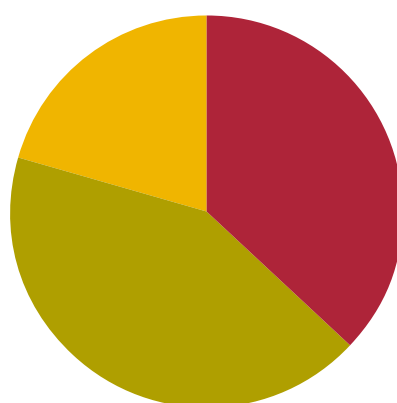
The networks are already involving institutions and countries that currently have little or no participation in EDCTP-funded health research activities such as Congo Brazzaville, Guinea Bissau, and Namibia. Other organisations working in sub-Saharan Africa, such as the Wellcome Trust (UK) and the National Institutes of Health (USA) are now funding similar capacity building entities. Collaboration with the EDCTP-funded networks is strongly encouraged. WHO/AFRO and NEPAD have also expressed a strong interest in this EDCTP initiative.

International and third-party collaboration

EDCTP collaborates with third-parties, i.e. pharmaceutical companies, small- and medium-sized enterprises, philanthropic organisations and like-minded organisations, to develop new clinical tools. Examples of effective collaboration are the Malaria in Pregnancy (MiP) Consortium and the Pan-African Consortium for the Evaluation of Antituberculosis Antibiotics (PanACEA). The consortia aim to avoid duplicating research efforts and create cost-effective synergies.

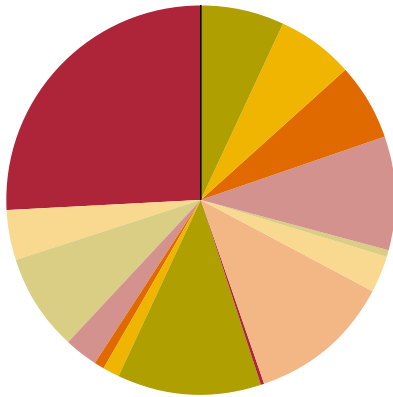
EDCTP funded the Pan-African Consortium for the Evaluation of Antituberculosis Antibiotics (PanACEA) to conduct a series of cooperative clinical trials to evaluate three different drugs (Moxifloxacin, Rifampicin and SQ109) for treatment of drug-sensitive tuberculosis. The consortium brings together many stakeholders besides EDCTP including researchers and funders from public and private institutions such as the Bill & Melinda Gates Foundation, pharmaceutical companies and academic institutions from Europe, USA and Africa. The aim is to simplify and shorten the current regimens. By December 2010, the moxifloxacin-study was well underway, and the two other studies had started recruitment.

Funding contributions to EDCTP supported projects: € 311.10 million



■ EDCTP Member States funding	€ 115.69
■ European Commission funding	€ 132.26
■ Third-party funding	€ 63.15

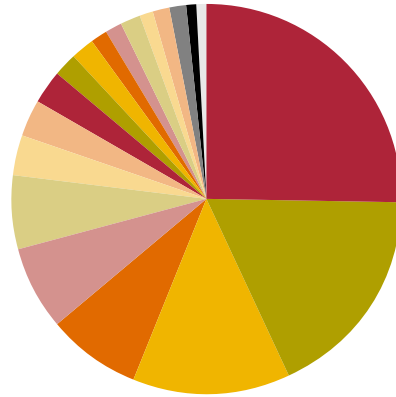
Composition of total Member State eligible cofunding per country (€ 000)



■ Austria	€ 1,361
■ Belgium	€ 45,369
■ Denmark	€ 44,294
■ France	€ 41,927
■ Germany	€ 64,239
■ Greece	€ 3,454
■ Ireland	€ 19,969
■ Italy	€ 80,438
■ Luxembourg	€ 2,182
■ Netherlands	€ 80,258
■ Norway	€ 8,500
■ Portugal	€ 5,897
■ Spain	€ 18,881
■ Sweden	€ 54,560
■ Switzerland	€ 27,350
■ United Kingdom	€ 172,708

From the inception of EDCTP till 31 December 2010, Member States have contributed a total of € 97.7 M to EDCTP signed projects. Additionally, the Member States have committed another € 29.5 M in direct and in-kind cofunding towards ongoing projects, which will come into effect after 2010. Approximately € 2.9 M in cash cofunding has been earmarked for projects approved in 2010 but currently still under budget negotiation.

Third-party funding to EDCTP activities 2003-2010 for all types of contributions (€ 000)



■ Bill & Melinda Gates Foundation	€ 11,624
■ Global TB Alliance	€ 8,236
■ Aeras Global TB Vaccine Foundation	€ 5,920
■ Reproductive Health Research Unit	€ 3,164
■ Sanofi Pasteur & EuroVacc Foundation	€ 2,800
■ Sequella	€ 1,550
■ International Partnership for Microbicides	€ 1,487
■ Bayer AG	€ 1,200
■ International AIDS Vaccine Initiative	€ 920
■ Uganda Virus Research Institute	€ 600
■ European Vaccine Initiative	€ 757
■ Medicine for Malaria Venture	€ 641
■ Foundation for the National Institutes of Health	€ 641
■ World Health Organization	€ 631
■ African Malaria Network Trust	€ 613
■ Foundation for Innovative New Diagnostics	€ 594
■ Sanofi Aventis	€ 376
■ Jomaa Pharma Gmbh	€ 333
■ Other	€ 2,175

Since the start of the EDCTP programme in 2003 up until 31 December 2010, third-parties have contributed approximately € 45.9 M and committed an additional € 20 M to EDCTP-funded projects. The largest third-party funder is the Bill & Melinda Gates Foundation. It has contributed over € 11.6 M in cash to EDCTP projects involving research and capacity building regarding HIV vaccines, tuberculosis treatment and diagnostics in sub-Saharan Africa.



EDCTP Networks

Western Africa: WANETAM

Project Coordinator: Prof. Soleymane Mboup

Burkina Faso

- Centre Muraz
- Centre National de Recherche de Formation sur le Paludisme (CNRFP)

The Gambia

- Medical Research Council Laboratories Gambia
- National Health Laboratory Service

Ghana

- Korle-Bu Teaching Hospital
- University of Ghana

Guinea-Bissau

- Bandim Health Project

Mali

- University of Bamako

Nigeria

- Federal Ministry of Health - Nigeria
- Innovative Biotech
- National Institute for Pharmaceutical Research (NIPRD) and Development
- Nigerian Institute of Medical Research
- University of Ibadan

Senegal

- Institut Pasteur de Dakar
- Université Cheikh Anta DIOP de Dakar (UCAD)

United States

- Brown University

Senegal
The Gambia
Guinea-Bissau

Mali

Burkina Faso

Ghana

Nigeria

Cameroon

Gabon

Congo

Central Africa: CANTAM

Project Coordinator: Prof. Francine Ntoumi

Cameroon

- Institute of Research for the Development (IRD)
- International Reference Centre Chantal Biya (CIRCB)
- Organisation de Coordination pour la Lutte contre les Endémies en Afrique Centrale (OCEAC)
- University of Buea
- University of Yaounde I

Congo, Republic of the

- Centre d'Etudes sur les Ressources Végétales (CERVE)

Gabon

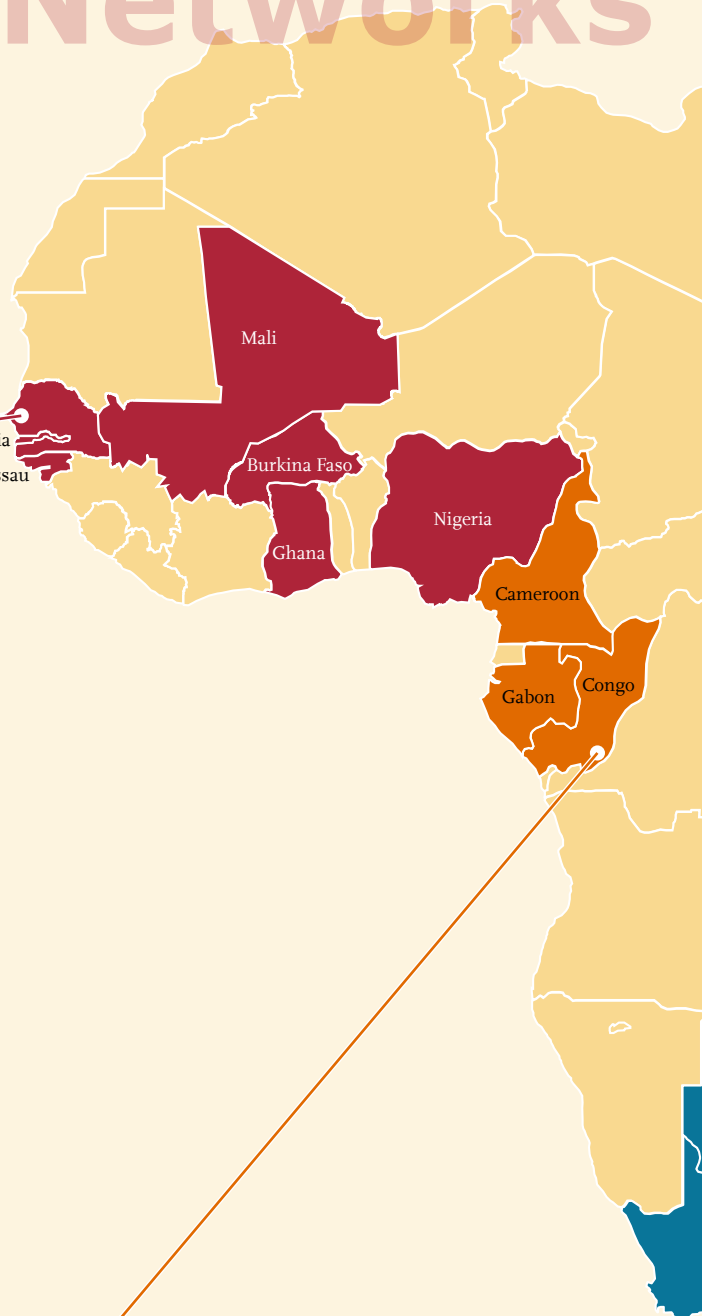
- Albert Schweitzer Hospital

France

- National Agency for AIDS Research (ANRS)

Germany

- University of Tübingen





Eastern Africa: EACCR

Project Coordinator: Prof. Pontiano Kaleebu

Kenya

- Kenya Medical Research Institute (KEMRI)
- Maseno University
- University of Nairobi

Sudan

- University of Khartoum

Ethiopia

- Armauer Hansen Research Institute (AHRI)

Tanzania

- Ifakara Health Research and Development Centre
- Mbeya Medical Research Programme
- Muhimbili University College of Health Sciences
- National Institute for Medical Research (NIMR)

Uganda

- Makerere University
- Medical Research Council Programme on AIDS - Uganda Virus Research Institute (MRC/UVRI)
- Ministry of Health, The Republic of Uganda
- San Raphael of St. Francis Hospital Nsambya

Germany

- Klinikum der Universität München, Institute for Medical Bioinformatics

Sweden

- University of Gothenburg
- Karolinska Institut

United Kingdom

- London School of Hygiene and Tropical Medicine (LSHTM)

United States

- Center for Disease Control and Prevention

Southern Africa: TESA

Project Coordinator: Dr Alexander Pym

Botswana

- Botswana-Harvard School of Public Health AIDS Initiative Partnership (BHP)

Malawi

- University of Malawi

Mozambique

- Hospital José Macamo
- Manhica Health Research Center

South Africa

- Medical Research Council South Africa (MRC)
- Stellenbosch University
- University of Cape Town

Zambia

- Biomedical Research and Training Institute (BRTI)
- University Teaching Hospital Zambia

Zimbabwe

- University of Zimbabwe

France

- Institut de Recherche pour le Développement (IRD)

Germany

- Max Planck Society

Netherlands

- Leiden University

United Kingdom

- University College London
- St. George's University of London

Governance



EDCTP General Assembly meeting 2010.

General Assembly & Deputy GA Members in 2010

Austria	Christiane Druml	Hemma Bauer
Belgium	Bruno Gryseels	Dirk van der Roost
Denmark	Søren Jepsen (Vice-Chair) (appointed in May 2010)	
France	Patrice Debre (Vice-Chair)	Bernadette Murgue
Germany	Joachim Krebsler (appointed in November 2010)	Detlef Böcking
Greece	Antonis Antoniadis	Suzanne Kolyva
Ireland	Teresa Maguire	
Italy	Stefano Vella	
Luxembourg	Carlo Duprel	
Netherlands	Marja Esveld (Vice-Chair) (appointed in November 2010)	Judith de Kroon
Norway	Arne-Petter Sanne	Kårstein Måseide
Portugal	Ana Maria Faisca	Catarina Resende
Spain	Rafael de Andres Medina	Almudena Gonzalez
Sweden	Hannah Akuffo (Chair) (appointed in January 2010)	Olle Stendhal
Switzerland	Isabella Beretta	
United Kingdom	Mark Palmer	Kevin Moreton

African Representation at the GA in 2010

The African Union (AU) Commission of Social Affairs

Advocate Bience Gawanas, Commissioner Social Affairs of AU (Alternate representative: Dr Olawale Maiyegun, Director for Social Affairs of AU)

The East African Community (EAC)

Ambassador Juma Mwapachu, Secretary General of EAC (Alternate representative: Dr Stanley Sonoiya, Principal Health Officer of EAC)

The Economic Community of Central African States (ECCAS) and the Organisation for the Coordination of the Struggle Against Epidemics in Central Africa (OCEAC)

Dr Jean Jacques Moka, the Secretary General of OCEAC (Alternate representative: Dr Marlyse Peyou Ndi, Head of Studies, Planning and Training Department of OCEAC)

The African Regional Committee of Health Ministers

Professor John Gyapong, Director Health Research Division Ghana (Alternate representative: Dr Alasford M. Ngwengwe, Chairperson of the Zambian National Health Research Advisory Committee)

Partnership Board in 2010

Sodiomon Sirima (Chair)	Burkina Faso
Eric Sandström (Vice-Chair)	Sweden
Rosemary Musonda (Vice-Chair)	Botswana (appointed in April 2010)
Carolyn Petersen	USA (left in April 2010)
Christian Burri	Switzerland
Martin Grobusch	South Africa
Robert Sauerwein	The Netherlands (appointed in January 2010)
Shabbar Jaffar	United Kingdom
Tumani Corrah	The Gambia (appointed in January 2010)

Developing Countries Coordinating Committee in 2010

Alioune Dieye (Chair)	Senegal
Nkandu Luo (Vice-Chair)	Zambia
Veronique Nintchom Penlap (Vice-Chair)	Cameroon
Abraham Alabi	Nigeria
Angelique Ndjovi Mbiguino	Gabon
David Ofori-Adjei	Ghana
Herman Awono Ambene	Cameroon
Hulda Swai	South Africa
Issa Sanou	Burkina Faso (WHO AFRO representative)
Jasper Ogwal-Okeng	Uganda
Josephine Kibaru Mbae	Tanzania (appointed in November 2010)
Martin Antonio	The Gambia
Mecky Isaac Matee	Tanzania
Modest Mulenga	Zambia
Omu Anzala	Kenya
Saadou Issifou	Gabon

EDCTP Secretariat Staff in 2010

Charles Mgone	Executive Director
Pascoal Mocumbi	High Representative
Simon Belcher	Director of Finance and Administration
Michael Makanga	Director South-South Cooperation and Head of Africa Office
David Coles	Joint Programme Manager (left in September 2010)
Waley Salami	Operations Manager
Thomas Nyirenda	South-South Networking and Capacity Development Manager
Anabela Atanásio	Senior Networking Officer (left in September 2010)
Danielle Roordink	Networking Officer (left in October 2010)
Montserrat Blázquez Domingo	Project Officer
Lara Pandya	Project Officer (left in November 2010)
Christian Geib	Project Officer (left in August 2010)
Pete Murphy	Project Officer
Hager Bassyouni	Project Officer (appointed in February 2010)
Monique Rijks-Surette	Project Officer (appointed in September 2010)
Nuraan Fakier	Project Officer (appointed in October 2010)
Jean Marie Habarugira	Project Officer (appointed in December 2010)
Lidwien van der Valk	Legal Advisor
Joan Ruberg	Human Resources Advisor
Chris Bruinings	Senior Bookkeeper
Mary Jane Coloma-Egelink	Grants Financial Assistant
Emma Qi	Grants Financial Assistant
Raquel Rovira Blanco	Grants Financial Assistant (left in May 2010)
Jing Zhao	Grants Financial Assistant (appointed in May 2010)
Kevin Burke	Financial Assistant (left in June 2010)
Sayma Siddiqui	Financial Assistant (appointed in July 2010)
Suzanne Hoogervorst	Travel and Events co-ordinator
Sanne Zoun	Travel and Events co-ordinator
Daniela Pereira-Lengkeek	Assistant Communications & IT Officer (appointed in April 2010)
Gail Smith	Senior Administration Officer
Patricia Sáez	Administration Officer
Sabina Stanescu	Administration Officer (left in September 2010)

Primary financial statement 2010 and auditor's report



Statement of financial activity 2010 (SOFA)

	2010 € 000	2009 € 000
Incoming resources		
Incoming resources from generated funds:		
Voluntary and donor income	59,001	81,628
Finance income	1,086	2,903
Total incoming resources	60,087	84,531
Resources expended		
Activities in furtherance of EDCTP objects	(3,947)	(4,351)
Grants payable	(56,049)	(100,309)
Governance costs	(331)	(653)
Total resources expended	(60,327)	(105,313)
Net income (expenditure) for the year	(240)	(20,782)
Allocations		
Allocated to earmarked funds	(49)	21
Allocated to general funds	0	0
Allocated to restricted funds	(191)	(20,803)
	(240)	(20,782)

Statement of changes in reserves 2010

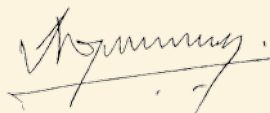
	Unrestricted € 000	Earmarked € 000	Restricted € 000	Total € 000
Balance as at 1 January 2009	0	(100)	28,948	28,848
Allocation of result for the year	0	21	(20,803)	(20,782)
Balance as at 31 December 2009	0	(79)	8,145	8,066
Allocation of result of the year	0	(49)	(191)	(240)
Balance as at 31 December 2010	0	(128)	7,954	7,826

The statement of financial activities includes all gains and losses recognised in the year. All incoming resources and resources expended derive from continuing activities.

Statement of financial position as at 31 December 2010

	2010 € 000	2009 € 000
Assets		
<i>Non-current assets</i>		
Tangible assets	0	0
Total non-current assets	0	0
<i>Current assets</i>		
Debtors	39,516	23,422
Cash and cash equivalents	50,405	64,614
Total current assets	89,921	88,036
Total assets	89,921	88,036
	2010 € 000	2009 € 000
Liabilities and reserves		
<i>Liabilities</i>		
<i>Current liabilities</i>		
Creditors: amounts falling due within one year	42,009	36,600
<i>Non-current liabilities</i>		
Creditors: amounts falling due over one year	40,086	43,370
Total liabilities	82,095	79,970
<i>Reserves</i>		
<i>Unrestricted reserves</i>		
General funds	0	0
Earmarked funds	(128)	(79)
Total unrestricted reserves	(128)	(79)
<i>Restricted reserves</i>		
Restricted funds	7,954	8,145
Total reserves	7,826	8,066
Total liabilities and reserves	89,921	88,036

Approved by the EDCTP Secretariat on behalf of EEIG General Assembly



Prof. Charles Mgone
Dated 13 May 2011

Statement of cash flow for the year ended 31 December 2010

	2010 € 000	2009 € 000
Cash flows from operating activities		
Net income for the period	(240)	(20,782)
<i>Adjustments for:</i>		
Depreciation	0	0
Net finance income	(1,086)	(2,903)
Change in receivables	(16,094)	(53,953)
Change in payables	2,125	40,099
Net cash from operating activities	(15,295)	(37,539)
<i>Cash flows from investing activities</i>		
Interest received	991	2,937
Net cash from investing activities	991	2,937
Net increase in cash and cash equivalents	(14,304)	(34,602)
Cash and cash equivalents at 1 January	64,614	99,250
Effect of exchange rate fluctuations	95	(34)
Effect of prior year adjustment	0	0
Cash and cash equivalents at 31 December	50,405	64,614

Notes to the Primary Financial Statements

Basis of preparation

The primary financial statements, including the 2009 comparative figures, comprising of the statement of financial position as at 31 December 2010, the statement of financial activity, changes in reserves and cash flows for the year then ended, have been derived from the financial accounts of EDCTP-EEIG for the year ended 31 December 2010. These financial accounts have been prepared in accordance with International Financial Reporting Standards as adopted by the European Union (hereafter EU-IFRS).

The primary financial statements omit the notes comprising of the significant accounting policies and other explanatory information as required by EU-IFRS. Reading the primary financial statements, therefore, is not a substitute for reading the financial accounts. The primary financial statements should be read in conjunction with the financial accounts from which the primary financial statements were derived.

Independent auditor's report

To: the General Assembly of EDCTP-EEIG

The accompanying primary financial statements, which comprise the statement of financial position as at 31 December 2010, the statement of financial activity, changes in reserves and cash flows for the year then ended, and notes, comprising the basis of preparation, are derived from the audited financial accounts of EDCTP-EEIG for the year ended 31 December 2010. We expressed an unqualified audit opinion on those financial accounts in our report dated 13 May 2011. Those financial accounts, and the primary financial statements, do not reflect the effects of events that occurred subsequent to the date of our report on those financial accounts.

The primary financial statements do not contain the disclosures required by International Financial Reporting Standards as adopted by the European Union. Reading the primary financial statements, therefore, is not a substitute for reading the audited financial accounts of EDCTP-EEIG.

Management's responsibility

Management is responsible for the preparation of a primary financial statements on the basis described in the basis of preparation.

Auditor's responsibility

Our responsibility is to express an opinion on the primary financial statements based on our procedures, which were conducted in accordance with Dutch Law, including the Dutch Standard on Auditing 810 "Engagements to report on summary financial statements".

Opinion

In our opinion, the primary financial statements derived from the audited financial accounts of EDCTP-EEIG for the year ended 31 December 2010 are consistent, in all material respects, with those financial accounts, on the basis described in the basis of preparation.

The Hague, 9 June 2011
KPMG ACCOUNTANTS N.V.

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