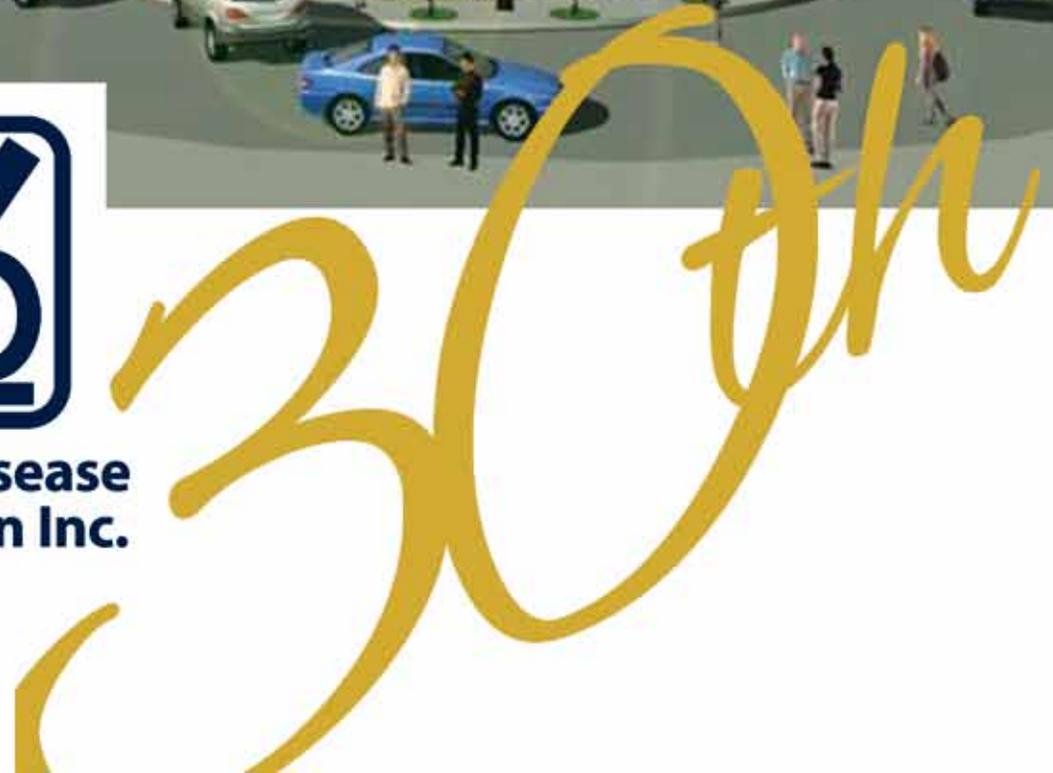


OUR VISION

Equitable Universal Access to Health  
for National Prosperity



**Tropical Disease  
Foundation Inc.**



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## The Symbols of THE TDF LOGO

### **The Microscope**

to symbolize medical research

### **The Sun and the Plant**

to signify the tropics and the lush vegetation and additionally, the plant symbolizes the idea of research being growth, and of exploration growing into further discovery

# Message

Roberta C. Romero, MD  
Chief Executive Officer



The past three decades have been marked by a flurry of activities. From the foundation's establishment, the many developments in research, to the rapid expansion and involvement in diseases other than TB, TDF has achieved so much.

We did not expect this – and therefore, can only be thankful we have come this far. The ability to be of service to thousands of people, save lives and improve the lives of those living with disease, is truly priceless.

Also, the opportunity to work in collaboration with some of the best minds in the scientific community to develop a better understanding of TB and a number of diseases has been a source of great pride. The achievements in the fields of research, training, and service towards fighting tuberculosis and of other infectious diseases were made possible through the significant partnerships that have been established through the years. We are proud of and continue to support our hard-working and internationally-recognized staff and look towards increasingly being 'home to the experts'.

As TDF celebrates its anniversary, we invite you to look back on the Foundation's thirty years of quality research, training, and service for Filipinos and dream with us as we move forward with a renewed commitment to search for cures and solutions as we deliver these quality services to more of our people.

# Message

Jose C. Benitez, Ph.D.  
Chairman of the Board



The Tropical Disease Foundation, Inc. (TDF) was established as a reminder that one cannot simply ‘stand and observe’ while others suffer – as Dr. Tupasi put it some 30 years ago, “something had to be done”.

And that is exactly what TDF is about: getting things done. And it will continue to do so. As we envision the coming years, we are challenged by diseases that afflict our country while aggravated by poverty, ineffective service delivery, lack of information and more so, new strains of diseases.

We are not perturbed. The resolve is the same. Something must – and will – be done. TDF will work to improve the health of Filipinos and aim to eradicate tuberculosis, dengue, HIV, leptospirosis and malaria. And TDF will take up the challenge that certain diseases might pose as these evolve or mutate.

TDF will continue to search and provide rapid solutions to mitigate the spread of infectious diseases in the country. TDF will partner, share its knowledge and provide technical trainings to ensure greater impact in the community. It will take measures to ensure that the right information is disseminated to the public and opportunities for health care service are present and in place for Filipinos.

It will do so while keeping abreast and maximizing technology and innovation so that its work is relevant to the Filipino people and immediate community.



# Introduction

The Tropical Disease Foundation Inc. (TDF) is a private, non-stock, non-profit scientific foundation organized in 1984 that is an active advocate for clinical research development and infectious disease control and prevention. Since then, it has become a leading institution in the implementation of research, service and training projects in infectious diseases.

The Foundation envisions equitable universal access to health for national prosperity.

Since 1984, TDF has made great strides in the research, early detection, and prevention of Tuberculosis and Leprosy. At the same time, TDF undertook research on various infectious diseases such as Hepatitis B, Childhood Acute Respiratory Infection (CARI), Herpes Simplex, Rubella, Malaria, HIV, and Tuberculosis, including Multi-drug resistant TB (MDR-TB).

Moving forward, TDF seeks to conduct research on other diseases afflicting millions of people around the world such as HIV, Dengue, Leptospirosis, and Malaria.

In the past thirty years, TDF has utilized knowledge to transform thousands of lives not only in the Philippines but also in various parts of the world.



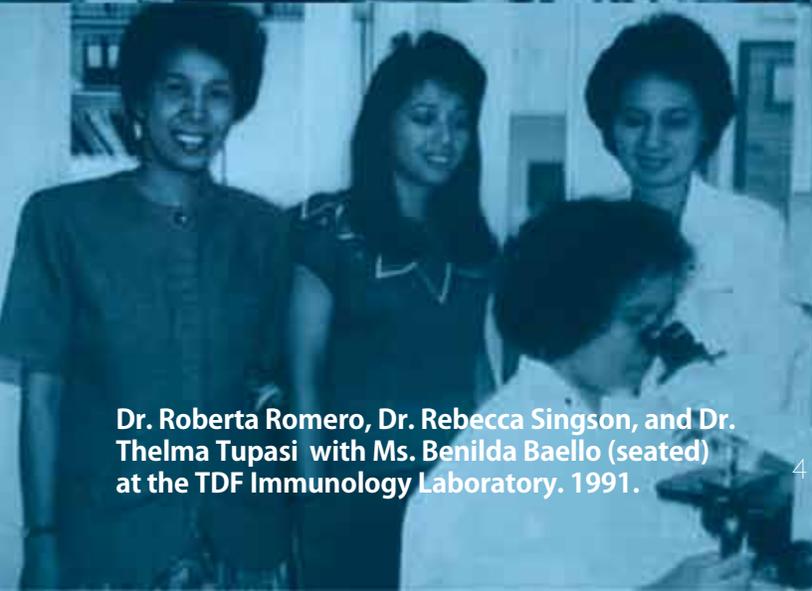
From L to R: Dr. Thelma Tupasi, Atty. Joselin C. Fragada, Dr. Contantino P. Manahan, Dr. Romeo H. Gustillo, and Dr. Raul G. Fores at the inauguration of the TDF laboratory at the Makati Medical Center (1988)



1987. TDF signs the Memorandum of Agreement with Makati Medical Center



Ms. Irene Kunin cuts the ceremonial ribbon at the opening of TDF's laboratory. 1988.



Dr. Roberta Romero, Dr. Rebecca Singson, and Dr. Thelma Tupasi with Ms. Benilda Baello (seated) at the TDF Immunology Laboratory. 1991.



Participants of the Workshop on Traditional and Ritual therapy in Acute Respiratory Infection held from March 17 – 18, 1990 at the Nutrition Center of the Philippines (NCP) organized by TDF and in cooperation with the National Research Council of the Philippines and the NCP.

## In the beginning...

The Tropical Disease Foundation, Inc. (TDF), a non-stock, non-profit organization, was founded in August 1984 with then Minister of Health, Dr. Jesus Azurin as Chairman of the Board of Trustees and Dr. Thelma E. Tupasi as Founding President. At the time, Dr. Tupasi was the Director of the Research Institute of Tropical Medicine (RITM), Ministry of Health (MOH) until 1986.

In keeping its vision of providing equitable universal access to health for national prosperity, the Foundation undertook research and provided trainings and services in the control and management of tropical infectious diseases which were of public health importance. Clinical research on Leprosy was carried out by Dr. Roberta Romero. The Foundation's contribution in the field of research included studies on antibiotic resistance and usage, Hantavirus seroepidemiology, and Hepatitis B. Dr. Tupasi also authored significant publications on tuberculosis (TB) and other infectious diseases in peer-reviewed international journals. Studies were done on drug-resistant Mycobacterium TB, genotyping, and molecular epidemiology and were presented at international conferences.

In 1987, TDF transferred to the Makati Medical Center (MMC) and together in partnership with the National TB Program (NTP) and the local government, Brgy. San Lorenzo, established a Public-Private Mix DOTS (PPMD) clinic.

In 1988, TDF inaugurated its research laboratory, including fluorescent sputum smear microscopy, TB culture, and anti-TB drug sensitivity testing. The launch was graced by the presence of Professor Calvin M. Kunin and Dr. Manahan. With these laboratory facilities, TDF was able to pursue its activities in training and research in tropical infectious diseases.

Also in the same year, TDF launched the first edition of the Guidelines on Anti-Microbial Therapy which became an annual project for the training of residents and fellows in Infectious Diseases. TDF also established an Institutional Review Board (IRB) that serves as a combined technical and ethical review board to evaluate research proposals and oversee their implementation in accordance with the provisions of the Helsinki Declaration.





Working Group Chairmen of the Stop TB Partnership from L to R: Dr. Giorgio Roscino of the New Diagnostics, Dr. Thelma Tupasi of MDR-TB, Dr. Maria Freire of New Drugs & Dr. Gijs Elizanga of TB/HIV at the Philippine Launch of the Global Plan to Stop TB 2006.



# Moving into the new Millenium

In 1997, TDF conducted the Nationwide Dermatologic Diseases Prevalence Survey with support from Janssen Pharmaceuticals. Led by Dr. Roberta Romero, the survey results showed that the over-all prevalence of skin diseases was high at 27.03 per hundred persons examined. Only 1% of patients consulted a physician for relief of their skin problems. Most relied on family, friend, and advertisements.

At the same time, the Nationwide TB Prevalence Survey (NTPS) was undertaken on behalf of the Department of Health (DOH) with support from the World Bank Philippine Health Development Project. This survey was given the 2000 Outstanding Health Research Award (2000 OHRA) by the Philippine Council for Health Research and Development of the Department of Science and Technology (DOST). This marked the first time that TDF conducted a project with a nationwide reach and was the impetus to expand its work beyond laboratory-based research. It also established TDF's relevance to the country's needs as it supports the country's health programs in partnership with the DOH.

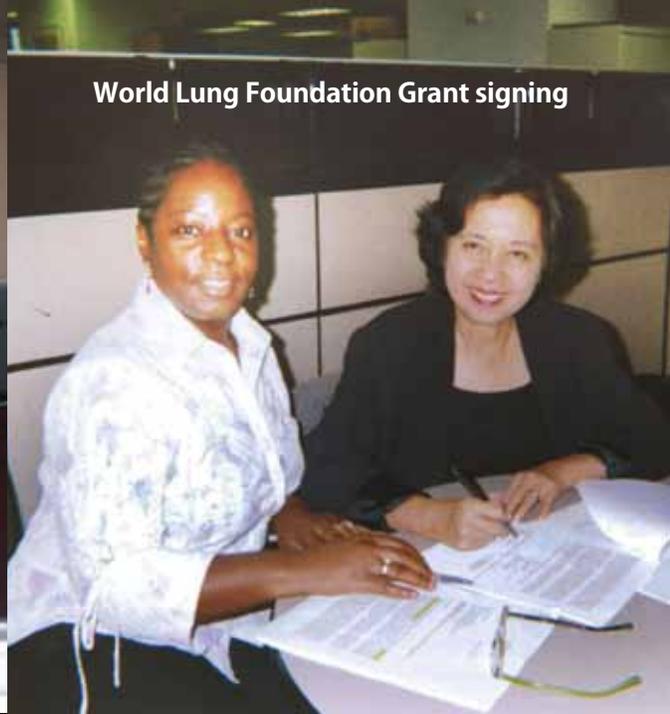
The survey results showed that more TB symptomatics went to private hospitals compared to public facilities which offered free diagnostic and treatment services for TB. This proved that even if DOTS was being implemented nationwide utilizing the NTP infrastructure, not all TB patients availed of these services. In response to this, TDF established the Makati Medical Center – DOTS Clinic, the first Public-Private Mix DOTS (PPMD) facility, which provided free services and medication in the management of TB and Multi Drug-Resistant-TB (MDR-TB).

TDF's DOTS-Plus Pilot Clinic was the first to be approved by the World Health Organization Green Light Committee (WHO-GLC) for the programmatic management of Multi-Drug Resistant TB (MDR-TB), now known as PMDT, making it one of a few centers worldwide to receive such distinction, and the first center in Asia to do so. A satellite DOTS-Plus clinic and temporary housing facility for MDR-TB patients, Kabalikat sa Kalusugan (KASAKA), was established in collaboration with the Philippine Tuberculosis Society, Inc. at the Quezon Institute in Quezon City.





First International Course on Clinical Management of MDR-TB 2008



World Lung Foundation Grant signing



Gov. Grace Padaca of Isabela Province, Dr. Rosalind Vianzon, NTP Manager, Dr. Thelma Tupasi, TDF & Dr. Policar, Chair of Cagayan Coalition against Tuberculosis during the Santiago, Isabela PPMD launching. 2006.



Greenlight Committee



Celebrating World TB Day



USAID Launch 2008



PIT Topping Ceremony

**MABUHAY!**  
**IMPLEMENTATION VISIT to the GLOBAL FUND PROJECT SITE for NTP**

DR. INGA OLESKY (GLOBAL FUND)  
 DR. ANNET ODHUAINBO (GLOBAL FUND)  
 DR. JIMMY LAGAHID (DOH-CENTRAL OFFICE)  
 DR. LYN VIANZON (DOH-CENTRAL OFFICE)  
 DR. THIRI MA THUMSI (DOH-CENTRAL OFFICE)  
 MR. JULIO MERILLES (TROPICAL DISEASE FOUNDATION)  
 DR. EVELYN MAGSAYO (TDRP-DIOM 3D)

As a result of the success of the DOTS-Plus pilot project, TDF was again tasked to lead the 3rd Nationwide Tuberculosis Prevalence Survey (NTPS) in 2007 which showed that multiple indicators for TB have declined, with smear positive and culture positive registering the most marked decline in prevalence. The National TB Control Program (NTP) had attained and exceeded the global targets of 70% case detection rate (CDR) and 85% treatment success rate in 2004. These rates were sustained or improved in succeeding years. It was reported that 16,048 were referrals of TB symptomatic and 4,918 new smear positive TB cases were detected in the Public Private Mix DOTS (PPMD) units. Out of the reported new smear positive TB cases, 2,244 were put on treatment through the efforts of the community support-group members.

The Foundation, with the support of the NTP established multiple PMDT centers capable of diagnosing and treating TB and Multi-Drug Resistant TB (MDR-TB). In 2009, a total of 221 facilities were monitored by the DOTS-Plus project, 170 of which were established under the Global Fund. The remaining 51 units were considered non-Global Fund sites (i.e., Public-Private Mixed DOTS (PPMD) units that were initiated by other funding agencies or were self-initiated). These facilities strategically served about 36 million Filipinos in 16 regions of the country. At the moment, the TB DOTS Clinic continues to attend to DOTS and MDR-TB patients.

## Strategic Partnerships

The WHO recognition of the efficacy of the DOTS-Plus Clinic paved the way for TDF to partner with other international organizations such as the United States Centers for Disease Control and Prevention (U.S.CDC), Case Western Reserve University TB Research Unit, Mayo Clinic, the Foundation for Innovative New Diagnostics (FIND), Korean Institute of Tuberculosis, United States Agency for International Development (USAID) and Otsuka Pharmaceuticals. In 2003, the Foundation was awarded funds by the Global Fund to Fight TB, Malaria and HIV/AIDS. As its Principal Recipient from 2003 to 2009, the Foundation carried out programs dedicated to these diseases.





**“ In 2013, Dr. Tupasi was conferred an honorary membership by the International Union Against Tuberculosis and Lung Disease (the Union) and was honored as one of the Luminaries on TB for her years of work in the study and management of TB in Asia. ”**



Thelma E. Tupasi, MD

# The Founder

Dr. Thelma E. Tupasi, an Infectious Disease (ID) specialist, founded the Tropical Disease Foundation, Inc. (TDF) in 1984. The mission and vision of the TDF is equitable universal access to health for national prosperity through research, service, training and health care delivery in the prevention and control of infectious diseases of public health importance.

Dr. Tupasi was commissioned by the Department of Health to conduct the 1997 and 2007 nationwide TB Prevalence Surveys (NTPS). The finding that more patients consulted private clinics strategically steered the Department of Health (DOH) to engage the private sector in TB control. Dr. Tupasi and her colleagues then set up the Makati Medical Center (MMC) private-public mix DOTS (PPMD) Clinic. A TB patient herself during medical school, Dr. Tupasi took drugs for 18 months, a personal experience that drove her to make a difference in TB. Patients in the MMC DOTS Clinic confirmed to be MDR, resistant to the two most potent anti-TB drugs, led her to seek technical support from the World Health Organization in 2000, making the MMC DOTS Clinic the first Green Light Committee (GLC) approved DOTS-Plus pilot project worldwide. Following World Health Organization (WHO) guidelines, this project, now referred to as Programmatic Management of Drug-resistant TB (PMDT) was mainstreamed to the National TB Program (NTP), and then scaled up nationwide. Today, under the NTP's stewardship, 16 of the 17 regions of the country are able to diagnose and treat MDR-TB programmatically.

Dr. Tupasi was instrumental in bringing in much-needed funds to the country not only for TB, but also for malaria and HIV. In 2002, she proposed to transform the DOH National Infectious Disease Advisory Committee, into a Country Coordinating Mechanism (CCM) for the Philippines to apply to the Global Fund to Fight AIDS, TB and Malaria, for which the DOH and partners nominated TDF as Principal Recipient. At that time, the bigger challenge was convincing decision-makers in the region and country to support MDR management, viewed to notoriously divert funds for DOTS to the smaller MDR population. With TDF's vision of universal access to health for national prosperity, and Dr. Tupasi's belief in the mandate to provide appropriate treatment to patients, she undauntedly nurtured and pursued the idea in line with global thinking, that has made the Philippines the site for MDR trainings for Asian countries piloting the strategy.

**The staff and some of the members of the Board of Trustees at the 12th C.P. Manahan Memorial Lecture. TDF, led by Dr. Thelma E. Tupasi, was awarded by Dr. Pacita Zara, then Executive Director of the Philippine Council for Health Research Development of the Department of Science and Technology (DOST), the 2000 Outstanding Health Research Award at the Manila Hotel in July 17, 2000.**



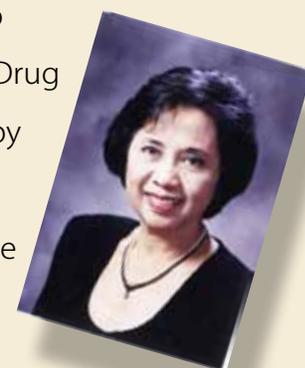
A visionary, Dr. Tupasi is a well-loved and respected mentor to many in both infectious diseases (ID) and public health because of her passion for work. Trained in the US Centers for Disease Control and Prevention, Atlanta, the University of Washington, and in the University of Virginia, she has published numerous articles in TB and acute respiratory infection among others, and was Associate Professor of Medicine at the University of the Philippines-Philippine General Hospital, head of the ID section in MMC and the Asian Hospital. She garnered many awards among them, the Outstanding Young Scientist Presidential Award, Ten Most Outstanding Women in the Nation's Service (TOWNS), Outstanding and Distinguished Researcher, Outstanding Health Research Award (1997 NTPS). She was president of the Western Pacific Society of Chemotherapy, and the Philippine Society for Infectious Disease and Microbiology.



**Standing from left to right: Mr. Rogelio Mendoza, Jr. , Mr. Joseph Yap, Ms. Arlene Santiago, Ms. Joy Ann Lico, Dr. Mario Baquilod, Mr. Edgar Veron Cruz, Dr. Jaime Lagahid, Ms. Lou Pambid, Ms. Marvi Trudeau, Dr. Dorina Bustos and Dr. Antonio Bautista. seating from left to right: Ms. Cecilia Hugo, Dr. Yolanda Oliveros, Dr. Thelma Tupasi and Dr. Raman Velayudhan. The Global Malaria Action Plan launch GMAP held in September 25, 2008 at Pan Pacific Hotel, Manila is jointly organized by ACTMalaria and DOH. This was supported by Roll Back Malaria. Technical partners such as the World Health Organization and advocates of malaria free world are present to sign the pledge of commitment.**

Because of her expertise and strong linkages, she has brought in clinical trials and operational research in support of the NTP through collaborations with international agencies.

In recognition of her work on tuberculosis, she served as the Chair of the Stop-TB Partnership Working Group on Multidrug-Resistant Tuberculosis (MDR-TB). She was also elected as a member of the Board of Directors of the Global Alliance for TB Drug Development. In 2013, Dr. Tupasi was conferred an honorary membership by the International Union Against Tuberculosis and Lung Disease (the Union) and was honored as one of the Luminaries on TB for her years of work in the study and management of TB in Asia.



----- Ma. Imelda D. Quelapio, MD

Adapted with permission from "Koalisyon: 20 Taon Pakikiisa Laban sa TB", the Philippine Coalition Against Tuberculosis (PhilCAT) Coffeetable Book on the occasion of its 20th Anniversary.

# TDF BY THE NUMBERS

TDF has been the training ground for many doctors, nurses, administrative staff and volunteers in medical research and service. Over the years, 651 staff have joined the institution dedicated to informing and serving the Filipino people in the fight against infectious diseases. It has conducted 121 training programs, with over 27,068 participants for its projects in TB, Malaria and HIV/AIDS. Its members have participated in more than 179 conferences locally and internationally, making TDF an essential figure in the research and development sector of the medical community.

**30**  
**YEARS**  
**OF TOP**  
**NOTCH**  
**MEDICAL**  
**EXPERTISE**

**MORE THAN**  
**30**  
**PARTNER**  
**ORGANIZATIONS;**  
**LOCAL,**  
**INTERNATIONAL**  
**& LOCAL**  
**GOVERNMENT UNITS**

**651**  
**DOCTORS, NURSES,**  
**ADMINISTRATIVE**  
**STAFF AND**  
**VOLUNTEERS**  
**121**  
**TRAINING**  
**PROGRAMS**  
**CONDUCTED**  
**27,068**  
**PARTICIPANTS IN**  
**TB/MALARIA AND**  
**HIV/AIDS PROJECTS**

**36**  
**MILLION**  
**LIVES**  
**CHANGED**  
**THROUGH**  
**MEDICAL**  
**RESEARCH, TRAINING**  
**& SERVICE**



Strategic partnerships enable TDF to fulfill its potential as a foundation. Resources and knowledge are transferred between different organizations, whether local or international, all with the goal of fighting disease and providing universal access to health care.



Millions of people have been tested, informed and trained on the management and control of Tuberculosis, Malaria and HIV/AIDS. According to the World Health Organization, TB deaths in the Philippines have decreased by 42% in 2011, while the number of Filipinos with TB went down by 52%. In 2008, it was reported that there was a 68% death reduction rate in malaria incidence due to the strategies and interventions on the management of the epidemic. In 2009, TDF provided care and support services to 2,000 people infected and affected by HIV/AIDS. The fight against Tuberculosis, Malaria, and HIV/AIDS is far from over, but TDF remains firm in its resolve to do all it can to create a better future for the Filipino people.

## TDF AT A GLANCE

 *30 years & counting*

1984 > TDF is established by a group of doctors at the Research Institute for Tropical Medicine (RITM) founded by then Secretary of Health, Dr. Jesus Azurin and Dr. Thelma Tupasi, then Director of RITM.

1987 > The Foundation transfers to the Makati Medical Center (MMC) with Dr. Constantino P. Manahan as Chairman of the Board of Trustees.



1988 > TDF inaugurates its research laboratory. Services include sputum fluorescent microscopy, culture and drug sensitivity testing (DST).

> Community-based prospective studies were conducted on Childhood Acute Respiratory Infection (CARI) through the support of the Board on Science and Technology in Development (BOSTID) Research Program and the World Health Organization (WHO). Results showed that out of 199 children less than five years old, 29% had pneumonia, and that most of their mothers attributed CARI symptoms to weather changes, and considered it a normal occurrence. This hindered proper care, and emphasized the need to educate mothers and traditional healers to diagnose signs and symptoms of pneumonia.



## TDF AT A GLANCE

1989 > Dr. Roberta Romero, a research specialist on dermatology and WHO temporary adviser on leprosy, heads studies on leprosy, in collaboration with the Leonard Wood Memorial Center in Cebu.

1990 > The Immunology Laboratory is established to support MMC's renal transplant program through histocompatibility testing. TDF pioneers a workshop on Traditional Therapy for ARI with support from the National Research Council of the Philippines and held at the Nutrition Center of the Philippines.



> TDF pioneers a workshop on Traditional Therapy for ARI with support from the National Research Council of the Philippines and held at the Nutrition Center of the Philippines.

1993 > TDF's virology laboratory is opened to address the increasing demand for rapid and accurate diagnosis of Herpes simplex virus and Rubella virus.

1997 > TDF is commissioned by the Department of Health to undertake the Nationwide TB Prevalence Survey, through the support of the World Bank and the Philippine Health Development Project.



> TDF laboratory is quality assured for DST by the Korean Institute of Tuberculosis (KIT).

> In the same year, a National Prevalence Survey of skin diseases was conducted to examine the significant skin diseases of the country.

> TDF won the Outstanding Health Research Award from the Department of Science and Technology (DOST) for its work on The 1997 NTPS.

1999 > The MMC DOTS clinic is established as a public-private partnership in TB control between Makati Medical Center and TDF (private sector), and the DOH's National TB Program (NTP) as well as Brgy. San Lorenzo (public sector).

2000

> The MMC DOTS-Clinic starts treating Multidrug-resistant TB (MDR-TB) and is referred to as DOTS-Plus. It is the world's first pilot project for the management of MDR-TB approved by the WHO's Green Light Committee (GLC), a technical expert committee of the Stop TB Partnership and advisory to the WHO.



2003

> The foundation is elected as the PR of the Global Fund to Fight AIDS, Malaria and TB (GFATM). TDF was responsible for monitoring and evaluating projects in coordination with the Infectious Disease Office – National TB Program (NTP), Malaria Control Service (MCS), National AIDS/STD Prevention and Control Program (NASPCP) and with other local government units (LGUs).  
> The DOTS-Plus Clinic is certified as a Center of Excellence by the World Health Organization.

2005

> TDF signs a Cooperative Agreement with the US Centers for Disease Control (US-CDC) to find solutions to improve the effectiveness of TB diagnosis.  
> The TDF joins the Global Preserving Effective TB Treatment Study (PETTS) Investigators as one of five GLC approved Centers for the Programmatic Management of Drug- Resistant TB (PMDT).

2006

> The Global Plan to Stop TB is launched as part of the World TB Day at the PICC with chairs of the working group of the Stop TB Partnership and over 500 people from 80 agencies and organizations in attendance.  
> TDF's TB laboratory becomes a demonstration site of the Foundation for Innovative New Diagnostics (FIND) for new technologies in the diagnosis of TB.



30 years & counting

## TDF AT A GLANCE

- 2006 > Universal Access to Antiretroviral Treatment (ART) for HIV/AIDS through the NASPCP improves survival rate of patients to 95% after one year of ART.
- > TDF launches a Post-Graduate Circuit Course on Infectious Diseases as part of its Continuing Medical Education project.
- > A satellite DOTS-Plus and housing facility, Kabalikat sa Kalusugan (KASAKA), is established in collaboration with the Philippine Tuberculosis Society, Inc., the Philippine Gaming and Amusement Corporation (PAGCOR) and Arch. Pablo R. Antonio, Jr. at the Quezon Institute in Quezon City.
- > TDF is chosen as one of the international treatment sites for clinical trials on TB Treatment Shortening Study of Case Western Reserve University TB Research Unit.



- 2007 > TDF undertakes the 2nd Nationwide Tuberculosis Prevalence Survey, to determine TB prevalence ten years after the initiation of DOTS in the Philippines.
- > FIND introduces a new culture confirmation of *M. tuberculosis*, Capillia TB Neo assay, which is an immuno-chromatographic assay using Anti-MPB64 or MPT64 monoclonal antibodies which discriminates MTB complex from non-tuberculosis mycobacteria (NTM).



- 2008 > TDF conducts a Phase 2 study with Otsuka Pharmaceutical Development and Commercialization, Inc. to evaluate the safety, efficacy, and pharmacokinetics of a new drug, Delamanid, administered to MDR-TB patients.



- 2009 > TDF participates as a Demonstration Project of FIND along with Peru, Azerbaijan, South Africa, and India. for the assessment and evaluation of the GeneXpert MTB/RIF assay which is an integrated diagnostic system for the diagnosis of tuberculosis and rapid detection of Rampicin (RIF) resistance.,
- > TDF joins a collaborative group of 26 treatment centers on the meta-analysis of individual patient data (IPD) in MDR-TB patients sponsored by McGill University (Canada) and Harvard Medical School (U.S.A.)

2010 > TDF participates in a second Phase 2 study on uncontrolled open label trial to evaluate safety, tolerability and efficacy of orally administered Delamanid 100 mg BID with optional titration to 200 mg BID for up to six months exposure in patients with pulmonary MDR-TB

2011 > A registry study, in partnership with Otsuka Frankfurt Research Institute GmbH, is conducted to follow-up on the treatment outcome of patients who participated in the phase 2 clinical trials on Delamanid. TDF conducts a Phase 3 study to evaluate the efficacy and Safety of Delamanid.

2012 > TDF conducts an exploratory study together with Otsuka for a new diagnostic point-of-care TB test using lipoarabinomannan (LAM) antibodies. LAM is a component of the cell wall of Mycobacterium tuberculosis.

2013 > TDF reopens the DOTS clinic in cooperation with the Makati Health Department and DOH in Makati City and becomes a satellite treatment center for Programmatic Management of Drug – Resistant TB



2014 > TDF through a Short Term Technical Assistance (STTA) undertakes a Case-Control Operational study upon the request of the National TB Control Program (NTP) with multiple stakeholders including the USAID (Office of Health U.S. Agency for International Development Mission in the Philippines, Global Health Bureau USAID/Washington), the US Centers for Disease Control and Prevention (CDC), Innovations and Multisectoral Partnership to Achieve Control of TB (IMPACT) and the National Center for Pulmonary Research (NCPR), Lung Center of the Philippines (LCP)



*30 years & counting*



# Research

*Research has always been a key function at TDF. Strategic partnerships with national and international institutions have allowed the TDF to undertake most of the research projects through the years. From these, TDF has been able to develop service programs that have increased awareness of the disease, facilitated in finding cures that have helped transform and save lives. This is a review of the most notable researches done by TDF through the years.*



## Studies on Infectious Diseases

In 1988, TDF published the first edition of the Guidelines on Anti-Microbial Therapy which became a yearly training tool for Infectious Disease Fellows and residents. Throughout the 1990's, research was conducted on infectious diseases of public health importance such as Hepatitis B, Herpes Simplex, and Rubella.

In 1997, a National Prevalence Survey of skin diseases was conducted to examine the significant skin diseases of the country. The results showed that overall prevalence of skin diseases is high at 27.03 per hundred persons examined. Superficial fungal infections i.e. pityriasis versicolor and dermatophytosis, gave the highest prevalence at 42.7 per 1000. Only 1 % of patients with skin diseases consulted a physician. Majority relied on family, friends and advertisements to relieve their symptoms.



## Nationwide Tuberculosis Prevalence Survey in 1997 & 2007

In 1997, TDF was commissioned by the Department of Health (DOH) to carry out the Nationwide Tuberculosis Prevalence Survey (NTPS), under the auspices of the National TB Control Program (NTP) in 1997 and again in 2007 under the guidance of WHO consultant, Dr. Sista Radhakrishna. The survey found that more TB symptomatics preferred to go to private hospitals rather than the public health facilities presenting gaps in the implementation of national program for TB control and prevention. In response to these findings, the Tropical Disease Foundation, then the research arm of the Makati Medical Center (MMC), a tertiary private hospital, set up the MMC DOTS Clinic in the spirit of private-public collaboration with the NTP and the local government unit, barangay San Lorenzo which became one of the first Private Public Mix DOTS facility.



Implementation of DOTS strategy in TB treatment at this facility showed failures in retreatment

cases who were infected with Multidrug-Resistant Tuberculosis (MDR-TB), which is resistant to the most active anti-TB medications, Isoniazid and rifampicin. This was an unmet need that proved to be a challenge to the DOTS strategy. The TDF has the distinction of being the first Green Light Committee (GLC) approved DOTS-Plus pilot project (now known as Programmatic Management of Drug Resistant TB (PMDT). The Green Light Committee (GLC), a subgroup of the International Working Group on MDR TB, aims to increase access to anti-TB drugs while at the same time preventing the emergence or amplification of resistance.



## Treatment Shortening in Adults with Noncavitary Tuberculosis and 2-month Culture Conversion

In 2004, TDF participated as one of three international treatment sites of the Case Western Reserve University (CWRU) School of Medicine, Cleveland, Ohio, USA, TB Research Unit. Other international treatment sites were Núcleo de Doenças Infecciosas (NDI); Universidade Federal do Espírito Santo, Vitória, Brazil; Makerere Medical School, Uganda-CWRU Research Collaboration, Kampala, Uganda. This phase III clinical trial involved 394 enrolled patients out of 2,339 subjects screened from April 2002 to August 2006. Enrollment was terminated by the safety monitoring committee due to an apparent greater risk for relapse among patients in the 4-month arm compared to the standard 6-month treatment.

## Preserving Effective TB Treatment Study (PETTS)



Several collaborative research projects have been undertaken through a cooperative agreement with the US Centers for Disease Control and Prevention (CDC), including a case-based study of MDR-TB, bacillary monitoring and clinical outcome of treatment of MDR-TB, and the study on the “Preserving of the Efficacy of Tuberculosis Treatment Study (PETTS)”, which aimed to determine the frequency, risk factors, and consequences of acquired resistance to second-line TB drugs (SLD).

PETTS is a prospective cohort study conducted to evaluate the extent to which the GLC mechanism prevents acquired resistance to second-line drugs. It is the largest prospective study of MDR-TB ever carried out from 2005 to 2010. The study was designed to compare the frequency and consequences of acquired resistance to second-line drugs in MDR-TB patients between projects approved by Green Light Committee and other MDR-TB treatment programs (non-GLC). The TDF participated as one of GLC-approved country programs apart

from Peru, Russia, Latvia, Estonia. Non-GLC countries included South Africa, Thailand, South Korea, and Taiwan. The amplification of drug resistance was determined by examining the drug-susceptibility testing (DST) results and genotypes of each patient's last positive culture compared with the same patient's pretreatment isolate. Results indicate that baseline prevalence of drug resistance was similar in GLC-approved and non-GLC projects except for the GLC site in the Philippines, which had a low prevalence of baseline drug resistance. Finally, cure rates were higher, while mortality and treatment failure were lower, in GLC-approved projects compared with non-GLC projects; mortality remained lower in GLC projects after exclusion of HIV-infected patients, the majority of those being from South Africa, a non-GLC site.

## **Demonstration Projects in collaboration with the Foundation for Innovative New Diagnostics**

In 2006, the TDF laboratory was chosen as one of the demonstration sites of the Foundations for Innovative New Diagnostics (FIND), a Swiss-based non-profit organization dedicated to the development of rapid, accurate and affordable diagnostic tests through public-private partnerships.



### **Capilia TB Assay**

The introduction of new diagnostics for mycobacteriology at the TDF was initiated with the evaluation of the Capilia TB assay. This is a lateral-flow immunochromatographic assay that detects the MPB64 antigen in *M. tuberculosis* culture isolates. Specialized equipment are not required in this assay and it is a rapid test which has been shown to be highly sensitive and specific for identification of *M. tuberculosis* from culture isolates.

### **Mycobacterium Growth Indicator Tube (MGIT 960)**

The Bactec Mycobacterium Growth Indicator Tube (MGIT 960), an automated system of rapid liquid culture and drug susceptibility testing (DST) for Tuberculosis, was initially implemented in four FIND demonstration sites which also included Russia, Uzbekistan and Nepal. This new method decreased total turn-around time for diagnostics, resulting in a more timely treatment and enabled the laboratory to identify and treat more MDR-TB patients.

This culture system utilizes a liquid culture medium (7H9) with PANTA and MGIT growth supplement. The MGIT tube contains a fluorescent compound embedded at the base of the tube which is sensitive to the presence of oxygen dissolved in the broth. Initially, the large amount of oxygen quenches the emission from the compound and little fluorescence is detected. Bacteria present in the concentrated sputum specimen metabolizes oxygen in the culture medium allowing the fluorescence to be detected. Quantification of culture in MGIT is measured by the growth unit.

## GeneXpert MTB/RIF™

In 2009, FIND introduced a new technology that could diagnose rapid molecular detection of tuberculosis and resistance to rifampicin, GeneXpert MTB/RIF™ (Xpert MTB) manufactured by Cepheid® provided sensitive detection of tuberculosis and rifampicin resistance directly from untreated sputum in less than 2 hours.



In collaboration with the Lung Center of the Philippines and with support from National TB Reference Laboratory (NTRL), TDF was chosen to be one of the product assessment and evaluation sites along with Peru, Azerbaijan, South Africa, and India.

The sensitivity of the Xpert test of detecting MTB complex is 91.5% with MGIT/LJ method as the gold standard. The specificity of the test is 91.5%. Only 126 have DST results comparable on the two methods. The concordance on Rifampicin resistance is 96.03%. The sensitivity of Xpert of detecting rif resistance is 92.9% The specificity of the test is 98.6%. The results showed that the rapid test was highly effective and efficient in detecting TB and MDR-TB.

## HAIN Lifescience

### Genotype MTBDRplus

This is a genotypic qualitative in-vitro test for the identification of Mycobacterium tuberculosis complex and its resistance to rifampicin and/or isoniazid from pulmonary smear-positive or negative clinical specimens. This is based on a DNA strip technology which start with DNA extraction, followed by multiplex amplification with biotinilated primers, and lastly reverse hybridization. The results of the test are available at least after two days.

### Meta-Analysis of Individual Patient Data in MDR-TB

In 2010, a study was sponsored by McGill University (Canada) and Harvard Medical School (U.S.A.) that looked into specific treatment parameters and treatment outcomes of Multidrug-resistant TB (MDR-TB). The study assessed the factors associated with MDR-TB treatment outcomes and proposed recommendations on the choice of agents that are most efficacious. The study was conducted by the TDF Data Management unit from July 2010 until March 2011 and included 170 of the 9,153 MDR-TB patients studied. TDF was one of 26 collaborating centers which investigated specific treatment parameters and treatment outcomes and the prevalence of drug resistance beyond extensively drug-resistant tuberculosis and the impact of resistance to fluoroquinolones and second-line injectable drugs on MDR-TB outcomes.



### Clinical Trials to Test the Safety and Efficacy of a New Anti-TB drug

In 2008, a phase 2 clinical trial, "A Multi-center, Randomized, Double-blind Placebo-controlled Phase II Trial to Evaluate the Safety, Efficacy, and Pharmacokinetics of Multi-Doses of OPC-67683 in Patients with Pulmonary Sputum Culture-Positive, Multidrug-Resistant Tuberculosis" was conducted. This study was sponsored by Otsuka Pharmaceutical Development and Commercialization, Inc. As

the project ended in 2010, it was immediately followed by another clinical trial involving the same drug entitled “ A Phase II, Multi-center, Uncontrolled, Open-label Trial to Evaluate Safety, Tolerability, and Efficacy of Orally Administered OPC-67683 as 100 mg BID with optional Titration to 200 mg BID for up to Six Months Exposure in Patients with Pulmonary Multidrug-Resistant Tuberculosis”, the second study ran from 2010 – 2012. A “Phase 2 Registry for data collection to determine the Final Treatment Outcomes of Multidrug -Resistant Tuberculosis Patients Previously Enrolled in Otsuka Trials Assessing Treatment with OPC- 67683” in 2011. The registry study, sponsored by Otsuka Frankfurt Research Institute GmbH, was conducted as a follow-up to the 2008 series of clinical trials. The registry of the final outcome of subjects enrolled in Phase II was conducted by the TDF clinical research staff who traced patients previously enrolled in the clinical trials in several provinces and regions in the Philippines. No registry-required interventions or procedures were conducted and the trial drug was not administered. The registry was completed in June 2012. This was followed by a “Phase 3, Multicenter, Randomized, Double-blind, Placebo-controlled, Parallel Group Trial to Evaluate the Safety and Efficacy of Delamanid (OPC-67683) Administered Orally as 200 mg Total Daily Dose for Six Months in Patients With Pulmonary Sputum Culture-Positive, Multidrug-Resistant Tuberculosis”.

## **Investigational study using LAM-specific antibodies to detect M. tuberculosis in Sputum**

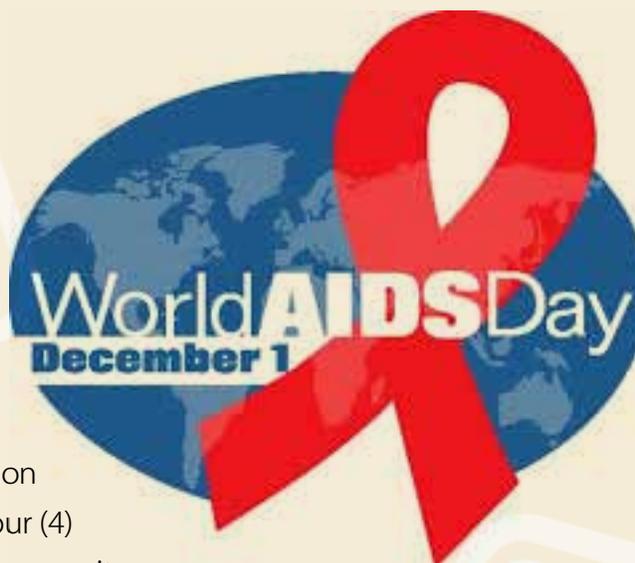
In 2011, an investigational study using lipoarabinomannan (LAM)-specific antibodies to detect Mycobacterium tuberculosis in sputum. LAM is a component of the cell wall of M. tuberculosis. The study was sponsored by Otsuka Pharmaceutical Development and Commercialization, Inc. This is an exploratory study of a new point-of-care-diagnostic TB test.

## **Comparison of Tuberculin Skin Test and Interferon-gamma Release Assay Test Response**

This study (Protocol 242-11-222) was sponsored by Otsuka Pharmaceutical Development and Commercialization, Inc. It compares results of tuberculin skin test and interferon-gamma release assay test response in individuals with strong risk factors for the development of tuberculosis due to immune compromise in comparison with healthy household members without immune compromise.

## HIV/AIDS

In 2004, TDF implemented various activities to contribute to the national goal of preventing the further spread of STI/HIV/AIDS infection and reduce its impact on those already infected and affected. Supported by the Global Fund to address the specific HIV-related risks and vulnerabilities of the Most-At-Risk Population (MARP), TDF's HIV/AIDS program focused on four (4) key strategies: advocacy and social mobilization, capacity building, community empowerment and provision of STI and HIV services.



The program parameters included: the prevention of the disease in people in prostitution (PIP), males having sex with males (MSM), injecting drug users (IDUs) and migrant workers (MWs); and treatment, care and support for people infected and affected by HIV and AIDS.

TDF focused its interventions in cities and urban areas where HIV risk factors were comparatively high. These interventions were implemented in partnership with the local government units (LGUs) and non-governmental organizations (NGOs), in coordination and partnership with the National AIDS STI Prevention and Control Program (NASPCP) of the Department of Health (DOH).

32 project sites were identified, covering 94,781 of Filipinos and the intervention made great strides in advocacy and social mobilization. By the end of the program in 2009, twenty-five of the 32 project sites passed local ordinances derived from the Philippine HIV and AIDS Prevention and Control Act of 1998, also known as Republic Act 8504. Twenty-four of the project sites allocated budgets for HIV Prevention and Control and 16 sites established functional Local Aids Councils (LACs). This initiative expanded to two (2) provinces in Bicol, Albay and Sorsogon, both of which have established their respective Provincial AIDS Councils.

The most significant impact of the program is in the improvement of the lives of People Living with HIV (PLHIV). With the provision of universal access to the antiretroviral treatment (ART), the survival rate of PLHIV on treatment has significantly increased. Notably, the program has recorded high survival rates of patients after initiating the ART. The Global Fund AIDS/HIV Project, registered 93.89%, 91.62% and 88.51% survival rates for patients at 12 months, 24 months and 36 months after initiating ART, respectively. The project continued to strengthen its delivery services and operation research. In 2009, the project recorded a survival rate of 90.11% (255/283) for patients completing 12 months of ART, slightly above its target of 90%.

# Malaria

Early diagnosis and prompt treatment was a core strategy of the Malaria Control Program (MCP) of TDF and central to the implementation of all the Global Fund Malaria Projects. Rapid diagnosis and adequate treatment within 24 to 48 hours after consultation of the patient with fever in endemic communities were emphasized to prevent progression of uncomplicated malaria to severe cases and to avoid death.

The MCP grouped 80 malaria-prone provinces into four categories, based on the average malaria cases per year. Category A provinces were those with more than 1,000 cases/ year, Category B provinces were those with 100 to less than 1,000 cases per year, Category C provinces were those with less than 100 cases per year, and Category D provinces were malaria-free.

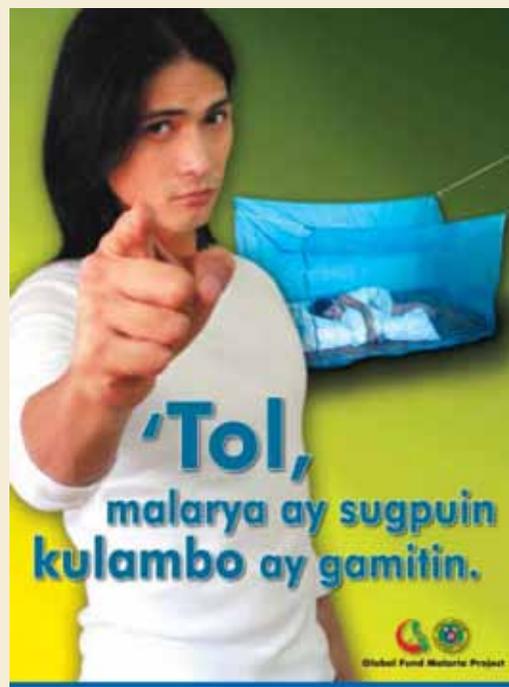
Through the baseline study conducted in 2005, around 94% of the malaria cases nationwide were found in 26 Category A provinces and were the focus of the Global Fund (GF) Round 2 Malaria grant. During the implementation period of the MCP, malaria cases documented from 2001 to 2007 prompted a re-categorization of all the endemic provinces done nationwide to improve the delivery of the MCP. From 26 provinces, only 7 provinces remained as Category A. Category B provinces increased to 26 (from 22) and Category C from 18 to 26. Malaria-free provinces also increased from 13 to 22.

In order to monitor the diagnosis records in the microscopy centers, quality assurance systems were developed by the MCP, in coordination with the World Health Organization (WHO) and ACTMalaria. Likewise, drug efficacy and patients' response to treatment were evaluated through the Therapeutic Efficacy Surveillance studies conducted by the Research Institute for Tropical Medicine (RITM). The implementation of the MCP projects were instrumental in the review and updating of the national drug policy for the treatment of malaria, moving towards the use of artemisinin-based combination therapy (ACT).



## Information Dissemination and Documentation of Malaria

The Rural Health Units (RHUs), together with partners from the Provincial Health Office (PHO), as well as the Centers for Health Development (CHD), provided technical support by conducting information and education campaigns in all areas with bednet distribution activities, as well as documentation and reporting of accomplishments. The local government units from the provincial, municipal, and barangay levels also provided support by transporting commodities from the PHO warehouse to the recipient communities.



A master list of families in all targeted communities was prepared to confirm targets set prior to bednet distribution. This helped to ensure that all families were provided with sufficient number of bednets. Mobile communities and new families that were not previously listed, particularly those from the endemic areas, were also provided with bednets from a contingency or buffer allocation.

## The Philippine Malaria Information System (PhilMIS)

Another important accomplishment in the implementation of the MCP was the Philippine Malaria Information System (PhilMIS) which was a comprehensive compilation of all the indicators of the MCP. Previously, a purely paper-based reporting system for Malaria cases was utilized by the National Malaria Control Program (MCP) of the DOH. Although the Field Assistance Workers (FAW) and other staff of the Provincial Health Team (PHT) kept a list of individuals examined, results of these diagnostic tests were not always recorded in a single file and were, at times, not recorded at all.

After several consultative meetings and discussions spearheaded by the Technical Working Group (TWG) for Malaria, a decision was made to formulate a single recording and reporting system for all MCP activities in 2004. The PhilMIS was envisioned to be the official reporting system of the National Malaria Control Program (MCP) of the DOH, from the most remote Rural Health Unit (RHU) up to the central office of the Department of Health (DOH). TDF, with the support of the Global Fund and WHO, took the lead in deploying the system in the field.

All health workers involved in the MCP, from Barangay Health Workers who perform Rapid Diagnostic Tests for Malaria (BHW-RDT) to the hospital doctors, nurses, and pharmacists had to be oriented, especially on the PhilMIS reporting forms. MCP personnel, barangay volunteers and partner NGOs were given orientations on the use of the PhilMIS Vector Control forms during field activities.

At the national level, malaria morbidity and mortality rates showed a downward trend. The 2003 DOH / WHO data on malaria showed that there were 588,836 suspected malaria cases in the country with 48,441 confirmed cases and 162 deaths. 94.0% of the cases nationwide were found in 26 (of the 59 endemic provinces) provinces in the Philippines currently addressed by GFATM project.

From a 2005 baseline Annual Parasite Incidence (API) report of 0.55/1000, the rate had gone down to 0.28/1000 in 2008 or a 49% decrease. As for death rates due to malaria, there is a 68% reduction from the 2005 baseline (0.17/100,000 in 2005 to 0.055/100,000 in 2008). Much of the reduction of malaria cases have resulted from the strategies and interventions in improving case detection and treatment, vector control, and epidemic management and surveillance.



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# Training

*The Tropical Disease Foundation Inc. (TDF) provides the opportunity, through linkages with national and international organizations, to enhance human resource capability through training in various aspects of research and service in the control of infectious diseases. The most significant trainings done by TDF are in connection with the control and containment of Tuberculosis, Malaria and HIV/AIDS.*



## Tuberculosis

The Tropical Disease Foundation, Inc. (TDF) quickly developed its training capabilities when it became the Principal Recipient (PR) of the Global Fund to Fight, AIDS, TB and Malaria (GFATM). TDF, with its reputation as an established research institution, welcomed the opportunity to share best practices in the management and control of infectious diseases, most especially in tuberculosis (TB).

In 2003, TDF participated in the exchange fellowship training on infectious diseases with the Mayo Clinic. Fellows from TDF and the Makati Medical Center (MMC) rotated with four other representatives from the Mayo Clinic to share knowledge and best practices in the management of infectious diseases. In the same year, TDF obtained the PhilCAT accreditation for



PhilHealth Outpatient TB package that authorized the Foundation to conduct a Basic Course on DOTS training for 80 trainees and six training courses on DOTS-Plus implementation for health workers and community volunteers in Metro Manila and other provinces.

Training courses focused on the use of Fixed Dose Combination (FDC) for MDR-TB and were conducted in line with the major policy change of DOH on the utilization of FDCs from Single Dose Formulation (SDF). These trainings were provided to trainers and health implementers like physicians, nurses, midwives and volunteer health workers in the regions, municipalities and cities. A total of 92 training courses were facilitated to ensure nationwide implementation of the National Tuberculosis Program (NTP) within the year.

In 2005, capacity building training sessions were conducted to facilitate group discussions of

MDR-TB/TB patients in the TDF TB Treatment Centers with social workers and other staff. In 2008, 14,708 doctors, nurses, medical technologists, midwives and barangay health workers were trained on NTP policies and guidelines while 2,507 community support group members and public health workers were trained on DOTS. 1,746 service deliverers were also trained on the diagnosis and treatment of MDR-TB.



## Training Modules in PMDT

In 2007, a National Consultative Workshop was held in collaboration with the NTP coordinators, Center for Health Development (CHD) Directors and international and local partners on TB control. Of particular significance were the training modules developed through the Programmatic Management of Drug-Resistant TB (PMDT) project, which was the world's first competency-based training material on MDR-TB management. The modules were written in the English language and became the basis for the global generic modules that were developed for other countries, thus contributing to the control and management of MDR-TB worldwide.





## TDF 30 years & counting Training

In 2008, a total of 221 Public-Private Mixed DOTS (PPMD) facilities were monitored by the TDF PMDT, 170 of which were established under the Global Fund. This public and

private collaboration mobilized and trained 2,912 private-sector physicians from 2004 to 2008, encouraging them to support and comply with the approved policies, guidelines, and standards of the NTP.

Efforts to attract support from the private sector have resulted in at least 36,870 cases of all types of TB that were initiated into treatment management from 2004 to 2008, out of which 15, 892 were detected as new smear positive pulmonary TB cases. Rapid detection of new smear positive pulmonary TB allows physicians to recommend the correct options for treatment.



In 2008 alone, the 6,914 new smear positive cases detected by the private sector contributed to 6% to the national case detection rate (CDR). The contribution of private practitioners to the national CDR has been recognized to have a significant impact on TB control and prevention in the country. The contribution demonstrates the apparent strength and capacity of the initiative to engage the private sector.

## Treatment Centers

In 2004, six satellite MDR-TB Treatment Centers were established, trained, and engaged by TDF. The first treatment site was the Bahay ng Kabalik sa Kalusugan (KASAKA) at the Phil TB Society, Inc. (PTSI), followed by the Lung Center of the Philippines (LCP) in 2005. The Jose N. Rodriguez Memorial Hospital (JNRMH) in Caloocan City and the Eversley Compound in Mandaue City were established in 2008. In 2009, two more treatment centers were established in Metro Manila, the Tala Treatment Center and the PTSI-Tayuman Treatment Center.

## Laboratory Trainings



TDF provided training to two culture laboratories namely, the LCP laboratory (2007) and the PTSI laboratory (2008), which contributed to the work that the TDF laboratory was doing. In 2007, the National TB Reference Laboratory started doing cultures and in 2008, became quality assured for drug susceptibility testing (DST) through its supranational laboratory, the Research Institute of TB (RIT), Japan.

The National TB reference laboratory eventually became the lead in the laboratory network in the Philippines, with TDF as one of its culture and DST laboratories. The expansion unit for MDR-TB which consisted of a) a Treatment Center, b) trained Treatment Sites, and c) a culture and drug susceptibility DST laboratory, served as the template for DOH's NTP, which aimed to reach out nationwide.

In 2011-2012, TDF staff conducted various lectures on a wide range of specializations. Lectures on laboratory biosafety, particularly for tuberculosis practitioners, were provided in Baguio City, Makati City, and Davao City. A lecture on good clinical practice (GCP) was also given at TDF's main office.

## Malaria

Alongside its accomplishments in managing TB in the Philippines, TDF also contributed significantly to the reduction of malaria cases in the Philippines.



From 2004 – 2008, trainings for Barangay Health Workers (BHW) were conducted to establish seven (7) Barangay Malaria Microscopy centers, 32 Rapid Diagnostic Testing (RDT) sites and the hiring of three (3) additional medical technologists. Training activities for hospital and rural health Unit (RHU) physicians, public health nurses and midwives were also conducted, resulting in better quality diagnosis and treatment. Likewise, teachers and nurses from the Department of Education (DepEd) were trained and school-based Malaria modules were integrated into the curriculum which contributed to increased awareness of Malaria among students.

With the decision of the Malaria Management Committee to use the Paracheck RDTs, the training on the use of Rapid Diagnostic Tests (RDTs) for Malaria Microscopy in 2007 was conducted. This was based on field study results which showed poor overall performance when using a combination - type RDT. Additional BHWs and midwives were trained in the use of Paracheck RDTs.

From 2008-2009, 2,095 were trained on malaria diagnosis; 1,437 on Rapid Diagnostic Test (RDT) volunteers; 486 medical technologists were trained. out of 1,002 volunteers, on Paracheck. TDF also provided training on Clinical Management on Malaria (severe malaria management and national guidelines on malaria chemotherapy): 348 medical technologists were trained out of 390, 249 barangay microscopists were trained out of 268 and 998 Rural Health Unit (RHU), hospital doctors, nurses, midwives and other service providers were trained out of 1,053.

Overall, the Malaria Control Program of TDF provided assistance to 1,978 health facilities in 40 provinces. A total of 4,399 health service providers were trained on diagnosis and treatment. These health facilities serve approximately 8 million of the endemic population, representing 70% of the total endemic population in the Philippines.

## HIV/AIDS

Since the inception of the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) project in 2004, the HIV/AIDS Control program, carried out by TDF, has trained 1,374 service providers on STI and HIV Case Management, Behaviour Change Communication (BCC) and Voluntary Counseling and Testing (VCT). These include health care providers at the Social Hygiene Clinics (SHC), Centers for Health Development (CHD), and treatment hubs. To ensure gender responsiveness, the program mainstreamed the issues of gender and sexuality in all of the trainings. Alongside these interventions, the program also actively empowered affected communities through education and strengthened HIV/AIDS-related ordinances.



## Community-Based Approach in Training.

The HIV/AIDS Control program involved community participation by recruiting community volunteers to serve as HIV/AIDS educators and advocates. The volunteers were trained on STI, HIV and AIDS. Community volunteers were equipped with the proper skills and attitudes necessary to carry out their respective roles and responsibilities in the community.

The HIV/AIDS training program made use of community outreach and peer education strategies within a community-based approach to behavioral change for HIV and STI prevention. This approach centers on two types of change agents: the community health outreach workers (CHOWs) and peer educators (PEs).

Often coming from the community, the outreach workers are NGO staff members trained in standard protocols for effective interpersonal communication, such as behavior change communication, risk reduction counseling and peer education. On the one hand, outreach workers provide skilled supervision and support to PEs. PEs, on the other hand, are members of the vulnerable community being served, who work voluntarily on a part-time basis for the program. They move among the Males having sex with Males (MSM) community as friends and equals, providing accurate information on HIV and STIs, and at the same time, encouraging and supporting them in changing risk behaviors. By modeling behavioral change themselves, they serve as effective change agents among their peers. The program has trained around 2,247 CHOWs and PEs.

Most-at-risk-populations (MARPs) were also provided training on safer sex skills, including condom negotiation. The training program has facilitated MARPs access to condoms and other preventive services. Moreover, this training also incorporated discussions on gender and sexuality.

The training program on HIV/AIDS Control ensured that the MARP sectors do not remain passive recipients but also active partners in program activities. By facilitating the MARPs involvement, the program motivated the sectors' commitment and ownership of the program. Participation of the sectors proved to be crucial when employing a peer-to-peer approach, which opened access to hard-to-reach members of the at risk populations.

## Regional AIDS Assistance Team (RAAT)

The advocacy and social mobilization programs of TDF had helped in the formation of a Regional AIDS Assistance Team (RAAT) in 2009, with the initial training of 57 regional representatives from



the Department of Interior and Local Government (DILG), Department of Social Welfare and Development (DSWD), and Center for Health Development (CHD). The formation of the regional assistance team was meant to transfer technical expertise, making technical assistance easily accessible to the local governments.



## Provider Initiated Counselling and Testing (PICT)

In 2009, there were 33 Directly Observed Treatment Strategy (DOTS) facilities that provided HIV counseling and testing for TB patients in ten cities in Metro Manila with high TB burden and high sexually transmitted infection (STI) prevalence. A total of 101 health workers were trained to provide HIV counseling through four batches of training on Provider Initiated Counselling and Testing (PICT), conducted in partnership with the Remedios AIDS Foundation and Positive Action.

Since 2009, TDF's HIV/AIDS Control program has provided access to antiretroviral treatment to over 600 persons living with HIV and AIDS and distributed four and a half million condoms to its project sites.





# Service

*Providing public health care service is part of TDF's mission to contribute to national prosperity. As the Foundation implemented the 1997 Nationwide Tuberculosis Prevalence Survey on behalf of the Department of Health (DOH), it laid the groundwork for two important endeavors that would become the cornerstone of TDF's service programs: DOTS for susceptible Tuberculosis (TB) and the DOTS-Plus for Multidrug-Resistant TB (MDR-TB). In line with these services, TDF also led community mobilization programs that integrated government services in the aspects of Training, Drug Management, and Laboratory Services.*



## Tuberculosis

### The PMDT Initiative

The Programmatic Management of Drug-resistant TB (PMDT) of the National TB Control Program (NTP) expanded its services in 2003, which involved faith-based organizations, public and private DOTS facilities and the establishment of two satellite treatment centers for Multidrug - Resistant TB (MDR-TB), the Kabalikat sa Kalusugan (KASAKA) MDR-TB Housing Facility at the Philippine TB Society, Inc. (PTSI) compound in 2004, and the Lung Center of the Philippines (LCP) DOTS Center in 2005.





## Psychosocial Care Service for TB/MDR-TB Patients

In 2005, clinical psychologists were asked to participate in carrying out the psycho-social care program for KASAKA patients in all MDR-TB Treatment Centers (MTCs), emphasizing TB/MDR-TB treatment beyond the medical aspect. Addressing the emotional problems that go with such a chronic illness, psychosocial care, through focus group discussions and one-on-one counseling, has become integral to the overall management of drug-resistant TB. Group get-togethers, general assemblies and peer counseling activities were attended by most patients.

Skills training, livelihood projects such as making beaded slippers, purses, Christmas decorations, other crafts, gardening, poultry-raising and cooking, were some of the activities done in MTCs to alleviate homesickness and provide patient empowerment.



## TB Treatment Centers

In 2008, an MDR-TB Treatment Center (TC) was established at the Jose N. Rodriguez Memorial Hospital (JNRMH), a Private-Public Mix DOTS unit (PPMD) in Caloocan City. With an outpatient facility outdoors and a few hospital beds, this facility was able to accommodate many MDR-TB patients. Another MDR-TB Treatment Center (TC) was established at the Philippine Tuberculosis Society, Inc. in Tayuman, Manila with an indoor facility.

All of these TCs were strategically located to accommodate the patients from different parts of the city and nearby provinces. A total of 1,207 drug-resistant TB patients have been enrolled in 2008 in the different TDF treatment centers.

The TDF-DOTS Clinic re-opened in November 2010 after the TB Control program, sponsored by Global Fund, ended in 2009. The clinic is located in the heart of Makati and it caters mostly to patients who



live or work within a two kilometer radius, whether they are walk-in patients or referrals by physicians of nearby hospitals such as Makati Medical Center (MMC), diagnostic clinics, schools, and business establishments. Internationally trained medical and laboratory staff at TDF provide proper care and treatment to visiting patients.

To accommodate the working sector, clinic operations extend from early morning until late in the afternoon. TB kits (drugs) and lab supplies are provided by the Department of Health through the Makati City Health Department.

## Malaria

The Malaria Control Project (MCP) focused on improving the malaria diagnostic and treatment services of existing government health facilities, such as the Rural Health Units (RHUs) and hospitals. New facilities in strategic locations in remote areas were set up, thereby providing access to quality services for the most vulnerable groups, including indigenous peoples, those whose livelihood depend on forest products, pregnant women, and children.



## Malaria Stockpile Centers

Support from the Global Fund Malaria Component paved the way for the establishment of stockpile centers in strategic areas, which were managed efficiently by the Centers for Health Development (CHDs) to respond immediately to outbreaks of Malaria and special operations across borders between provinces. The presence of these centers helped intensify efforts to combat Malaria. The centers managed the required logistical support, particularly for

insecticides, spray cans and personal protective equipment. The accessibility of these centers, combined with active local manpower, helped TDF achieve its targets over the years.

Logistics necessary for the delivery of malaria diagnostic and treatment services, such as microscopes, RDT kits, laboratory supplies, and antimalarial drugs, were provided. For the first time in years, health facilities had a steady supply of anti-malarial drugs. Monitoring the stock levels of these essential commodities was regularly done to ensure that the various services were consistently available.

Resources for the management and control of Malaria were made available for 25 provinces, increasing in number as the year advanced. In 2007, service points established were as follows: 1,934 health facilities, 309 rural health units, 501 barangay microscopy centers, 966 RDT sites and 158 hospitals. In 2008, there were 93,072 patients tested, diagnosed and treated for malaria.



In 2009, the project reported that the Barangay Malaria Microscopy Centers (BMMCs) had the highest proportion (89%) of service points which provided diagnostic tests and treatment facilities, followed by Rural Health Units (87%) and hospitals (85%). Rapid Diagnostic Test(RDT) sites have the lowest proportion at 55%. This could partly be attributed to the rapid turn-over of barangay health workers because of their need to look for better sources of income for their families

## Community-based Programs in Malaria Control

The community-based Malaria Control Program (MCP) heightened the involvement of various organized action committees, health workers, and different organizations. In 2008, a total of 4,151 partners actively participated in the MCP activities in the 26 provinces. At the forefront are the Barangay Action Committees (BACs), barangay councils,



Barangay Health Workers (BHWs), RHU personnel, and the municipal government, accounted for 44% of all partners.

TDF *30 years & counting*  
**Service**

In addition to the government agencies, schools and private sector organizations, like faith-based organizations (FBOs), non-government organizations (NGOs), and people's organizations (POs), were also made partners. Partner activities centered on planning for the distribution and of bednets, malaria awareness campaigns, indoor residual spraying (IRS), and conduct of active case detection and mass blood surveys (ACD/MBS). These were carried out by the BHWs, barangay council officers and BAC members who served as conduits for health services between the municipal and barangay levels.



## Bednet Distributions

In 2009, bednet distributions were subsidized at full-subsidy and partial-subsidy schemes. The target was to distribute 440,333 bednets.

The MCP began to expand the services provided by the health facilities by improving their capacity in microscopy and treatment for other disease programs such as TB and parasitic diseases of public health importance (schistosomiasis, filariasis, food and water-borne diseases). The program achieved 102% or 118,056 nets distributed out of the 115,463 targeted for the period.

Overall, the project provided assistance to 1,978 health facilities. These health facilities serve around 8 million of the endemic population in 40 provinces, representing approximately 70% of the total endemic population in the Philippines.

## HIV/AIDS

The HIV and AIDS project supported by the Global Fund to Fight AIDS, Tuberculosis, and Malaria (GFATM) in the Philippines, started implementation in 2004. With the project title “Accelerating STI and HIV/AIDS Prevention through Intensified Delivery of Services to Vulnerable Groups and People Living with HIV/AIDS in Strategic Areas in the Philippines,” it aimed to contribute to the national goal of preventing the further spread of sexually transmitted infections (STI) and human immunodeficiency virus (HIV) infection, and reduce its impact on those already infected and affected. More particularly, it intended to:



(1) Improve behavior change communication and STI management among vulnerable and poor population, and (2) scale up voluntary counseling and testing (VCT), support, care, and treatment for people living with HIV/AIDS, and their families.

The project was implemented in 11 project sites: Bauang, La Union; San Fernando, Pampanga; Gumaca, Quezon; San Pablo, Laguna; Legaspi, Albay; Tabaco, Albay; Sorsogon, Sorsogon;

Matnog, Sorsogon; Ormoc, Leyte; Lapu-Lapu, Cebu; Mandaue, Cebu. With a five-year project cycle, the project ended in 2009.

The second GFATM project began in October 2006. Entitled "Upscaling the

National Response to HIV/AIDS through the Delivery of Services and Information to Populations at Risk and People Living with HIV/ AIDS," the project continued working on the goals of the first project run, aiming to maintain an HIV prevalence rate of less than 1% among vulnerable groups and to reduce



the impact of HIV and AIDS on individuals, families, and communities. In addition, the project included more goals: (1) To reduce transmission among vulnerable groups; (2) To scale up support, care, and treatment for PLHIV and their families; (3) To strengthen health management and delivery systems; and (4) To conduct operations research.

The project expanded implementation to 21 project sites, including: San Fernando, La Union, Baguio City, Lucena City, Batangas City, Makati City, Mandaluyong City, Pasig City, Marikina City, Daraga, Albay, Allen, Samar, Calbayog City, Catbalogan City, Isabel, Leyte, Kananga, Leyte, Tacloban City, Bacolod City, Metro Cebu, Surigao City, Cagayan de Oro City, General Santos City, and Zamboanga City

Moreover, the project increased the number of HIV and AIDS Treatment Hubs to 11, with the addition of five more hubs: Baguio General Hospital, Bicol Regional Training and Teaching Hospital, Western Visayas Medical Center, Corazon Locsin Montelibano Memorial Regional Hospital, and Zamboanga Medical Center.

In the 2007 Integrated HIV Behavioral and Serologic Surveillance (2007 IHBSS), the overall national adult HIV prevalence was pegged at less than 0.1%, with a 0.08% rate across MARPs, which is consistent with the program and the national goal.

There had been a decline of STI cases on its focal areas, particularly in the project sites of the first run of the GFATM project. From a baseline of 24% in 2004, there was a gradual decline from 2005 to 2007, at a rate of about 2% per year. This was accompanied by an increase in consultations at SHCs from 2006 to 2007. The program has seen minor improvement in condom use among MSM and female sex workers (FSW). With baseline figures of 14% for MSM and 40 % for Female Sex Workers (FSW), the rate of condom use increased to 50% and 60% respectively in 2007.

Additionally, a decrease in the unsafe practices of Injecting Drug Use (IDU) was also recorded. At the onset of the program in 2004, 80% of the IDUs were reported to be sharing unclean needles and syringes. In 2007, this baseline figure had gone down to 52%, nearing the project-end target of 20%.



## Behavior Change Communication

The HIV/AIDS program of GFATM, through TDF and its partners also conducted activities on Behavior Change Communication (BCC) and Voluntary Counseling and Testing (VCT). Participants included health care providers at the Social Hygiene Clinics (SHC), Centers for Health Development (CHD), and treatment hubs. The program also incorporated the distribution of condoms as part of its community outreach.

Through community outreach and peer education, members of the Most-At-Risk Populations (MARPs) were provided with necessary information and skills to protect themselves against HIV and other STIs. Since 2004, the program has distributed more than four and a half million condoms in its 32 project sites. It has also supported the diagnosis, counseling, and treatment of more than 46,000 cases of STIs, and facilitated the conduct of VCT for more than 14,000 individuals in these focal areas.

Employing behavioral change communication, the program likewise helped modify risk behaviors among MARPs, while improving their health-seeking behavior. These outreach activities include: one-on-one interpersonal communications; group behavior change communications; and guided group interactions.

Cumulatively, the program provided HIV prevention services to more than 28,400 people in prostitution (PIPs), 29,000 MSM, 34,700 migrant workers (MWs) and 2,500 IDUs since its inception in 2004.

By 2009, the program enrolled 600 patients on antiretroviral treatment with 18 sites established to improve the management of sexually transmitted diseases. Eight treatment hubs nationwide were setup to care for HIV patients and provide free medications with Global Fund support. It also provided care and support services to affected families and significant others. These services include home and hospital visits, counseling, and palliative care. The HIV/AIDS program extended care and support services to more than 2,000 people infected and affected by HIV and AIDS.



# Global Fund and Tropical Disease Foundation Reach Settlement

20 November 2012

GENEVA – The Global Fund to Fight AIDS, Tuberculosis and Malaria and the Tropical Disease Foundation, Inc. (TDF), a former principal recipient of Global Fund grants in the Philippines, have reached an amicable resolution of a dispute stemming from an audit by the Global Fund’s Office of the Inspector General in 2009.

The Foundation will be welcomed back as an implementer of Global Fund-supported health programs in the Philippines.

“This is a big step forward for the fight against tuberculosis in the Philippines,” said Gabriel Jaramillo, General Manager of the Global Fund. “The Tropical Disease Foundation is an acknowledged leader in tuberculosis research not only in the Philippines but in the region.”

Secretary Enrique Ona of the Department of Health of the Philippines also hailed the settlement and said: “The Global Fund is an essential partner of the Filipino people in their fight to wipe out TB. We thank the Global Fund for their continued support as we strive to reach Millennium Development Goal 6 and welcome the decision to re-engage TDF in business. ”

The Tropical Disease Foundation also expressed satisfaction with the outcome. The TDF Board, its officers and staff have issued this statement: “We are happy that our efforts all these years have borne fruit. The Foundation looks forward to working with the Global Fund again as well as with other donors for the benefit of our fellow Filipinos.”

The Philippines has the ninth highest tuberculosis burden in the world. The Global Fund to date has disbursed more than US\$ 180 million for programs to fight TB, HIV/AIDS and malaria in the Philippines.

*Reprinted from the Global Fund website  
[http://www.theglobalfund.org/en/mediacenter/announcements/2012-11-10\\_  
Global\\_Fund\\_and\\_Tropical\\_Disease\\_Foundation\\_Reach\\_Settlement/](http://www.theglobalfund.org/en/mediacenter/announcements/2012-11-10_Global_Fund_and_Tropical_Disease_Foundation_Reach_Settlement/)*

# Moving Forward



*As TDF celebrates its 30th year, promising researches are being undertaken that will further enhance the Foundation's capabilities not only in the field of tuberculosis, but other infectious diseases as well.*

## DENGUE

Dengue fever is still a major health problem throughout the tropics; its geographic distribution and severity of impact are increasing, with more than 390 million people currently estimated to be affected by dengue disease each year.

Traditional control measures focus on reducing populations of the vector *A. aegypti*, but these have largely failed to slow the current dengue pandemic. One promising avenue is provided by the intracellular insect bacterium, *Wolbachia*, which is present in up to 60% of all insects, to reduce the ability of mosquitos to pass dengue between people. Compared to traditional disease control strategies (e.g., pesticides against vectors, and drugs and vaccines against pathogens), *Wolbachia*-based population replacement strategies can be deployed at relatively low cost, environmentally-friendly, and can potentially meet the major challenges in dengue control.



Recognizing this potential the Tropical Disease Foundation has set its sight for the possibility of bringing the program in the Philippines. Initial engagement commenced in the last quarter of 2013 which led to an invitation for an orientation and field site visit last May 2014 to Monash University in Melbourne and the Eliminate Dengue Program's (EDP) Australian field office in Cairns, Queensland. The week-long visit involved the introduction to the processes of the program and expectations from both sides. Guided tours were also organized in both the laboratories and the trial sites. The EDP has been gracious enough to share their experiences and technology to potential collaborators.

## **Operationalization of Informal Network Mechanism of Street-Based Sex Workers in relation on HIV and STI Prevention (Project WELL)**

Currently, no NGO is providing sustained programs for freelance sex workers, creating a major gap in the fight against HIV-AIDS. This project aims to empower street-based sex workers (SBWS) by establishing a functional informal network of sex workers; addressing their needs using the following known strategies [Psychological , Capacity enhancement and modified clinical and condom service provision]; and develop a simple, acceptable and effective method to evaluate SBSWs behavioural change.

Project WELL encompasses trainings and workshops on STI and HIV as well as sharing of core information on HIV and STI and "condom negotiation" to help street-based sex workers master techniques for self- and partner-protection.

## **Phase III Multicenter, Double-Blind, Randomized Active Comparator Clinical Trial to Evaluate the Safety and Efficacy of Reformulated Raltegravir 1200 mg Once Daily versus Raltegravir 400 mg Twice Daily, Each Taken in Combination with Truvada™, in Treatment –Naive HIV-1 Infected Subjects.**

Tropical Disease Foundation (TDF) has been selected as one of the centers worldwide to conduct a phase III clinical trial on the safety, effectivity, and tolerability of Raltegravir given once daily compared to the same medication given twice daily, each taken in combination with Truvada™ . The study drug, Raltegravir, has been approved for use worldwide to help control HIV infection.

TDF *30 years & counting*

# Moving Forward

## TUBERCULOSIS

In its continued fight to eradicate tuberculosis in the country, the Tropical Disease Foundation, Inc. is conducting an operational research project on “Evaluation of reasons for patients’ loss to follow up during MDR-TB treatment in the Philippines”. The project is sponsored by the U.S. Agency for International Development (USAID) Philippines through the Innovation Multi-sectoral Partnership to Achieve TB



Control (IMPACT) . The study aims to determine individual, clinical, interpersonal, health-setting, and socio-economic factors associated with loss to follow up from MDR-TB treatment in the Philippines as well as to describe patients’ views on the types and delivery-mode of interventions that would have an impact on reducing MDR-TB treatment loss to follow up.

To ensure that the interviewers were properly equipped with the right skills to extract data, a training workshop was conducted by Dr. Joan Mangan and Dr. Ekaterina Kurbatova of the US Centers for Disease Control and Prevention (CDC).



Tropical Disease Foundation Inc..

## BOARD OF TRUSTEES



### **Jose C. Benitez, Ph.D.**

Dr. Benitez is currently the Chairman of the Board of Trustees of TDF. He is formerly the President of the Philippine Women's University and the Minister of the Philippine Human Settlements. He is an expert in community development and has been responsible for many national programs in housing, skills training and education. Dr. Benitez's expertise in community development has been instrumental in the types of program service provided by the Foundation.

### **Thelma E. Tupasi, MD**

Dr. Tupasi is the Founding President of TDF. In 1968, she obtained her Post-Doctoral Fellowship practice at the Centers for Disease Control in Atlanta, Georgia, USA, followed by her Infectious Disease Fellowship at the University of Washington, USA and the University of Virginia, USA from 1968 to 1970. She graduated from the University of the Philippines in 1964 with a degree in Doctor of Medicine. Dr. Tupasi's research studies on Tuberculosis and Infectious diseases make her an invaluable asset to the Foundation, pioneering methods of rapid detection and containment of infectious diseases.



### **Roberta C. Romero, MD**

Dr. Romero is the CEO of TDF and is a consultant Dermatologist at the Cardinal Santos Medical Center. She received her Post Graduate Training in Dermatology under the Preceptorial Program of the Philippine Dermatological Society. She also obtained a WHO Training Course in the Immunology of Infectious Diseases in Lausanne, Switzerland and was a Research Fellow in Immunology at the Montreal General Hospital in Montreal, Canada. She graduated from the University of the Philippines as a Doctor of Medicine. Dr. Romero is a staunch supporter of the Foundation and has contributed numerous written articles on leprosy, HIV in the Philippines, infectious diseases, acne and prevalence of skin diseases in the Philippines.





### **Claver P. Ramos, MD**

Dr. Ramos is a Nephrologist in Makati Medical Center. He was previously the founding President of the National Kidney Foundation and was responsible for the construction of the Kidney Institute. He has been a strong advocate of the Foundation and has provided financial support of its activities.

### **Florina R. Kaluag, MD**

Dr. Kaluag is a Cardiologist at the Makati Medical Center. She graduated from the University of the Philippines College of Medicine - Philippine General Hospital (UP-PGH) in 1943, and had her fellowship practice in the University of Pennsylvania studying Cardiology. She obtained her Physician's license at the Philippine College of Physicians and her subspecialty board certification at the Philippine College of Cardiology. She has been a member of TDF's board since 1989 and is one of its most stout advocates.



### **Pablo R. Antonio Jr., Architect**

Architect Antonio is the Founder of the Pablo R. Antonio Jr. Design Consultancy, specializing in the design of healthcare facilities such as the Asian Hospital and Medical Center and the Makati Medical Center; semiconductor plants, learning institutions and residential communities. He has been a philanthropist in the cause of TDF, providing free architectural services for the Foundation.

### **Vitaliano N. Nañagas II, MBA**

Mr. Nañagas obtained his Bachelor of Arts degree in Economics and Bachelor of Science degree in Commerce, major in Accounting, from De La Salle College. In 1972, he graduated with distinction from the Master of Business Management program of the Asian Institute of Management. For more than 30 years, Mr. Nañagas has demonstrated extensive management experience working with government agencies, private businesses and non-profit organizations. He is the Chairperson and Board of Trustees Member of the Cartwheel Foundation and was Chairman of the Philippine Council for NGO Certification (PCNC).





## **Florentino S. Solon, MD, MPH**

Dr. Solon is currently the President Emeritus of the Nutrition Center of the Philippines and a Board Member of the Philippine Nutri-Foods Corporation and NCP-Publishing Corporation. He is a world renowned expert in Nutrition and was a formerly Deputy Minister of Health as well as the Mayor of Cebu City. In 1966, he received a Certificate of Applied Nutrition at Ibadan University in Nigeria and a Diploma in Nutrition at the London School of Hygiene and Tropical Medicine at the London University in the United Kingdom. In 1964, he obtained his Master's Degree in Public Health with honors, at the College of Public Health in the University of the Philippines. He graduated with a degree in Doctor of Medicine at the University of Santo Tomas. Dr. Solon is responsible for guiding the public health policy of TDF.

## **Ruben L. Encarnacion, PhD**

Dr. Ruben L. Encarnacion is currently the President of PsychVisions, his own psychotherapy practice, training and psychological assessment firm. He obtained his PhD in Clinical Psychology, MA in Counseling Psychology, and B.S. in Management Engineering, cum laude, all from Ateneo De Manila University. He serves a larger segment of Philippine society in psychological health and well-being through geriatric evaluation and care and CISD emergency preparedness. In November 2013 he was sent by the German Development Cooperation (GIZ) to administer Critical Incident Stress Debriefing (CISD) to its staff and families stricken by Typhoon Yolanda in Tacloban, Leyte. He has been an expert witness for medico-legal cases involving annulment, custody, adoption and inheritance for Filipino, North & South American, and European nationals. He has been a Market Research Consultant from the 1990s to 2000s, having San Miguel Beer, Unilever, Jollibee, Nestle, PSRC-RI, Good Thinking!, Universal McCann and ACNielsen among his clients.



## **Manuel M. Lazaro, Esq.**

Atty. Lazaro is the Founder and Senior Partner of M.M. Lazaro and Associates. He incorporated the TDF upon the initiative of Doctors Claver Ramos and Thelma Tupasi, and one of the three (3) living incorporators. He was the former Government Corporate Counsel with the rank of Presiding Justice of the Court of Appeals by law and Presidential Assistant for Legal Affairs of the Office of the President. He was the former Executive Vice-President and General Counsel of the GSIS. He is presently the Chairman and CEO of Philippine Constitution Association (Philconsa), Director of the Manila Golf and Country Club, Manila Hotel Corporation and Philja Development Center, Inc. and Member of the Board of Advisors (Ateneo Law School).



# *Acknowledgements*

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