

FP7: EMPHASIS ON TRANSLATING BASIC KNOWLEDGE INTO CLINICAL APPLICATIONS

The European Commission's Research Framework Programme 7, FP7 (2007-2013) is funding research aimed at combating the three major killer diseases, HIV/AIDS, malaria and tuberculosis (Poverty related diseases, PRD).

Research on PRD focuses on developing new therapies and diagnostic and preventive tools, such as vaccines.

The programme is sponsoring research on the full spectrum from basic molecular research through preclinical tests and proof-of-principle. Research efforts confront the three diseases at global level, but also address specific European aspects. Structures that were successfully built under FP6 (2002-2006) are reinforced and complemented in FP7

THE FIRST FP7 PROJECTS IN TB HAVE ALREADY STARTED IN THE FOLLOWING TOPICS:

Highly innovative approaches for research into host-pathogen interaction in tuberculosis: **5 projects**

Next generation of researches for TB: **2 projects**

Development of fast test for the diagnosis of Multi-Drug-Resistant TB: **2 projects**

Coordination of European research activities with global initiatives, including Public-Private Partnerships: **1 project**

European network for study and clinical management of TB drug resistance: **1 project**

Sustainability is one of the key factors in our strategy. Joining forces with other funders and stakeholders is another one. TB is a global problem, therefore we are acting globally as well as at European level.

Highly innovative research in TB between Indian and European partners: **2 projects**

THE INFECTIOUS DISEASES UNIT

The core task of the Unit is to implement translational research in infectious diseases within the Health Theme of FP7 with emphasis on:

- 1) antimicrobial drug resistance,
- 2) PRD
- 3) emerging epidemics and
- 4) neglected infectious diseases.

The strategic objective of PRD at the Unit of Infectious Diseases is to confront HIV/AIDS, malaria and tuberculosis in Europe and the rest of the world at broad fronts and in a multidisciplinary approach through the development of effective preventive and controlling strategies.

In addition, the unit manages the EDCTP, which is a pioneer programme of the European Union for clinical trials and capacity building in Africa with the overall goal of alleviating poverty in developing countries by fighting the poverty related diseases.



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Additional information:

FP7 in general: http://cordis.europa.eu/fp7/health/home_en.html

PRD: http://ec.europa.eu/research/health/infectious-diseases/poverty-diseases/index_en.html

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LEAFLET



Tuberculosis

Research and Policy



TUBERCULOSIS IS A GLOBAL PROBLEM

Approximately 1.7 million people die each year because of tuberculosis (TB) and up to two billion people are infected with the causative agent, *Mycobacterium tuberculosis*. These numbers demonstrate why *M. tuberculosis* is considered to be one of the most dreadful pathogens ever encountered. The European Commission Directorate General for Research recognizes the importance of TB and is building partnerships with the Member States, disease endemic countries and other stakeholders to

integrate European efforts with the global TB research agenda. Recent reports of spreading of extensively drug resistant TB strains (XDR-TB) inside the borders of European Union should alarm us and be taken as convincing evidence that we need to continue our investment in TB research in the future.

TB is one of the diseases that are prioritized in the Cooperation Health programme

BASIC RESEARCH AND TRANSLATIONAL RESEARCH — A DUAL STRATEGY

Many of the European Commission supported research projects aim to gain information about the processes by which *M. tuberculosis* enters the state of latency, an inactive state that makes asymptomatic infections difficult to detect and cure. Host-pathogen interaction is another important area for research when we want to elucidate the mechanisms underlying the complex life cycle of *M. tuberculosis*.

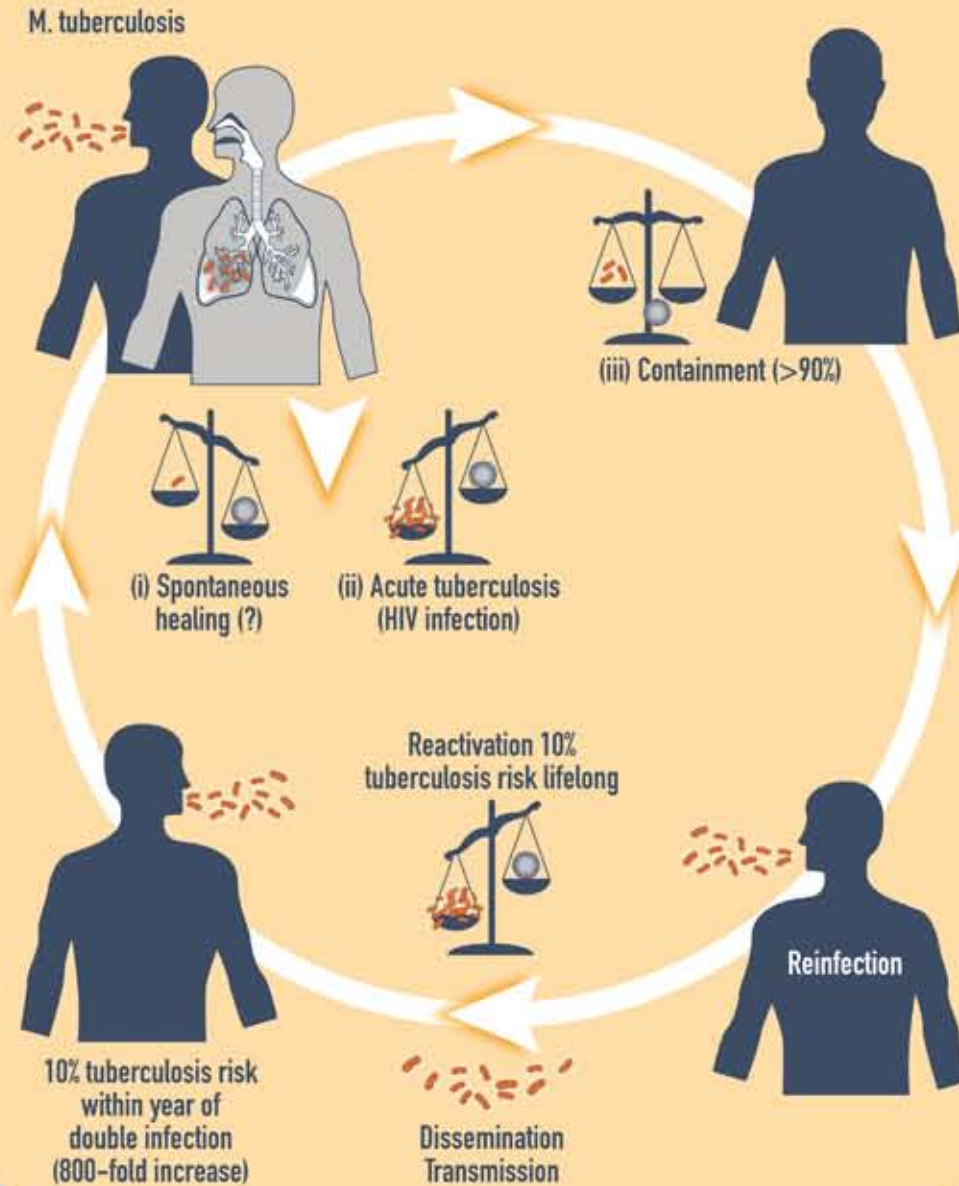
can lead to real applications. In TB control the BCG vaccination is not as effective as could be hoped for, and the spread of antimicrobial resistance has made most of the drugs ineffective against some strains of TB. The large translational projects are the key in bridging the gaps between discovery and application.

The dual strategy of utilizing both large translational projects and smaller discovery oriented projects has proven to be fruitful in the Framework Programmes.

So, there are good reasons not to forget basic discovery and knowledge of the mechanisms of pathogenesis as a delicate balance prevails between us humans and the pathogen. However, only translational research

WHAT IS THE MECHANISM OF PATHOGENESIS?

M. tuberculosis is a complicated and sophisticated pathogen. There are several possible outcomes after becoming infected with the bacterium. Only 10 % of the victims develop active disease at some stage of their life.



FP6 IS A SUCCESS STORY

Tuberculosis was a priority area for health research under both FP5 and FP6. The total Community contribution for TB research under thematic priority 1 "Life sciences, genomics and biotechnology for health" in FP6 was more than € 65 million. During FP6 three Integrated Projects (IP) were initiated, two for TB vaccine development (TB-VAC and MUVAPRED) and one for developing new efficient drugs against TB (NM4TB).

In addition, 19 smaller projects were aimed at dealing with specific aspects of TB research.

Most of the efforts in these smaller STREP-projects were basic research activities supporting translational research for developing new diagnostics, drugs and vaccines against TB.

The overall aim of the TB research programme has been to structure and integrate European research into a pipeline of projects ranging from early discovery to phase I clinical testing of drug and vaccine candidates. Partnerships were built between European scientists, industrial partners and researchers from disease endemic countries. The European and Developing countries Clinical Trials Partnership, EDCTP, will take over some of the most promising candidates and help to accelerate the development of new vaccines and drugs by supporting clinical trials in Africa in true partnership with developing countries.