WHY IS RESEARCH ESSENTIAL TO STOP TB?

TB RESEARCH MOVEMENT

TB causes unnecessary suffering all over the world. In 2009 some 9.4 million people, including 1.1 million people living with HIV, became ill with TB and 1.7 million (380 000 of them living with HIV) died from the disease. TB is becoming increasingly difficult to treat because drug resistance has soared, with an estimated 440 000 new cases of multidrug-resistant TB (MDR-TB) worldwide. Virtually untreatable extensively drug-resistant (XDR-TB) cases are now being diagnosed in 58 countries. For people infected with the most drug-resistant TB strains or co-infected with HIV, TB is often a death sentence.[1]

TB strikes the most vulnerable people. Every day TB takes the lives of some 4700 people - most of them belonging to the very groups targeted by programmes aimed at fighting poverty. By failing to invest sufficiently in TB, we are undermining investments in development.

Most methods used in TB care are outdated.

- Until now most TB control programmes in resource-poor countries have had little choice but to use a method of diagnosing the disease (sputum smear microscopy) that is 125 years old and detects only half of all cases.
- No new drugs in widespread use were developed within the past 40 years. The present six-month treatment regimen, developed in the 1970s, demands close supervision, is difficult to use in people living with HIV and is ineffective against MDR-TB.
- The only vaccine available (BCG) protects children against severe forms of TB but affords little protection against infectious TB in adults.

Research is critical to meeting the goal of TB elimination. TB elimination - defined as the reduction of TB disease incidence to one per million population - is more than an aspiration. It could become a reality by 2050. But this will happen only if we achieve radical transformation in the way TB is diagnosed, treated and prevented. This goal can be realized only if TB research is both intensified and envisioned in an entirely new way. It must be viewed as a continuum from basic research (for discovery) to operational research (to achieve optimal implementation). New technologies are needed for best possible prevention, diagnosis, and treatment of all forms of TB in people of all ages, including those living with HIV. Such tools must deliver quicker results, be affordable to the poor and applied in combination to have broad impact on the pandemic.

1 WHO World TB Report, 2010

Stop TB Partnership | World Health Organization

WHAT TYPES OF RESEARCH ARE NEEDED TO CONQUER TB?

1. **Fundamental research** - To better understand the TB germ and its interaction with humans--a critical step towards developing new diagnostic tests, new drugs and a new vaccine.
2. **Research and development:**
   a. **New diagnosis** - A rapid, simple-to-use test to diagnose TB and to confirm what treatment is needed. Rapid diagnosis and prompt treatment reduce spread of the disease and save lives.
   b. **New drugs** - A much shorter non-toxic treatment regimen is needed--one that is compatible with anti-retroviral drugs and efficient against drug-resistant strains.
   c. **New vaccines** - To revolutionize TB control, we need a vaccine that protects against new infections and also prevents progression of latent TB infection -- which is present in about a third of the world's population -- to active TB disease.
3. **Operational/implementation research** - To ensure that existing tools are used most effectively, and to streamline the introduction of new tools into health care services around the world, so as to ensure universal access to the best possible care.

THE TB RESEARCH MOVEMENT

Recognizing the urgent need for stepped-up funding for and commitment to TB research, the Stop TB Partnership launched the Research Movement in 2006.

The goal of the Research Movement is to stimulate, support and expand research towards elimination of TB in the world by 2050, through the mobilization of a broad alliance of groups involved in TB research and development. It has these three overarching objectives:

- to provide a forum for TB researchers and funders of TB research to coordinate their priorities and actions;
- to lead on efforts to increase resources for TB research;
- to work towards the development of a coherent and comprehensive global research roadmap towards TB elimination.

How much is invested in TB research & development?

Financing for TB research & development increased by nearly 50% between 2005 and 2009, from US$ 363 million to US$ 614 million (*2009 Report on Tuberculosis Research Funding Trends, 2005-2008*, Treatment Action Group/Stop TB Partnership).

In 2009 the breakdown was as follows:

- basic science: US$ 170 million (28%)
- drug development: US$ 188 million (30%)
- new TB vaccines: US$ 108 million (18%)
- new diagnostics: US$ 541 million (7%)
- applied/unspecific research: US$ 57 million (9%)
- operational research: US$ 47 million (8%).

The Global Plan to Stop TB 2011-2015, the Stop TB Partnership's roadmap for halving TB prevalence and deaths compared to 1990, calls for US$ 9.8 billion -- about US$ 2 billion per year -- for TB research and development over the next five years. High-income countries and those with growing economies will need to increase their investment in research and development to fill an estimated gap of about US$ 7 billion, or $1.4 billion per year.

For more information:

Stop TB Partnership: www.stoptb.org

The Research Movement: www.stoptb.org/**researchmovement**/

The Global Plan to Stop TB 2011-2015: Transforming the Fight - Towards Elimination of Tuberculosis: http://www.stoptb.org/assets/documents /global/plan/GlobalPlanFinal.pdf

2009 Report on Tuberculosis Research Funding Trends, 2005-2008 http://www.treatmentactiongroup.org/publication.aspx?id=3404

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