Lancet article highlights hope in the tuberculosis

EurekAlert

New York, NY?May 19, 2010?According to a paper published today in the *Lancet*, there is unprecedented progress in the development of the global tuberculosis (TB) drug pipeline with 10 drug candidates currently in clinical development. The paper was written by a team of renowned international experts led by Zhenkun Ma, Ph.D., Chief Scientific Officer for the TB Alliance, a not-for-profit organization accelerating the discovery and development of new TB drugs. The article, published as part of the *Lancet*'s Series on Tuberculosis, also highlights the significant funding and other challenges associated with the pursuit of life-saving treatment for the nearly 2 million people who die each year from TB.

Of the 10 compounds in clinical development, three TB drugs are being co-developed by the TB Alliance and its partners. These clinical candidates are basic building blocks for a new generation of novel TB drug regimens that have the potential to greatly reduce the global TB burden by shortening the duration of the current treatment regimen, which currently takes six to 30 months. Results of a recent modeling study in a WHO region suggest that new and improved TB drugs, vaccines, and diagnostics could reduce the global incidence of TB by 71% by 2050. In 2008, there were more than 9 million new cases of TB.

"A decade ago, there were essentially no drugs being developed to treat TB, so there has been tremendous progress in this area," said Dr. Ma, lead author of the paper "Global Tuberculosis Drug Development Pipeline: The Need and the Reality." "Still, the global TB drug pipeline must continue to be strengthened to ensure we can deliver the tools to help stop the devastation TB wreaks on patients, families, and countries around the world."

Dr. Ma notes that access to increased and sustainable funding to bring the next generation of TB treatments to patients is a key challenge to unleashing the hope in the drug pipeline. According to Médecins Sans FrontiÃ¨res, currently, there is a 75 percent funding shortfall to support the necessary TB drug research and development.

"While we're headed in the right direction, this draws much needed attention to the challenges that lie ahead," said Dr. Stefan Kaufmann, Director, Department of Immunology at the Max Planck Institute for Infection Biology. "Only together and with a global commitment can we support the development of new TB regimens and dramatically reduce the mortality of TB and its economic impacts."

Multi-drug combinations are needed to treat drug-sensitive and drug-resistant disease. Until recently, only one new TB drug in a regimen has been tested at a time. However, with the availability of drug candidates, the Critical Path to TB Regimens (CPTR) initiative was recently launched, which is intended to enable several new TB drugs to be tested simultaneously, in combination. This is expected

to lead to a dramatic reduction in the time that it takes to develop an innovative TB drug regimen.

TB kills nearly two million people every year, and is second only to HIV/AIDS in mortality among infectious diseases. However, 94% of TB cases and 98% of deaths occur in the developing world, and therefore there is very little market incentive for the private sector to invest in TB drug development.

Critical Path to TB Drug Regimens Initiative
With support from public and private partners, promising compounds will be tested through the Critical Path to TB Drug Regimens (CPTR), an initiative created by the TB Alliance, the Critical Path Institute, and the Bill & Melinda Gates Foundation. CPTR is a new collaboration that aims to speed the development of truly novel combination treatments for tuberculosis by testing individual TB drug candidates from different companies together?and replace an almost 50-year-old drug regimen.

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