Seven Pharmaceutical Companies Join Academic Researchers To Speed TB Drug Discovery

Groundbreaking partnership seeks rapid cure to reduce treatment time from six months to one month

Seven pharmaceutical companies and four research institutions, working with the Bill & Melinda Gates Foundation, have launched a groundbreaking partnership that aims to speed the discovery of essential new treatments for tuberculosis (TB).

The partnership, known as the TB Drug Accelerator (TBDA), will target the discovery of new TB drugs by collaborating on early-stage research. The long-term goal of the TBDA is to create a TB drug regimen that cures patients in only one month. Existing drugs, all at least 50 years old, require six months to cure the disease – a lengthy process that contributes to 20-30% of patients dropping out before completion.

Aided by nearly $20 million from the Gates Foundation, partners officially launched the TBDA in April and have begun the first round of screening for new TB drug candidates. The TBDA aims to develop five new preclinical drug candidates with treatment-shortening potential within 5 years and proof-of-concept for a one-month three-drug regimen within 10 years.

“The TB Drug Accelerator establishes a new paradigm of cooperation in drug discovery,” said Sanofi Chief Executive Officer Chris Viehbacher, speaking on behalf of the pharmaceutical industry partners. “By working together on this, we can optimize our research and speed the development of one of the most pressing needs in global health.”

Through this partnership, the participating pharmaceutical companies -- Abbott, AstraZeneca, Bayer, Eli Lilly, GlaxoSmithKline, Merck and Sanofi – will open up targeted sections of their compound libraries and share data with each other and four research institutions: the Infectious Disease Research Institute; the National Institute of Allergy and Infectious Diseases, part of the U.S. National Institutes of Health; Texas A&M University; and Weill Cornell Medical College. Breaking from traditional research and development practices, the companies will work together to develop the best prospects, regardless of where the drug originated. The structures of lead compounds identified through the program will ultimately be placed in the public domain.

“TB drug discovery has reached a crossroads,” said Dr. Carl Nathan, Professor and Chairman of the Department of Microbiology and Immunology at Weill Cornell Medical College. “Finding new and faster-acting TB drugs will take a new kind of partnership, connecting not only academia and industry, but drug company with drug company. The TB Drug Accelerator is a historic experiment in innovative collaboration.”

Tuberculosis is a bacterial infection that attacks the respiratory system and other organs. It is the second leading infectious cause of death worldwide, having killed nearly 1.4 million people in 2010 alone. At any given moment, more than 12 million people around the world are suffering from active TB.

The high percentage of patients who fail to complete the current six-month treatment regimen adds significantly to the TB burden. High default rates lead to increased mortality, contribute to TB drug resistance and allow patients to continue to infect others. Shortening treatment regimens to even two months would keep an additional one million people on treatment each year.

“Innovative partnerships are critical to helping us solve the most pressing challenges of global health,” said Trevor Mundel, president of the Global Health Program at the Bill & Melinda Gates Foundation. “It’s our hope that the TB Drug Accelerator will set a precedent for drug discovery and serve as a resource for others.”

The TBDA will add to existing collaborative efforts on TB, building a more robust drug discovery pipeline to complement other initiatives, such as Critical Pathways to TB Drug Regimens (CPTR), which works with the Global Alliance for TB Drug Development to speed the clinical development of new combination TB drug therapies.

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