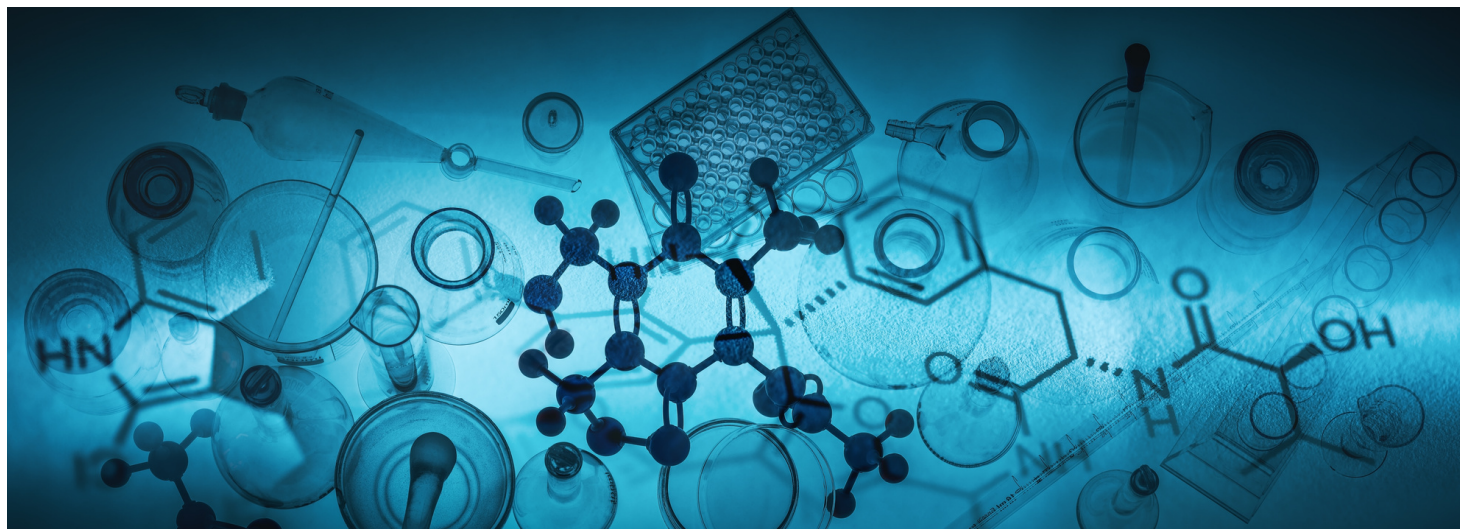


THE MONTHLY DOSE

Official Newsletter of The Mueller Health Foundation



WHAT'S NEW AT THE MUELLER HEALTH FOUNDATION:

We at MHF are excited to attend the NYC World TB Day 2025 Conference on March 28th in New York City.

In commemoration of World TB Day, this conference will address the TB prevention and elimination efforts in New York City and in the United States. Topics will include a review of local epidemiology, updates on asylees and migrant populations in NYC, implementation of new isolation guidelines for persons with infectious TB, and an overview of cultural humility.

For more information and to register please use the following link:
<https://globaltb.njms.rutgers.edu/educationalmaterials/calendar/2025/NYCWTBD2025.php>

Stay tuned for more updates!

LATEST NEWS: SHOWCASING STORIES OF TB SURVIVORS

We at The Mueller Health Foundation continue to be deeply committed to sharing personal stories and giving a voice to TB patients, TB survivors, TB practitioners, and all the friends and family members of the people who have been affected by the disease. We are also proud to continue our support of our new HeroRat Tamasha who has been trained by APOPO, a charity focused on training rats to detect TB in sputum samples across Africa. APOPO has put together a wonderful collection of success stories from TB survivors, and this month, we would like to highlight Jacobo's story:

Jacobo is 24 years old and lives in Manzese, a neighborhood in Dar es Salaam, Tanzania, with his parents and siblings. He works as a plumber, supporting his family and saving for the future. When one of his brothers fell ill with tuberculosis, he developed severe symptoms, including coughing up blood and constant fatigue. Jacobo took care of him for weeks, unaware of how easily the disease could spread. Soon after, Jacobo began experiencing similar symptoms—persistent coughing, weight loss, and night fevers. Concerned about his health, Jacobo visited the hospital, where doctors diagnosed him with pneumonia and prescribed medication. However, his condition continued to worsen, making it impossible to work. This loss of income put a financial strain on his family, affecting their ability to afford food and rent. Desperate for answers, he returned to the hospital and requested a TB test, but the results came back negative, leaving him frustrated and uncertain about what to do next. A week later, he received an unexpected call from an APOPO volunteer, informing him that further testing had confirmed he had tuberculosis. His sample had been re-analyzed using APOPO's HeroRATs, which detected TB, a result later verified in APOPO's lab. With the correct diagnosis, he began TB treatment and gradually regained his strength. The doctor confirmed he was no longer contagious, allowing him to return to work and support his family. Aware of how easily TB spreads, Jacobo encouraged his colleagues to get tested. Thanks to APOPO's HeroRATs, one of them was also diagnosed with TB and started treatment early. Both are grateful for the intervention, knowing it likely saved their lives. To read his full story, please follow the link here: <https://apopo.org/what-we-do/detecting-tuberculosis/success-stories/jacobo/>

For more news, please also take a look at our top 3 picks for **February** in this newsletter, where we highlight novel research findings and news about the prevention and treatment of tuberculosis around the world.

MHF TOP PICKS FOR FEBRUARY

Every month, we at the Mueller Health Foundation like to showcase interesting news and updates in the field of tuberculosis (TB). Below are our top **3** picks for **February**:

1. Trial Data Support Three Shorter Regimens for Drug-resistant TB

A recent randomized clinical trial conducted across seven countries has identified three new 9-month, all-oral regimens for treating drug-resistant tuberculosis (TB). These regimens—bedaquiline, pretomanid, linezolid, and moxifloxacin (BPaLM); bedaquiline, pretomanid, linezolid, and levofloxacin (BPaL-L); and bedaquiline, pretomanid, and linezolid (BPaL)—demonstrated favorable outcomes in 85% to 90% of participants, proving noninferior to the traditional 18- to 24-month therapy. The study, part of the endTB project, offers promising alternatives to the standard treatment, which has a historical success rate of only 65% and often involves severe side effects. The findings suggest that these shorter, less toxic regimens could significantly improve patient adherence and overall recovery rates, marking a major advancement in global TB treatment efforts. To learn more, you can access the research paper at: <https://www.nejm.org/doi/full/10.1056/NEJMoa2400327>

2. TBoNotTB: A Novel AI-driven Tool to Streamline Tuberculosis Evaluation in Hospitals

A recent study introduced *TBoNotTB*, an AI-driven clinical decision support system (CDSS) designed to enhance tuberculosis evaluation and streamline isolation decisions in hospitals. Developed by researchers at Massachusetts General Hospital, this tool analyzes patient data, symptoms, and risk factors to help clinicians determine the likelihood of TB more efficiently. In a validation study, *TBoNotTB* correctly identified 96% of TB cases while also reducing unnecessary isolation by 37%, optimizing hospital resources and minimizing patient burden. By integrating AI into TB evaluation, this system has the potential to improve diagnostic accuracy, expedite care, and lower healthcare costs, making TB screening more efficient in high-risk settings. To learn more, you can read about the study here: <https://www.cambridge.org/core/journals/infection-control-and-hospital-epidemiology/article/tb-or-not-tb-development-and-validation-of-a-clinical-decision-support-system-to-inform-airborne-isolation-requirements-in-the-evaluation-of-suspected-tuberculosis/DB9321FCF44CA83BC7153A5C3B4C7473>

3. Molecular Bacterial Load Assay: New Method Predicts Effectiveness of Tuberculosis Therapy

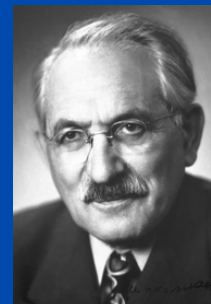
Researchers from the Marius Nasta Institute and the Research Center Borstel, Leibniz Lung Center evaluated the Molecular Bacterial Load Assay (MBLA) as a new tool for monitoring tuberculosis treatment effectiveness. Unlike traditional methods such as sputum smear microscopy, DNA amplification tests, and cultures, which can be slow, prone to false positives, or unable to differentiate between live and dead bacteria, MBLA offers a faster and more precise alternative. By measuring *M. tuberculosis* 16S rRNA, MBLA detects bacterial load changes within hours, providing real-time insights into treatment progress. This method is especially crucial for drug-resistant TB cases, where early identification of treatment failure can lead to faster intervention and improved patient outcomes. If widely implemented, MBLA could revolutionize TB monitoring by offering a more efficient and accurate way to track patient recovery. You can read the full article here: [https://www.journalofinfection.com/article/S0163-4453\(24\)00334-7/fulltext](https://www.journalofinfection.com/article/S0163-4453(24)00334-7/fulltext)

DID YOU KNOW?

One of the most pivotal moments in tuberculosis history occurred in the 1940s with the discovery of streptomycin, the first effective antibiotic treatment for TB. Before this breakthrough, tuberculosis was considered a nearly untreatable disease, with patients often confined to sanatoriums for rest and fresh air as the primary form of care.

In 1943, Dr. Selman Waksman and his team at Rutgers University discovered streptomycin, an antibiotic derived from *Streptomyces griseus*, a soil bacterium. In 1944, the first human trial demonstrated that streptomycin could successfully kill *Mycobacterium tuberculosis*, marking the beginning of modern TB treatment. This discovery revolutionized TB care, reducing mortality rates and making hospitalization unnecessary for many patients.

Waksman's discovery earned him the 1952 Nobel Prize in Physiology or Medicine and set the stage for the development of combination therapies, which remain the standard for TB treatment today. The introduction of antibiotics transformed tuberculosis from a deadly, widespread disease into one that could be controlled and cured, shaping the global fight against TB for decades to come.



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The Nobel Prize in Physiology or Medicine 1952. NobelPrize.org.
Nobel Prize Outreach 2025. Mon. 3 Feb 2025.
<<https://www.nobelprize.org/prizes/medicine/1952/summary/>>