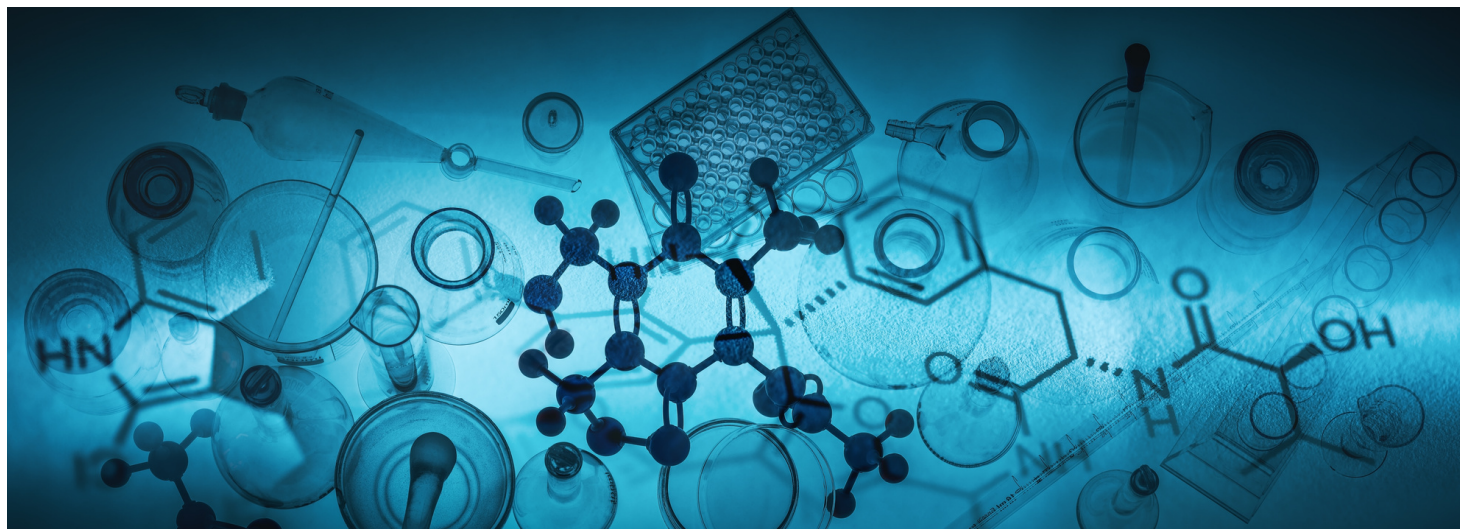


THE MONTHLY DOSE

Official Newsletter of The Mueller Health Foundation



WHAT'S NEW AT THE MUELLER HEALTH FOUNDATION:

We are excited to share a meaningful update from our work with the NYC TB-Free Coalition: together, we have made excellent progress on developing a new TB patient support booklet titled "Managing Your TB Care." Designed as a practical and compassionate resource for people newly diagnosed with tuberculosis, the booklet brings together essential guidance on navigating isolation at home and in public, managing treatment side effects, maintaining good nutrition, and building routines that support medication adherence. It also addresses key topics such as when to report symptoms, understanding Directly Observed Therapy (DOT), communicating effectively with providers, and the unique needs of children and older adults affected by TB. We are proud of this collaborative effort to ensure patients feel informed, supported, and empowered throughout their treatment journey. We will share a link to this resource as soon as it is posted on the NYC TB-Free Coalition website—stay tuned!

LATEST NEWS: SHOWCASING STORIES OF TB SURVIVORS

We at The Mueller Health Foundation remain deeply committed to sharing personal stories and giving a voice to TB patients, TB survivors, TB practitioners, and all the friends and family members affected by the disease. We are also proud to continue our support of our 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 Lucia's story:

Lucia Massawe is a 28-year-old mother of three who lives in Mbagala, Dar es Salaam in Tanzania, where she supports her family through a small poultry business while her husband runs local bars. Originally from Moshi, Lucia's life changed when she began experiencing weight loss, persistent fever, and a worsening cough that left her too weak to manage her daily responsibilities. After multiple attempts at self-treatment and an initial malaria diagnosis that failed to resolve her symptoms, she sought care at Mbagala Rangi Tatu hospital. Although her first sputum test for tuberculosis was negative and she could not afford an X-ray, a second sample was later analyzed using alternative methods and confirmed positive for TB through APOPO's HeroRat diagnostic program. The diagnosis initially frightened her, as she knew little about the disease, but with counseling from health workers and strong support from her family, especially her husband and her father, who is a doctor, Lucia found the strength to begin treatment and protect those around her. Learning that trained rats had helped detect her illness amazed her and gave her renewed hope, particularly knowing that this innovative approach helps people like her who cannot afford expensive diagnostic tests. Today, Lucia remains deeply grateful for the care she received and for the chance to heal, hopeful that her story will encourage others to seek help early and believe in recovery. To read her full story, please follow the link: <https://apopo.org/what-we-do/detecting-tuberculosis/success-stories/lucia/?v=0b3b97fa6688>

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. High-Dose Rifampin Shows No Benefit in TB Meningitis Trial

A recent randomized clinical trial found that giving adults with tuberculous meningitis a much higher dose of the antibiotic rifampin did not reduce deaths compared with standard therapy and may even have been associated with slightly worse mortality at six months. The study enrolled nearly 500 patients across Indonesia, Uganda, and South Africa and showed no survival advantage from high-dose rifampin, underscoring the need for new treatment strategies that better address the disease's severe inflammatory response in the brain. To learn more, you can access the article here: <https://www.cidrap.umn.edu/tuberculosis/high-dose-rifampin-fails-cut-tuberculous-meningitis-deaths-may-worsen-outcomes>

2. Large Global Study Reveals High Rates of TB Diagnostic Errors

A new study published in *Nature Medicine* estimates the scale of incorrect tuberculosis diagnoses in low- and middle-income countries by analyzing 2023 World Health Organization case-finding data from 111 countries. The researchers estimate that about 2.05 million people were falsely diagnosed with TB (false-positives) and roughly 1.00 million true TB cases were missed (false-negatives), suggesting that up to three in ten reported TB cases may be incorrect. While expanding rapid PCR-based diagnostic tools could significantly reduce underdiagnosis, the study indicates that substantial improvements in test sensitivity and reduced reliance on clinical judgment are needed to cut both false-negative and false-positive errors and strengthen global TB control efforts. To learn more, you can access the paper here: <https://www.nature.com/articles/s41591-025-04097-5>

3. ASU Researchers Discover Tuberculosis Bacterium's "Heartbeat" as a Potential Drug Target

Arizona State University scientists have identified a critical molecular system in *Mycobacterium tuberculosis*, called PrrAB, that functions like the bacterium's "heartbeat," driving energy production and respiration essential for survival. Using CRISPR interference to silence this system caused the bacteria to die, highlighting PrrAB as a promising target for new TB treatments. The team also tested an experimental compound, DAT-48, which selectively killed multiple TB strains in laboratory studies and showed enhanced potency when combined with existing TB drugs, suggesting possible strategies to improve therapy. With TB cases rising in parts of the United States and drug resistance a growing concern, these findings could help guide the development of more effective, targeted treatments. You can read the article here: <https://news.asu.edu/20251107-science-and-technology-asu-scientists-uncover-tuberculosis-bacteriums-heartbeat>

DID YOU KNOW?

Indonesia is advancing the next phase of its national tuberculosis response based on an extensive August 2025 Joint Programme Review involving the Ministry of Health, WHO, and partners that assessed progress, identified systemic gaps, and laid out priorities for the forthcoming National TB Strategic Plan 2025–2029.

Despite high political commitment, the country's TB burden remains large, with approximately 387 cases per 100,000 people and roughly 131,000 deaths in 2023 compared with earlier years, reflecting COVID-19 setbacks and persistent programmatic challenges.

The review combined field visits across multiple provinces with stakeholder interviews and data analysis to pinpoint actions needed to strengthen legal frameworks, secure sustainable financing, close detection and notification gaps, speed referrals, improve treatment success and retention, protect households from catastrophic costs, and tackle upstream risk factors like undernutrition, smoking, diabetes, and alcohol use.

Emphasis was also placed on empowering community health workers, integrating data systems, and galvanizing multi-sectoral action to identify and link one million people with TB to care and achieve a 90 % treatment success rate, while exploring TB vaccine introduction by 2028–2029.

These steps aim to translate evidence into implementation, bend the TB curve, and accelerate Indonesia's progress toward its 2030 TB elimination targets.

Information Source: <https://www.who.int/indonesia/news/detail/08-01-2026-indonesia-charts-next-phase-of-tb-response-through-national-programme-review>