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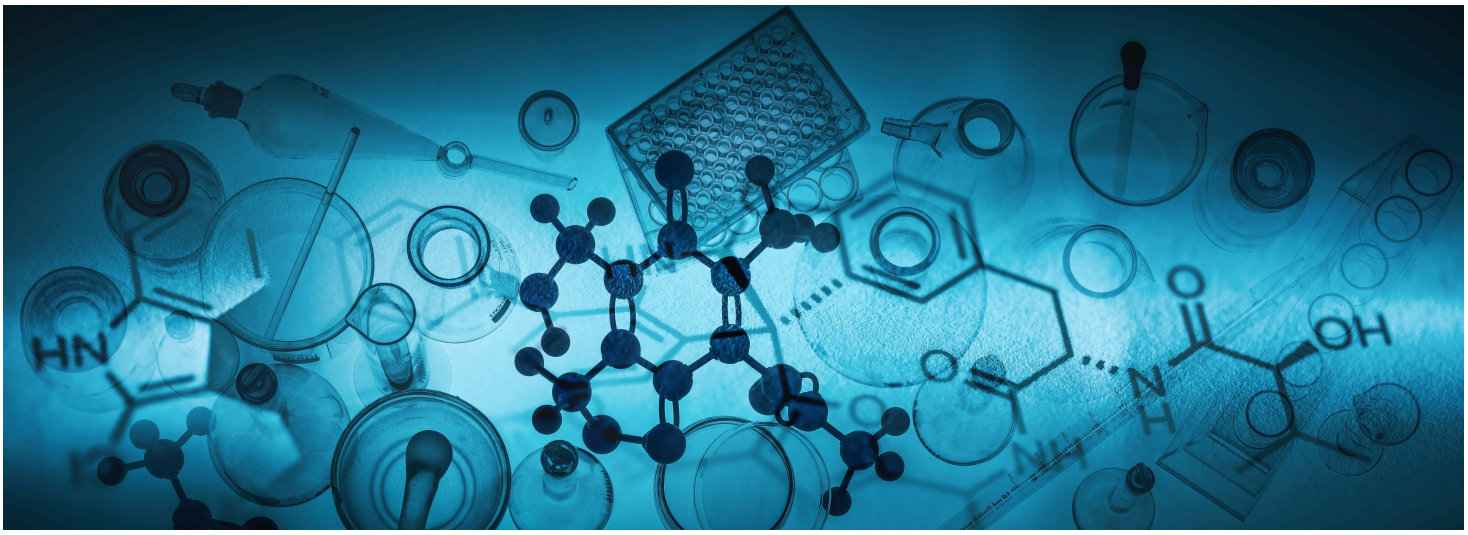
THE MONTHLY DOSE

Official Newsletter of The Mueller Health Foundation



WHAT'S NEW AT THE MUELLER HEALTH FOUNDATION:

As World TB Day approaches on March 24, 2025, the Mueller Health Foundation is proud to join the global community in commemorating this significant day. This year's theme, **"Yes! We Can End TB: Commit, Invest, Deliver,"** emphasizes the critical need for sustained commitment, financial investment, and effective intervention delivery to combat tuberculosis.

In alignment with this theme, we reaffirm our dedication to supporting community-led programs that fight TB, advancing research efforts for shorter and more effective drug regimens, and raising awareness about TB's impact worldwide. By empowering communities, investing in innovative treatments, and promoting education, we believe that together, we can end TB.

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 Kepra's story, a 66-year-old man living in Tanzania:

Kepra was born 66 years ago on the slopes of Mount Kilimanjaro but moved to Dar es Salaam in 1971, where he now lives with his wife and two grandchildren. A retired officer from the Tanzania People's Defense Forces (TPDF), he served his country throughout the 1980s after enlisting following the Idi Amin War in 1979. After his military career, he worked as a security guard for private companies until his declining health forced him to leave his job. For four months, he struggled with fevers, night sweats, and a persistent cough, unsure of the cause. Concerned, his wife finally took his hand and urged him to seek further testing, fearing the worst—HIV/AIDS. To their relief, his test came back negative, but the clinic decided to take a sputum sample to test for tuberculosis. The next day, the diagnosis was confirmed, and treatment began immediately. One of his samples had been sent to a partner laboratory for further screening. To his astonishment, he learned that the lab used African giant pouched rats to detect TB. These HeroRATs, trained by APOPO, had successfully identified his illness, confirming what standard diagnostic tests had initially missed. He reflects that being sick at home was the most difficult experience of his life. For months, he had felt weak, hopeless, and unable to support his family. He had sought relief through malaria treatment and prayer, but nothing worked. However, now, with the right medication, he is gaining back strength and weight, and he and his family are filled with hope for the future. To read his full story, please follow the link here: https://apopo.org/what-we-do/detecting-tuberculosis/success-stories/nilham/

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

The Mueller Health Foundation

MHF TOP PICKS FOR JANUARY

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 **March:**

1. Cash Incentives and Counseling Shown to Improve TB Treatment Success Rates

A recent study published in *The Lancet* reveals that combining conditional cash transfers with tuberculosis counseling significantly enhances treatment success rates and reduces patient loss to follow-up in South Africa. Conducted across nine clinics in Johannesburg, this randomized controlled trial was led by Professor Nazir Ismail from Wits University and Dr. Harry Moultrie from the National Institute for Communicable Diseases. The intervention required participants to attend scheduled appointments, including returning for results, initiating treatment, and attending monthly follow-ups, to receive financial incentives. Results showed that patients receiving both counseling and cash incentives had a treatment success rate of 82.0%, compared to 65.6% in the control group. Additionally, pretreatment loss to follow-up decreased from 15.8% to 3.9%. These findings suggest that addressing financial and behavioral barriers can improve TB treatment adherence and contribute to global TB control efforts. To learn more, you can access the research study at: https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(24)00816-8/fulltext

2. Meta-Analysis Finds Use of Preventive Levofloxacin to Reduce Drug-Resistant TB in Household Contacts

Two recent phase 3 randomized controlled trials, published in the *New England Journal of Medicine*, investigated the efficacy of a 6-month levofloxacin regimen in preventing multidrug-resistant tuberculosis (MDR-TB) among household contacts. Conducted in South Africa and Vietnam, the studies found that while the levofloxacin group had a lower incidence of TB compared to the placebo group, the difference was not statistically significant. However, a combined meta-analysis of individual data from both trials revealed a 60% relative reduction in TB incidence among those receiving levofloxacin. These findings have led the World Health Organization to strongly recommend a 6-month daily levofloxacin regimen for individuals exposed to MDR or rifampicin-resistant TB. Despite the promising results, researchers noted an increase in low-grade adverse events, particularly musculoskeletal issues, among participants. They emphasize the need for further evaluation of the risk–benefit balance, tolerability, and cost-effectiveness of this preventive treatment in diverse populations. To learn more, you can read about the study here: https://evidence.nejm.org/doi/full/10.1056/EVIDoa2400190

3. Age and Sex Influence Antibody Profiles Associated with Tuberculosis Progression

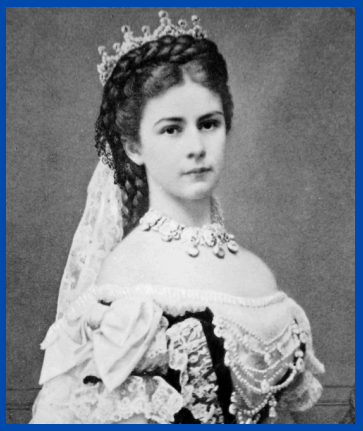
This study, which profiled *Mycobacterium tuberculosis*-specific antibody responses in 140 TB-exposed South African individuals, found that antibody profiles associated with TB progression vary notably with age and sex. Specifically, the study observed that certain antibody features correlated with disease progression more strongly in adolescents compared to adults, and disease progression also correlated more strongly in males compared to females. This suggests that younger individuals and males may exhibit distinct immune responses that influence the course of TB infection. These findings underscore the importance of considering demographic factors such as age and sex in TB risk assessments, diagnosis, and treatment strategies. Tailoring public health interventions to account for these differences could enhance the effectiveness of TB control programs and lead to more personalized approaches in managing the disease. You can read the full article here: https://www.nature.com/articles/s41564-024-01678-x

DID YOU KNOW?

In the early 1860s, Empress Elisabeth of Austria, affectionately known as Sissi, faced significant health challenges. She exhibited symptoms such as persistent coughing, fever, and profound fatigue, leading court physicians to diagnose her with pulmonary tuberculosis. To aid her recovery, Sissi embarked on extended journeys to Madeira and Corfu, seeking the therapeutic benefits of milder climates. These travels not only contributed to her physical recuperation but also marked a period of personal transformation as she returned to the Viennese court with renewed self-assurance and a more assertive demeanor.

However, contemporary historians debate the accuracy of this tuberculosis diagnosis. Some suggest that Sissi's ailments may have been psychosomatic, stemming from the immense pressures and emotional strains of imperial life. This perspective posits that her illnesses were manifestations of mental health struggles rather than a physical disease.

Sissi's health journey underscores the complexities of medical diagnoses in the 19th century and highlights the interplay between mental and physical well-being. Her story offers a nuanced perspective on how personal health can influence and reflect broader historical narratives.



Information Source:
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