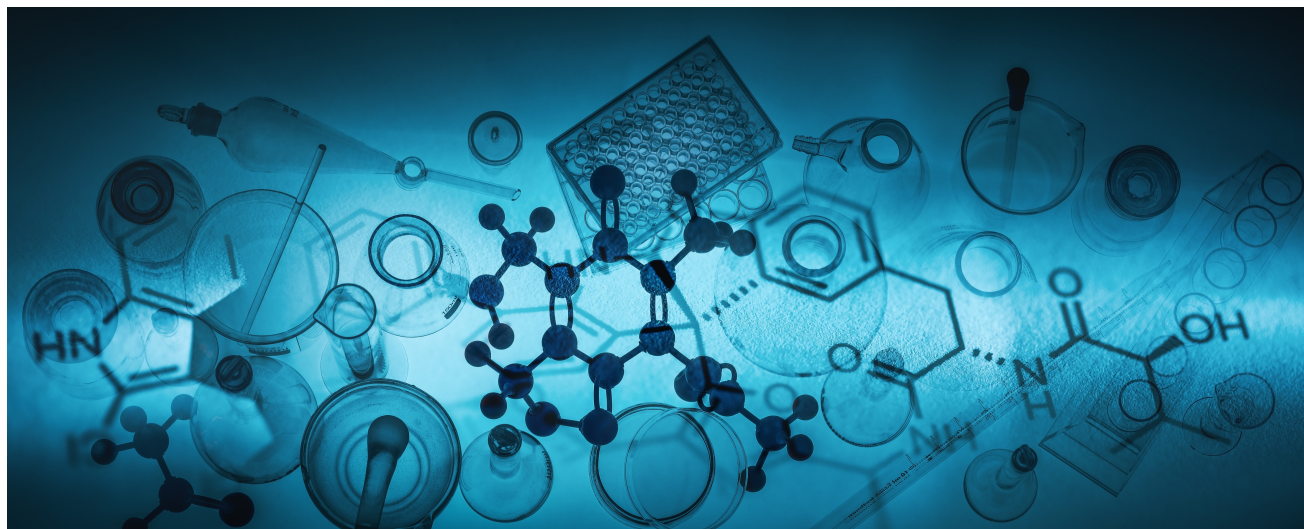


THE MONTHLY DOSE

Official Newsletter of The Mueller Health Foundation



WHAT'S NEW AT THE MUELLER HEALTH FOUNDATION:

Mark your calendars for the upcoming World TB Day 2022 on **March 24th!**

The theme for this year's World TB Day is **"Invest to End TB. Save Lives."** Without adequate financial resources, the global community cannot win the fight against TB.

The Mueller Health Foundation is proud to renew its commitment for 2022 to provide funding and resources to help raise awareness for TB, to improve data and information sharing, to create lasting partnerships, and to continue to save as many lives as possible through funding research for novel preventative and treatment options.

Stay tuned for more updates!

LATEST NEWS: STORY FROM A TB SURVIVOR

Researchers have recently estimated that there were 155 million tuberculosis survivors alive globally in 2020 (1). While tuberculosis disproportionately affects lower socio-economic groups, those with underlying health conditions, and people with substance use disorder, the increasing spread of tuberculosis and particularly the rise of drug-resistant strains of TB, can lead to a diagnosis of TB for anyone around the globe, including those in higher-income settings. As part of our mission for 2022, the Mueller Health Foundation cares deeply about sharing the stories of those affected by TB around the world and to learn from their experiences.

One such story is the story of Mohammed, a Pakistani immigrant in the United Kingdom, who shared his experience of being diagnosed with pulmonary TB approximately two years ago. He candidly shares how the diagnosis and treatment has affected his life and the lives of those close to him. Here is his story: [https://www.thelancet.com/journals/lanres/article/PIIS2213-2600\(21\)00350-7/fulltext](https://www.thelancet.com/journals/lanres/article/PIIS2213-2600(21)00350-7/fulltext)

It is stories like those of Mohammed that inspire us at The Mueller Health Foundation to continue to devote our time and resources to fight the battle against TB. These stories also underline our strong belief in increasing awareness for treating patients through a more holistic, patient-centric approach and to see the extensive diagnosis and treatment process for TB as an opportunity to better help address a patient's other co-morbidities.

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 around the prevention and treatment of tuberculosis around the world.

Source: (1) <https://pubmed.ncbi.nlm.nih.gov/33640076/>

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. Below are our top 3 picks for **February**:

1. New Vaccine May Provide Better Treatment for Tuberculosis

A new study at Oslo University Hospital shows that the so-called H56: IC31 vaccine, developed in Denmark, also can be given to people who have already become ill. The vaccine can help the immune system to attack and fight the tuberculosis bacteria, and can be a relevant treatment option in addition to antibiotics. The most important finding in this study is that it is safe to give this therapeutic vaccine, i.e. a vaccine used as treatment, to patients who have ongoing tuberculosis disease. The study also shows that the vaccine strengthens the part of the immune system that is to fight the tuberculosis bacteria.

To learn more, you can access the full article at: <https://www.miragenews.com/new-vaccine-may-provide-better-treatment-for-714674/>

2. Metabolite of TB-Causing Bacteria May Provide New Approach to Assess Severity of TB Infection

Researchers at Washington University School of Medicine in St. Louis have discovered a molecule in the lungs of tuberculosis patients that reflects the levels of TB-causing bacteria in the lungs. The new research identifies a molecule in people with active TB and shows that levels of this molecule are higher in those with more severe infections. The molecule is a derivative of cholesterol known as cholestenone. While cholestenone was previously thought to be an intermediate required for cholesterol degradation by *M. tuberculosis*, the researchers found that *M. tuberculosis* can utilize cholesterol for growth without making cholestenone. Thus, the accumulation of cholestenone in clinical samples suggests it has an alternative role in pathogenesis and could be a clinically useful biomarker of TB infection. To learn more, you can read the full article here: <https://www.jci.org/articles/view/152509>

3. Confronting and Coping with Multidrug-Resistant Tuberculosis: Life Experiences in Thailand

A qualitative study using a face-to-face in-depth interview was conducted at a hospital in Thailand which has the highest prevalence of MDR-TB in the country between January and February 2019. The results indicated that all participants faced emotional difficulties, such as fear of death, fear of stigmatization, confusion, and sadness when first knowing of their diagnosis. Family and social support were the main ways that the patients coped with difficult situations. Suicidal ideas were more prevalent among patients with poor family support. The study suggests that screening for mental health problems should be routinely performed in MDR-TB patients. Furthermore, proper health education should be provided to patients and families to reduce emotional difficulties and stigmatization. To learn more, you can access the full article here:

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8739603/pdf/10.1177_10497323211049777.pdf

DID YOU KNOW?

This month, we would like to continue to highlight some surprising shifts in social behavior and changes in public health policy that came out of the TB epidemic in the US in the early 1900s:

- **No More Beards:** Most men at the turn of the century in America featured stylish beards or mustaches, but showing off a smooth face became a new trend once public health officials maintained that men could transmit dangerous infectious particles, such as TB Bacteria, through the scruff of their facial hair. Therefore, a more clean-shaven look became a symbol of the new middle-class man during that time.
- **No More Spitting:** Up until the late 19th century, spitting in public was considered acceptable social behavior in America, whether it was merely spitting saliva or discarding one's chewing tobacco. With the increased knowledge into the contagious nature of tuberculosis and other diseases at the turn of the century, many communities banned spitting in shops, theaters, and taverns and required public gathering places to provide spittoons.
- **City Parks and Outdoor Recreation:** Around the 1920s, public health reformers argued that the health of the nation should not be dependent on sanatoria or hospitals, but should instead rely on recreation in the readily available outdoors. In an effort to encourage more active lifestyles, and thus help to stave off diseases like tuberculosis, cities launched initiatives to beautify parks with trees and lively vegetation and to build public recreation areas in order to create more pleasant environments.

Source:

<https://www.pbs.org/wgbh/americanexperience/features/p-lague-know/>