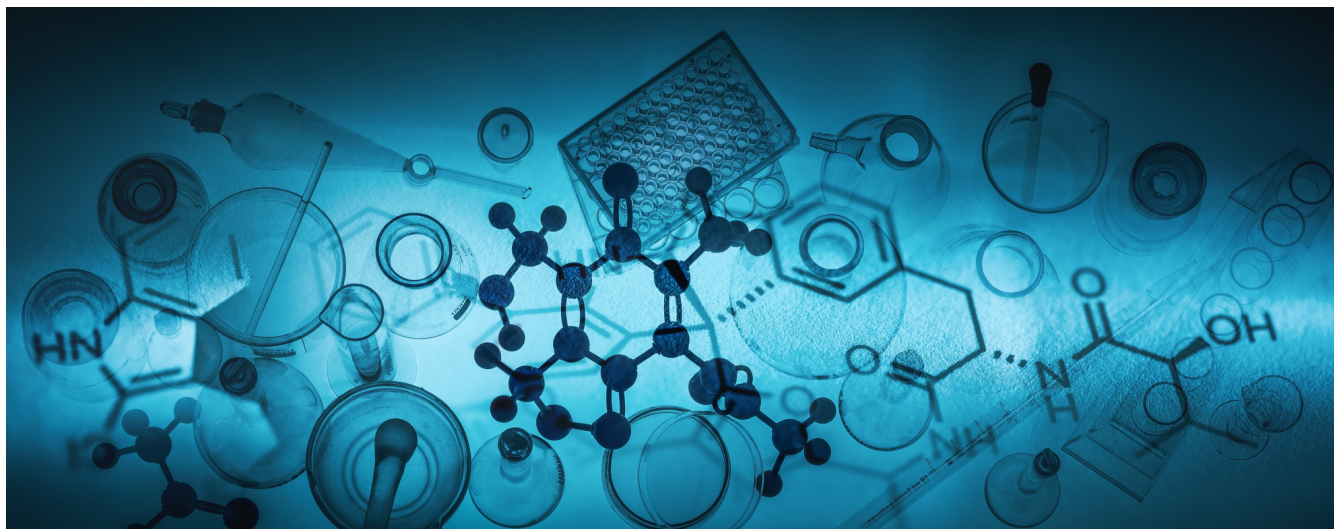


THE MONTHLY DOSE

Official Newsletter of The Mueller Health Foundation



WHAT'S NEW AT THE MUELLER HEALTH FOUNDATION:

We at the Mueller Health Foundation are continuing to prepare for the upcoming events in September surrounding the UN High Level Meeting on Tuberculosis on September 22nd at the United Nations Headquarters in New York.

We truly hope that countries will adopt the revised resolution towards eradicating tuberculosis around the globe. It is only through the commitment of funds and through coordinated efforts that tuberculosis can be managed and defeated.

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. The Center for Disease Control and Prevention (CDC) has put together a wonderful collection of stories and this month we would like to highlight Sarah's story:

When Sarah, a high school student, found an odd lump on her neck in October 2011, she never imagined it could be tuberculosis. She went to see her pediatrician, who referred her to a surgeon. The surgeon removed the lump, but did not diagnosis it at the time as TB. Then in September 2012, Sarah noticed that something was blocking the vision in her left eye; frighteningly, the sight in that eye was affected and getting worse. She returned to see the pediatrician she had seen before. This time, he referred her to an ophthalmologist, who then referred her to a retinal specialist. The retinal specialist talked with Sarah, learned about her history of having a lump on her neck, and found the positive lab results for TB that had never been reviewed or reported by her other doctors or the laboratory. The ophthalmologist made the diagnosis of TB of the eye, also known as ocular TB. Because the TB disease was not diagnosed and went untreated, it spread to her eye, causing her retina to gradually detach. Within three weeks of the diagnosis, Sarah underwent successful surgery to have the retina re-attached. Sarah's TB specimen was never tested by the laboratory to find out if the bacteria making her sick were resistant or susceptible to standard TB drugs. As a result, she was placed on more drugs than are normally prescribed to ensure that her TB was treated successfully. Sarah's treatment, lasting until September 2013, consisted of taking seven and a half pills each day. In addition to the treatment that Sarah received, her parents, siblings, and other relatives were evaluated for TB. No one else in her family was found to have TB disease, but her dad was diagnosed with latent TB infection and placed on treatment. Sarah wanted to share her story so that other people facing TB, especially young people, will know they are not alone. To read her full story please follow the link to the Center for Disease Control and Prevention's website here: <https://www.cdc.gov/tb/topic/basics/sarahstory.htm>

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

MHF TOP PICKS FOR AUGUST

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 August:

1. Innovative Deal Could Give Millions Access to Cheaper Tuberculosis Drugs

The patent on the tuberculosis drug bedaquiline expired on July 18. But while its manufacturer, Johnson & Johnson, intends to use secondary patents to extend its exclusive right to sell the drug, an innovative deal was reached to lower its price and expand access to millions around the globe. The never-before-seen deal between Johnson & Johnson and Global Drug Facility, a non-profit organization, would dramatically expand access to bedaquiline. The agreement, which was finalized in June but announced on July 13 after a social media campaign spearheaded by author John Green, will allow for the sale and manufacture of generic bedaquiline in most lower and middle income countries. To learn more, you can access the full article at: <https://time.com/6295511/how-an-innovative-deal-will-give-millions-access-to-cheaper-tuberculosis-drugs/>

2. Indonesia Plans to Revive Sanatoriums to Treat Tuberculosis

President Joko 'Jokowi' Widodo recently instructed the Health Ministry of Indonesia to reestablish sanatoriums as part of the government's strategy to curb increasing TB cases in the country. The ministry recorded 354 cases of TB and 34 deaths from the disease per 100,000 population. The Indonesian government aims to reduce the number to 65 cases and six deaths per 100,000 population by 2030. Indonesia is the second-highest contributor to global TB cases in the world after India, according to the 2022 Global TB Report issued by the World Health Organization (WHO). Sanatoriums would limit the risk of disease transmission to healthy family members, while health workers could monitor the patients to make sure they stayed on their medication, said Health Minister Budi Gunadi Sadikin. The ministry was still formulating details on the sanatorium program, including the length of the quarantine and whether the program would be made mandatory for people with TB. Patients treated in a facility would also receive healthy and nutritious meals to support their recovery process. To learn more, you can read the article here: <https://www.thestar.com.my/aseanplus/aseanplus-news/2023/08/03/indonesia-plans-to-revive-sanatoriums-to-treat-tuberculosis>

3. Global Treatment Outcomes of Extensively Drug-resistant Tuberculosis in Adults: A Systematic Review and Meta-analysis

In this study, researchers extensively searched multiple databases, PubMed, Web of Science, Embase, etc., from 2005 until April 2023 to find studies that had cohorts of at least ten adults and reported WHO treatment outcomes of extensively drug-resistant tuberculosis patients based on the 2006 and 2021 WHO definition. Overall, they found 94 studies from 26 nations with a total sample size of 10,223 patients who suffered from extensively drug-resistant Tuberculosis. The results of the analysis showed that globally, only 44% of extensively drug-resistant tuberculosis-infected individuals achieved successful treatment outcomes, much less than the WHO's goal of 75% treatment success. For patients with stratified data, this figure further fell to 27%, which makes the current situation comparable to the pre-antibiotic era. The researchers concluded that implementing shorter, more tolerable, and effective treatment regimens with or without moxifloxacin could improve treatment outcomes by up to 90%. You can learn more and access the full paper here: [https://www.journalofinfection.com/article/S0163-4453\(23\)00337-](https://www.journalofinfection.com/article/S0163-4453(23)00337-)

DID YOU KNOW?

Tuberculosis not only affects humans, but the animal world as well. Recently, there have been increased reports of TB outbreaks among captive elephants within the United States. Below is a summary of key facts related to tuberculosis in elephants:

- Since 1996, about 60 elephants have been diagnosed with TB in a population of nearly 1,300 individuals in zoo facilities within the United States.
- In North America, approximately 5% of captive Asian elephants are infected with M. tuberculosis, on the basis of positive cultures of trunk washing samples or necropsy results. Asian elephants have a higher incidence rate than African elephants.
- Testing for TB in elephants is an expensive and unreliable process costing approximately \$500 USD per trunk wash. The disease can lie dormant for years before an elephant tests positive, and elephants that have TB often do not show signs of the disease.
- Elephants are social animals that live in close contact with others in herds, making transmission likely within a herd. Medical quarantine is possible for infected elephants but not healthy for long periods of time for these naturally social creatures.
- Within the US, elephants are transferred often from one facility to another, bringing them into contact with many other elephants and humans, allowing for transmission across large populations.
- Routine TB screening among elephants and caretakers by setting up an occupational health program for early diagnosis of infection through combined efforts of public health, veterinary medicine, and occupational health experts is suggested.



Information Source:
https://www.sas.com/en_us/insights/articles/analytics/nerd-in-the-herd.html
<https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6452a2.htm#:~:text=In%20North%20America%2C%20approximately%205.and%20humans%20has%20been%20documented,https://bmcbvetres.biomedcentral.com/articles/10.1186/s12917-022-03356-8>