



# media release

## World Tuberculosis Day, 24 March 2024

### Prof Novel Chegou is leading TB diagnostics research for early detection in South Africa

**World Tuberculosis Day, 24 March:** Tuberculosis (TB) is an infectious but curable disease that is caused by a form of bacteria that attacks and damages the lungs. It can be easily passed to others through coughing or sneezing. Symptoms may include coughing, chest pain, fatigue, weight loss, and night sweats.

World TB Day, which is observed on 24 March every year, is designed to raise public awareness about the devastating health, social and economic consequences of the epidemic of TB and urge global efforts of eliminating the disease. The date marks the day in 1882 when Dr Robert Koch announced that he had discovered the bacterium that causes tuberculosis, *Mycobacterium tuberculosis* (MTB). At the time of Koch's announcement in Berlin, TB was raging through Europe and the Americas, causing the death of one out of every seven people. Koch's discovery paved the way towards diagnosing and treating this disease. TB should have been eradicated long ago, given the knowledge that we have of the bacterium.

The South African theme for the commemoration of World TB Day 2024 is "Yes! You and I Can End TB", to encourage individual action to contribute to the national effort against TB. This theme emphasises the importance of people being accountable as individuals, taking charge of their own health as reflected in government's [National Wellness Campaign: Cheka Impilo](#) objectives. The Cheka Impilo campaign targets included finding and putting at least 80 000 more people with TB and drug-resistant TB on treatment in 2019.

The esteemed recipient of the 2023 TW Kambule-NSTF Researcher Award of the NSTF-South32 Awards, [Prof Novel Chegou](#) has been conducting research on new tests that can assist in the rapid diagnosis of TB, especially in rural areas, as obtained in most African countries. Prof Chegou developed tests that measure multiple proteins in finger-prick blood and cerebrospinal fluid at once. He is a Professor in the Division of Molecular Biology and Human Genetics, Department (Dept) of Biomedical Sciences, Faculty of Medicine and Health Sciences, at Stellenbosch University (SU).

Despite significant progress over the last decades, TB continues to be the top infectious killer worldwide, claiming over 1,5 million victims per year. The World TB Day is one of the eight official campaigns for global public health marked by the WHO (World Health Organization). South Africa (SA) has committed to reduce new TB cases by 80% by 2030, in accordance with Target 3.3 of the Sustainable Development Goals (SDGs), to end TB as an epidemic by 2030. In 2022, 280 000 people in SA fell ill with TB according to the new WHO data, down from 552 000 TB cases in 2015.

**Advancing TB detection:** Targeted Universal Testing for TB (TUTT) is an example of new targeted testing approaches, where patients visiting clinics around the country are offered tests whether or not they are showing any symptoms of TB. The findings of the first large study to test the TUTT approach in SA were presented at the Conference on Retroviruses and Opportunistic Infections last year, one of the top international conferences for HIV, TB and now also COVID-19 science. Conducted in over 60 large clinics in KwaZulu-Natal, Gauteng and the Western Cape, the strategy was found to result in a 17% increase in TB diagnosis in clinics compared to the existing approach. Rough estimations suggested that if TB diagnosis in SA overall were to be improved by 17%, there would be around 40 000 additional cases detected every year. This randomised testing and early detection will help prevent the ongoing spread of this disease in communities because relying on symptom screening misses countless TB cases.

**TW Kambule-NSTF Researcher Award winner:** The NSTF celebrates Prof Novel Chegou, who won the prestigious 2023 TW Kambule-NSTF Researcher Award at the NSTF-South32 Awards, known as the 'Science Oscars of SA'.



This award is sponsored with prize money by [proSET \(Professionals in science, engineering and technology\)](#), a sector of the NSTF representing about 50 professional and learned societies.

He received the prestigious award for his work which has focused mainly on the immunology of tuberculosis and the development of new tools for its management and conducting research on new tests that can assist in the rapid diagnosis of TB. Prof Chegou boasts over 90 health science papers published, but he continues fighting to improve TB diagnostics for little children who may be battling TB related illnesses. He recalls one particular hospital visit: "The way those children were sitting, with tubes inserted all over their bodies, it's disheartening." These children had meningitis related to TB. TB diagnosis can take up to two weeks, time that could have been used for rapid response treatment. Prof Chegou's research is focused on developing rapid testing applications, with his prick test having been through trials in many places in Africa and Asia. His work with some of his postgraduate students has received international recognition. He concludes: "The interest shown by the Foundation for Innovative New Diagnostics (FIND) and other major companies so far, attests to the potential impact that these tests will have in the management of TB disease globally".

**About the NSTF (National Science and Technology Forum):** NSTF is an independent non-profit stakeholder body and network – a civil-society forum of over 130 organisations involved in science, engineering, technology (SET) and innovation in SA.

**Join the NSTF's conversations on social media:**

- Facebook: [@NSTFSA](#)
- X: [@NSTF\\_SA](#)
- Instagram: [@nstf\\_sa](#)
- LinkedIn: [National Science and Technology Forum \(NSTF\)](#)
- YouTube: [National Science and Technology Forum \(NSTF\)](#)
- TikTok: [nstf\\_sa](#)

**References/Sources:**

- [New TB testing strategy ups diagnosis in clinics by 17% \(spotlightnsp.co.za\)](#)
- [In-depth: What new WHO TB numbers mean for SA \(spotlightnsp.co.za\)](#)
- [World TB Day 2024 \(stoptb.org\)](#)
- [24 March is World TB Day \(sahpra.org.za\)](#)
- [Goal 3 | Department of Economic and Social Affairs \(un.org\): "By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases"](#)

**About the NSTF**

The National Science and Technology Forum (NSTF), established in 1995:

- is a broadly-representative stakeholder body for all science, engineering and technology (SET) and innovation organisations in South Africa
- gathers stakeholders around burning issues of national and global interest, across the public and private sectors, including matters of public policy
- includes a network of professional societies in SET and STEM education (STEM = science, technology, engineering and mathematics) - the NSTF proSET membership sector.
- recognises, awards and profiles the outstanding contributions of individuals and groups to SET and innovation through the prestigious NSTF Awards
- runs and supports collaborative projects and youth outreach, including recognition of top performance in mathematics and science, role modelling, bursary and STEM career information
- runs and supports the STEMulator.org which attracts youth and educators to Explore>Discover>Learn the world of STEM including careers. (Established by NSTF proSET)

**For more information**  
[www.nstf.org.za](http://www.nstf.org.za)  
 E-mail: [enquiries@nstf.org.za](mailto:enquiries@nstf.org.za)

**Disclaimer**  
 The NSTF has taken all practical measures to ensure that the material contained in this newsletter is correct.

**Privacy**  
 Registration details submitted to the NSTF will be treated confidentially and will only be used by NSTF to communicate with its members and subscribers, as required by the South African Protection of Personal Information Act.

Non Profit Company Registration Number: 2007/029165/08  
 NPO Registration Number: 92042  
 Donations Tax exempt