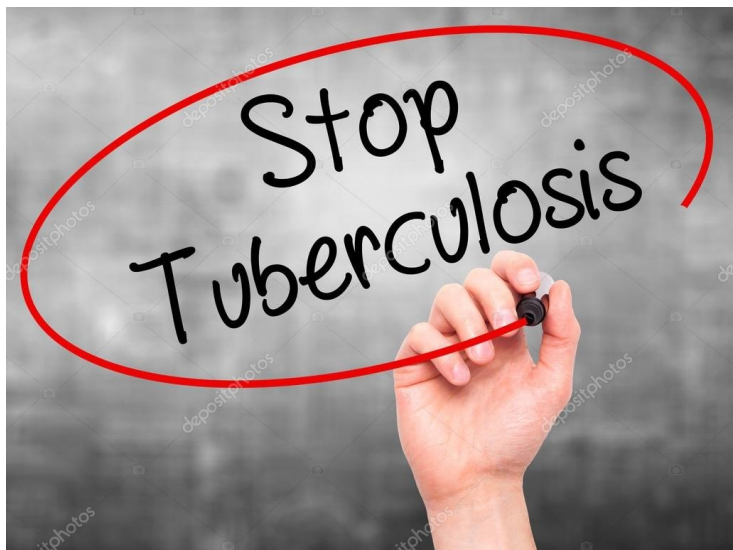


Global BioLife to Present 3F Antimicrobial Fragrance at 2020 ASM Biothreats

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A New Method to Prevent and Treat Tuberculosis



Global BioLife Inc, the U.S. subsidiary of Singapore eDevelopment Ltd (SeD), will present its 3F Antimicrobial Fragrance as a new method to prevent and treat Tuberculosis at the ASM Biothreats Conference, 28 to 30 January, 2020 in Arlington, Virginia. ASM Biothreats is a one-of-a-kind program that explores emerging industry technologies and offers biodefense, biosecurity and biological threats professionals the opportunity to exchange knowledge and ideas that will shape the future of this emerging field.

Tuberculosis (TB) is a disease caused by *Mycobacterium tuberculosis* (Mtb) bacteria. TB primarily affects the lungs, is transmitted through the open air when an infected person sneezes, coughs, talks, or laughs. Symptoms of TB include a low-grade fever, night sweats, weakness or tiredness, and weight loss. TB kills someone approximately every 18 seconds, causing over 1.6 million deaths in 2017 alone. According to the WHO, one-quarter of the world's population has latent TB, which means people have been infected by TB bacteria, making it the top infectious killer in the world.

In 2017, Global BioLife and US-based Chemia Corporation, a provider of high quality, cost effective fragrances for personal care, household and industrial products, began collaboration to develop a suite of fragrances labeled 'Functional Fragrance Formulation' or 3F, which could go towards fighting disease rather than simply smelling pleasant. "The impact of functional fragrances will transform the modern perfume industry," said Mr. Thomas A. Meyer, Chemia's Vice-President of Innovation and Sustainability.

The 3F Antimicrobial Fragrance was shown to inhibit *Mycobacterium tuberculosis* (Mtb), the causative bacterial agent of tuberculosis, in experiments performed by ATCC in its High Containment Laboratory under BioSafety Level 3 conditions. ATCC designs custom services for testing the world's most dangerous viruses

and bacteria, and has expertise in handling and experimenting on dangerous pathogens such as Mtb.

Mr. Daryl Thompson, Global BioLife's Director of Scientific Initiatives, and a Nobel Prize nominee in 2015 and 2016 for his research on pandemic technology, leads research on the 3F project. "3F works by taking advantage and exploiting the sophisticated bacterial or viral communication system called quorum sensing. In essence, we can utilise quorum sensing to instruct the bacterial or viral agent to shut down or stop replication.

"The 3F project was designed to provide a solution for open environment defense strategies, to prevent or suppress the transmission of aerosoled viral and bacterial particles that cause the spread of influenza, MRSA and tuberculosis in congested areas. The process has been demonstrated to be very effective," says Thompson. "3F is a new paradigm, designed to provide solutions for emerging epidemics and pandemics globally using cutting edge methods."

"As a leading developer of authenticated cells lines and microorganisms, ATCC was honored to provide Global BioLife with custom susceptibility testing to determine if their product was able to kill MTB," said Dr. Manzour Hazbon, ATCC Senior Scientist. "This fragrance is effective even in low concentrations, and an excellent candidate to treat tuberculosis, particularly important as there are few antibiotics effective in treating antibiotic-resistant tuberculosis cases."

Dr. Roscoe M. Moore Jr, former Senior Assistant U.S. Surgeon General and Epidemic Intelligence Officer at U.S. Center for Disease Control and Prevention, serves as Senior Scientific Adviser to Global BioLife. "I'm excited about the results 3F has demonstrated, and 3F's potential to address a global epidemic by providing safe and versatile protection layers. There is a strong need for new and effective measures to address the spread of TB globally. Global BioLife's solution will help save lives on a global scale."

"It is an honor to be invited to present our groundbreaking research at the 2020 ASM Biothreat Conference," said the Executive Chairman of SeD, Mr Chan Heng Fai. "We are excited about this potential breakthrough in the 3F Series. Global BioLife will step up in its efforts to provide real solutions for global healthcare problems."