

NEWS RELEASE

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NTU Singapore launches new lab to bolster national fight against COVID-19 and future pandemics

Lab will also advance NTU's infectious diseases research programme

To bolster Singapore's efforts to fight COVID-19 and prepare for the next big biological threat, the **Lee Kong Chian School of Medicine (LKCMedicine)** at **Nanyang Technological University, Singapore (NTU Singapore)** today launched a new laboratory designed for research into pandemic viruses and deadly bacterial infections.

The new **Biosafety Level 3 laboratory (BSL-3)** hosted at the Experimental Medicine Building on NTU Singapore's Yunnan Campus will allow the safe handling of bacteria and viruses that are serious or lethal, such as those that cause COVID-19, tuberculosis, and Avian flu.

Biosafety Level 3 laboratories (BSL-3), like the one at NTU LKCMedicine, are gazetted as a protected place under the Ministry of Home Affairs and are regulated by the Ministry of Health (MOH), in accordance with the Biological Agents and Toxins Act (BATA) 2005.

At this facility, researchers will be able to safely process samples from infected patients to study the impact of the disease on the immune system, test for the pathogen's transmissibility, and develop vaccines and diagnostic tools – activities that can only be done in a highly contained environment due to the pathogen's infectious nature.

The BSL-3 was launched today by **Associate Professor Kenneth Mak, the Director of Medical Services at MOH**. It comes amid scientists' warning that the world could in the future be hit by a more severe 'Disease X' – a new, unknown disease that is highly infectious, deadly, and mutates easily.

The facility will allow NTU LKCMedicine researchers to work closely with clinician-scientists at the National Healthcare Group and the National Centre for Infectious Diseases to respond more quickly and effectively in the fight against deadly pathogens and in the event of an infectious disease outbreak. It will be an important partner with

a role to play in **Singapore's Programme for Research in Epidemic Preparedness and Response (PREPARE)**, which pulls together pandemic research experts from various fields to respond to future infectious disease outbreaks.

Professor Wang Linfa, Executive Director, PREPARE said: "There are many lessons we learnt from the national response to COVID-19. One of them is the importance of biocontainment facilities for research purposes and the national co-ordination of their operations. PREPARE is very keen to work with the new NTU LKCMedicine BSL-3 facility in the context of establishing a more efficient national BSL-3 network both during peace time and in response to future outbreaks."

Professor Joseph Sung, Dean of NTU LKCMedicine and NTU Senior Vice President (Health and Life Sciences) said: "Over the past two years of the pandemic, NTU and other institutions here have stepped up and played a role in managing the virus. As we emerge from the pandemic, it is important to remember the lessons we have learnt and prepare for the next disease that will hit us. NTU LKCMedicine is proud to continue contributing to Singapore's efforts to fight COVID-19 and future biological threats by providing a safe facility to quickly identify high-risk pathogens as early as possible and develop reliable diagnostics, stemming disease transmission early."

The facility will also allow the NTU research community to advance its infectious diseases research into other lethal bacteria and viruses.

Professor Lim Kah Leong, Vice-Dean (Research) at NTU LKCMedicine, said: "The opening of the BSL-3 facility at NTU provides a 'timely booster' to advance greater research collaboration on infectious diseases at LKCMedicine, with the ultimate goal to develop innovative diagnostic tools, vaccines, and therapeutics not only for COVID, but also other deadly diseases such as tuberculosis and melioidosis."

The BSL-3 facility at NTU will be helmed by **NTU LKCMedicine's Professor of Infectious Disease Laurent Rénia**. As the Facility Operator, he will oversee the management of the facility and make sure that all health, safety, and environmental regulations are in place.

He is assisted by a BSL-3 Biosafety Committee (BSC) chaired by **NTU LKCMedicine's Associate Professor of Infectious Disease Kevin Pethe**. The Committee will review all scientific projects using the BSL3 Lab to make sure they are in line with health, safety and environmental regulations.

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About Nanyang Technological University, Singapore

A research-intensive public university, Nanyang Technological University, Singapore (NTU Singapore) has 33,000 undergraduate and postgraduate students in the Engineering, Business, Science, Medicine, Humanities, Arts, & Social Sciences, and Graduate colleges.

NTU is also home to world-renowned autonomous institutes – the National Institute of Education, S Rajaratnam School of International Studies, Earth Observatory of Singapore, and Singapore Centre for Environmental Life Sciences Engineering – and various leading research centres such as the Nanyang Environment & Water Research Institute (NEWRI) and Energy Research Institute @ NTU (ERI@N).

Under the NTU Smart Campus vision, the University harnesses the power of digital technology and tech-enabled solutions to support better learning and living experiences, the discovery of new knowledge, and the sustainability of resources.

Ranked amongst the world's top universities, the University's main campus is also frequently listed among the world's most beautiful. Known for its sustainability, over 95% of its building projects are certified Green Mark Platinum. Apart from its main campus, NTU also has a medical campus in Novena, Singapore's healthcare district.

For more information, visit www.ntu.edu.sg