

Hilleman Laboratories Officially Opens US\$20 Million Facility in Singapore to Bolster Resilience in Vaccine Manufacturing

This is the only multi-modality vaccine and biologics development and manufacturing organisation in Singapore capable of end-to-end product development

Singapore, November 9, 2023 – Hilleman Laboratories, an organisation with a mission to develop affordable vaccines and biologics against infectious diseases with unmet medical need, officially opened its US\$20 million (SGD\$27 million) ACES current Good Manufacturing Practices (cGMP) facility in Singapore today. The opening ceremony was graced by Mr. Ong Ye Kung, Singapore's Minister for Health, and attended by Jacqueline Poh, Managing Director, Economic Development Board, Mr. Sanat Chattopadhyay, Chairman of Hilleman Board of Directors, members of MSD and the Wellcome Trust, UK.

The 30,000-square-foot manufacturing facility at Depot Road, which broke ground in February 2022, is now fully operational and can produce affordable, high-value vaccines and biologics that comply with local and international regulations. The facility will primarily focus on supplying clinical trial materials for development of up to the Phase II stage and has the built-in capability to pivot to producing vaccines and biologics for Singapore's use during future pandemics and public health emergencies.

The ACES cGMP facility is designed to achieve <u>a</u>gile manufacturing, through a highly <u>c</u>ompact and configurable design, with <u>e</u>nd-to-end production capabilities. Portable, skid-mounted, <u>s</u>ingle-use systems allow the facility's manufacturing model to remain platform-agnostic and product-independent, thus enabling production to remain agile and easily adaptable for future or emergency needs without significant disruption to ongoing operations. Additionally, the facility is also capable of parallel production in controlled isolated suites and is supported by in-process testing to rapidly generate test results to facilitate GMP decision-making.

"The opening of the ACES facility marks a significant milestone in our commitment to advancing global public health through innovation and research. To date, we remain the only vaccine R&D and manufacturing organisation in Singapore capable of developing both drug substance and drug product (to fill and finish). We believe that Hilleman Laboratories is well-poised to share our expertise in vaccine and biologics manufacturing to foster local capabilities while bolstering Singapore's resilience against disease outbreaks, especially those with a pandemic possibility," said Dr. Raman Rao, CEO of Hilleman Laboratories.

Through the ACES facility, Hilleman Laboratories can supply scale-up batches and clinical trial materials to local and global research and development (R&D) partners to facilitate early phase clinical development of new and cost-effective vaccines and biologics. Hilleman Laboratories is also facilitating technology transfers to larger manufacturers in low- and middle-income countries (LMICs) to improve access to vaccines for populations in the region.

"Singapore has been deepening our vaccine manufacturing capabilities to enhance our pandemic resilience and improve regional vaccine access. Hilleman Laboratories' new GMP facility will build on its existing R&D presence in Singapore, to bring advanced vaccines and biologics development and manufacturing expertise to our ecosystem, and drive training and collaboration opportunities with our local institutions," said Ms Jacqueline Poh, Managing Director of the Singapore Economic Development Board.

Hilleman Laboratories has invested extensively in vaccine platforms such as mRNA and viral vectors to develop and manufacture vaccines that can help prevent outbreaks in Singapore and globally. Locally, Hilleman Laboratories is collaborating with the Agency for Science, Technology and Research (A*STAR) to test if a novel circular ribonucleic acid (circRNA) technology could be used to develop a biologically stable



and thermostable RNA vaccine against pathogens with outbreak potential. Hilleman Laboratories also uses a live viral vector platform to develop thermostable vaccines for viruses such as Ebola that are prevalent in LMICs. Through the use of these vaccine platforms, Hilleman Laboratories aims to support the development of affordable, high-value vaccines that meet global public health needs.

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About Hilleman Laboratories

Hilleman Laboratories was established in 2009 as a joint venture between Merck Sharp & Dohme LLC (MSD), a global research-driven pharmaceutical company, and Wellcome Trust, a global charitable foundation dedicated to human and animal health. Hilleman Laboratories' mission is to develop affordable vaccines and biologics against infectious diseases that affect low- and middle-income countries.

The company's expertise in end-to-end product development is targeted at creating novel vaccines and biologics in areas of high unmet need as well as adapting existing vaccines and biologics with more effective delivery tools to meet challenging environments in developing countries. Hilleman Laboratories also seeks to collaborate with local, regional, and global partners and stakeholders, including policymakers and governments, to facilitate wider, affordable access to life-saving vaccines and biologics.

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