BD, Bio Farma Collaborate to Help Eliminate Tuberculosis in Indonesia by 2030

Supply and Distribution Agreement Includes BD MAX™ Systems and Tuberculosis Diagnostic Tests

WASHINGTON, D.C., USA, Nov. 20, 2023 – BD (Becton Dickinson and Company), a leading global medical technology company, and Bio Farma, a state-owned life science company in Indonesia, signed a memorandum of understanding (MOU) for a joint effort to combat tuberculosis (TB) by providing access to BD's innovative TB diagnostics portfolio and establishing a partnership to optimize the supply chain for TB solutions in Indonesia.

The MOU exemplifies a strong commitment to public health and innovation, and was signed by officials from Bio Farma, BD and witnessed by the Indonesian Minister of Health, Deputy Chief of Mission (Minister), Embassy of the Republic of Indonesia, and other company officials.

With over one million annual TB cases, Indonesia has the second highest TB disease burden in the world. Before the global COVID-19 pandemic, TB was the country's leading cause of death from a single infectious agent. TB that is resistant to one or both of the first line drugs typically used in treatment, rifampicin (RIF) and isoniazid (INH), remains a critical hurdle in the fight to eradicate the disease, as patients with drug-resistant TB require different medications. If not identified early and treated appropriately, treatment may not succeed, resulting in a risk of disease progression, transmission, and acquisition of resistance to additional drugs. With timely detection and treatment, however, TB is curable.

"This collaboration is a testament to our dedication to assisting Indonesia in improving TB diagnosis, particularly multidrug-resistant TB and mono-resistant TB," said Nikos Pavlidis, acting president, BD Diagnostic Solutions. "I am encouraged by our collective efforts that are aligned with Indonesia's national goal of TB elimination by year 2030."

The BD MAX™ MDR-TB assay enables laboratorians and clinicians to simultaneously detect bacteria that cause tuberculosis and determine if the bacteria is multidrug-resistant or mono-resistant, enhancing the information available to direct the optimal treatment for their patients.

"Bio Farma's collaboration with BD adds an opportunity and an important step for Bio Farma to deepen its experience, knowledge and expertise in the field of diagnostic kits development and is part of our commitment to improving access to TB-related services, from detection to vaccination," said Shadiq Akasya, president director of Bio Farma. "This collaboration helps us expand the diagnostic kits products portfolio, and we hope we can help Indonesia significantly reduce TB cases and eliminate TB by the end of this decade."

The BD MAX™ System is a molecular diagnostic platform already in use at thousands of laboratories worldwide. The system is fully automated, reducing the opportunity for human error and increasing the speed to result, and can process 24 samples simultaneously, and up to several hundred samples per 24-hour period. Each unit is capable of performing assays for respiratory infections, enteric pathogens, hospital acquired infections, and sexually transmitted infections. The BD MAX™ MDR-TB assay is included in the World Health Organization (WHO) 2021 guideline update on rapid diagnostics for tuberculosis detection.

About BD
BD is one of the largest global medical technology companies in the world and is advancing the world of health by improving medical discovery, diagnostics and the delivery of care. The company supports the heroes on the frontlines of health care by developing innovative technology, services and solutions that help advance both clinical therapy for patients and clinical process for health care providers. BD and its more than 70,000 employees have a passion and commitment to help enhance the safety and efficiency of clinicians' care delivery process, enable laboratory scientists to accurately detect disease and advance researchers' capabilities to develop the next generation of diagnostics and therapeutics. BD has a presence in virtually every country and partners with organizations around the world to address some of the most challenging global health issues. By working in close collaboration with customers, BD can help enhance outcomes, lower costs, increase efficiencies, improve safety and expand access to health care. For more information on BD, please visit bd.com or connect with us on LinkedIn at www.linkedin.com/company/bd1/ and Twitter @BDandCo.

About Bio Farma
PT Bio Farma (Persero) referred to as "Bio Farma" is an Indonesia state-owned vaccine and antisera manufacturer for humans in Indonesia. Celebrating its 133th anniversary, Bio Farma has through the years grown into a life science company of international recognition, producing and distributing more than 3.2 billion doses of vaccines per year. Bio Farma is by far the

largest vaccine manufacturer in Southeast Asia. The company supplies not only the needs for Expanded Program on Immunization (EPI) in Indonesia but also the global market to more than 150 countries. Bio Farma's ability to enter the global market is due to numerous of its vaccines attaining pre-qualification (PQ) from World Health Organization (WHO). The Bill & Melinda Gates Foundation and PATH have collaborated with Bio Farma to produce novel Oral Polio Vaccine type 2 (nOPV2) in support of Global Polio Eradication Initiative (GPEI);it was the first vaccine granted the EUL designation from WHO in 2020. In addition to vaccine products, Bio Farma's portfolio also includes diagnostic kits, and currently has developed and market 4 types of diagnostic kit products.

Bio Farma plays an important role in establishing a healthy nation in which its existence would be maintained for generations to come. With its philosophy of "Dedicated to improving Quality of Life" Bio Farma stands firm in devoting its efforts to Global Health Security.

In early 2020, a state-owned pharmaceutical holding company was established with Bio Farma as its parent company. The establishment of this holding company is aimed to strengthen self-reliance of the national pharmaceutical industry, and also to increase the availability of products supporting the pharmaceutical ecosystem. For more information refer to: www.biofarma.co.id

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