BioSpectrum
the business of Bio & Health Sciences
ASIA EDITION

Singapore launches next phase of National Precision Medicine Programme

April 8, 2021 | News | By Hithaishi C Bhaskar

A new national body established to further research insights, improve patient outcomes and create new economic opportunities for the biomedical technology industry



Precision medicine is part of Singapore's Research, Innovation, and Enterprise (RIE) 2025 strategic goal to transform healthcare in Singapore. Singapore's Ministry of Health has identified precision medicine as an essential solution to understand how genomic, phenotypic, lifestyle and clinical factors contribute to health.

To achieve this Ministry has set up Precision Health Research, Singapore (PRECISE), as the central entity to drive National Precision Medicine (NPM) strategy and to address Singapore's healthcare challenges in a sustainable and clinically cost-effective manner.

Singapore's NPM strategy is a 10-year plan to enhance and accelerate Singapore's biomedical research, health outcomes, and economic growth. NPM is a whole-of-government effort to establish the necessary frameworks and infrastructure to realize precision medicine on a national scale, to ultimately improve public health, enhance disease prevention, and identify the right treatments for the right individuals and groups.

Phase II of Singapore's NPM strategy will start in April 2021 with a four-year horizon and it aims to:

1. Further research insights into the Asian phenotype by analyzing the genetic makeup of 100,000 healthy Singaporeans and up to 50,000 patients with specific diseases
2. Improve patient outcomes by piloting the implementation of precision medicine in clinical practice
3. Create new economic opportunities for Singapore's healthcare and biomedical technology industry by attracting and anchoring overseas companies while yielding new opportunities for home-grown enterprises.

Furthering research insights into Asian Genomes

The NPM Strategy was launched in 2017, supported under Singapore's RIE 2020 plan. NPM Phase I culminated in the world's largest genetic databank for multi-ethnic Asian populations. Completed in October 2019, the NPM Phase I databank comprises the complete genetic data of 10,000 healthy Singaporeans, serving as a reference for Asian genetic normality and underpinning the subsequent development of precision medicine for Singaporeans and patients across Asia.

In NPM Phase II, PRECISE will collaborate with research and clinical partners from the Singapore ecosystem, including the A*STAR, Lee Kong Chian School of Medicine, National Healthcare Group, NUH System, National University of Singapore, and SingHealth Duke-NUS Academic Medical Centre to study the genetic makeup of 100,000 healthy Singaporeans and up to 50,000 people with specific diseases. The genetic data will be integrated with detailed lifestyle, environmental, and clinical data to yield rich insights into factors that contribute to Asian diseases and conditions.