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Temasek Life Sciences Laboratory launches regional One Health initiative to strengthen early warning against infectious disease threats

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APOHI will connect human, wildlife and environmental health surveillance across the region, beginning with a programme on zoonotic malaria in Borneo



The Asia Pacific One Health Initiative (APOHI) has been launched in Singapore to strengthen regional preparedness against emerging infectious disease threats. The initiative brings together regional partners, experts and institutions across human, wildlife and environmental health to build a more integrated approach to detecting early signals of emerging infectious disease threats.

Led by and hosted at Temasek Life Sciences Laboratory (TLL), APOHI's three co-leads are Professor Leo Yee Sin, Senior Advisor and Senior Consultant (APOHI), TLL; Dr Ian Cheong, Senior Principal Investigator and Senior Consultant (APOHI), TLL; and Dr Lee Fook Kay, Head, Health Collaborative, Temasek Trust. Together, they will drive the initiative's scientific direction, regional partnerships and resource mobilisation to support its long-term development. The initiative is supported by Temasek Foundation, Gates Foundation and the Health for Human Potential Community by the Philanthropy Asia Alliance.

"We are honoured to host APOHI and contribute our life sciences expertise to this important regional effort. TLL's mission is to harness the power of the life sciences to improve lives, and the health of people, animals and the environment underpins the food security, wellbeing and sustainability we work towards. Emerging infectious diseases are a shared challenge that no single institution or country can address alone. We are grateful for the support of our partners and look forward to working with colleagues across the region to help countries spot risks earlier and respond together," said Mr Peter Chia, Chief Executive Officer, Temasek Life Sciences Laboratory.

"APOHI shows what Asia Pacific can do when scientists, governments and funders choose to get ahead of a threat rather than wait for it to worsen and spread. Today we still tend to learn of an emerging disease from its first human patients, because the warning signs in animals and the environment are seldom brought together. Through APOHI, we can build a platform for partners to connect these signals and give the region an earlier warning capability," said Mr Ng Boon Heong,

Executive Director and Chief Executive Officer, Temasek Foundation.

By integrating human, wildlife and environmental health data, APOHI aims to identify emerging disease risks through predictive modelling, enabling earlier intervention. This is especially important in Asia-Pacific, where dense populations and rich biodiversity heighten the risk of emerging zoonotic disease threats or animal-to-human spillovers.

Launched on World One Health Day at Temasek Shophouse, the initiative brought together approximately 100 delegates from 12 Asia-Pacific countries, alongside representatives from international organisations including the World Health Organization (WHO), World Organisation for Animal Health (WOAH), and Food and Agriculture Organization of the United Nations (FAO). Dr Rabindra Abeyasinghe, WHO Representative to Malaysia, Brunei Darussalam and Singapore, delivered the keynote address. Singapore Deputy Prime Minister Gan Kim Yong, Minister for Health Ong Ye Kung, and Minister for Trade and Industry (Energy and Industry) Dr Tan See Leng also provided recorded messages in support of APOHI.

Connecting human, animal and environmental health to detect emerging threats

According to the US Centers for Disease Control and Prevention, three out of every four new or emerging infectious diseases in people originate in animals. Diseases such as SARS and Nipah have demonstrated how infections can cross between species, sometimes with devastating consequences for communities and economies, and COVID-19 showed the world the cost of being caught unprepared.

Emerging infectious disease threats are increasingly shaped by interactions between humans, animals and the environment. Yet surveillance systems often operate in silos, with information fragmented across institutions and borders, making it difficult to identify emerging risks and act early.

APOHI seeks to bridge these gaps through a One Health approach, bringing together scientific expertise and information across human, animal and environmental health. By integrating surveillance, research and predictive analytics, the initiative aims to help countries anticipate disease threats and translate scientific evidence into timely public health action.

Working with national authorities and existing institutions, APOHI will strengthen regional scientific capabilities, support responsible data sharing and foster sustained partnerships, with participating countries playing central roles in implementation.

First regional programme to focus on zoonotic malaria in Borneo

APOHI will begin with a programme on zoonotic malaria in Borneo, bringing together researchers and institutions across Malaysia, Indonesia and Brunei Darussalam to demonstrate how integrated surveillance and predictive modelling can strengthen understanding of disease transmission risks.

Borneo’s changing forest and land-use patterns can affect interactions between humans, wildlife and mosquitoes, potentially influencing the risk of zoonotic malaria transmission. As an island shared by three countries, Borneo also provides a setting for cross-border research and collaboration on shared disease risks.

As APOHI’s first programme, it will also serve as a platform to develop and test approaches to cross-border data sharing, joint analysis and coordinated action, with lessons informing future efforts to address other emerging infectious disease threats, in line with participating countries’ priorities.

Regional collaboration to secure a healthy shared future

Over the next decade, APOHI aims to develop into a trusted regional platform for One Health collaboration, advancing integrated surveillance, predictive intelligence and cross-border scientific research to strengthen preparedness against emerging infectious disease threats.

Beyond its initial programme, the initiative will build regional scientific capabilities, translate research into public health policies and practices, and mobilise sustainable financing for pandemic prevention.