A Novel Host-based Diagnostic Test for Early Sepsis

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Abstract
Sepsis is a life-threatening condition prevalent in populations all over the world. Global incidences stand at about 20 million with a mortality rate of 35 to 60%, posing an enormous healthcare burden. The incidence of sepsis is still increasing annually because of aging population and underlying comorbidities. Due to the rapid progression of sepsis and frequently non-specific symptoms at its early stages, timely and effective treatment is often hampered by lack of accurate and rapid diagnosis of early sepsis.

We have developed a host-derived, blood-based diagnostic test for accurate and rapid diagnosis of early sepsis. The principle of the test is based on the application of a proprietary panel of 19 biomarker genes whose expression levels, as quantified by RT-PCR, to segregate patients who have sepsis from those who have infections or inflammation only. Data on the clinical validation of sepsis diagnostic gene panel will be presented.

About our Speaker
Leading a multi-disciplinary and global team of scientists, Dr. Ong is currently working on development of molecular diagnostics for a major unmet medical need of sepsis, which has a large global market. As an adjunct Faculty member of the Department of Microbiology, Dr. Ong teaches the post-graduate module on “Bio-Innovation and Entrepreneurship”. Dr. Ong also serves as the Chairman of the Executive Council of BioSingapore, a non-profit association that foster Singapore’s Bioscience enterprises and contribute to Singapore’s continual economic growth. She is also a frequent invited speaker at industry conferences and institutions with various aspects of interest in the biopharma industry, such as the International Society for Pharmaceutical Engineering (ISPE) and UBS (Wealth Management).

Other than building a successful company, Dr. Ong also has interest to bring Science to the community, with focus on the young generation. She particularly hopes to help children develop interest in Science as well as a culture of innovation. Dr. Ong believes that innovation is a necessity, an imperative to push across the limits of time, space and other physical constraints. She also believes that the most important element of innovation – the seeds of innovation – is talented individuals and their ideas. She had started the Science Explorers’ Camp in 2010, as a company social responsibility program, which comprises extra-curricular enrichment activities in various Science subjects such as workshops and Science camps during term breaks, for young students from families below socio-economic norm in Singapore.

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