

Abstract-Keynote Speech

Ethnomedicine Inspired Drug Development – Opportunities and Challenges

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Despite remarkable advances in medical technology, the number of people affected by life-threatening diseases is increasing. In an era where COVID-19 is in the spotlight, the annual deaths due to COVID-19 from 2019 to 2021 are just 5.2 million, falling short of the NCD deaths of 24.3 million per year. Currently, for every COVID-19 death, there are 5 heart-related deaths and 14 NCD deaths worldwide. It appears that we need to re-think our strategy for maintaining wellness.

The current paradigm of drug development is primarily concerned with designing molecules against a single drug target with the goal of curing a disease caused by a complicated network of fundamental causes. However, this "magic bullet approach" is failing to provide effective methods to prevent NCDs due to many reasons.

In contrast, indigenous medicine, being a holistic approach, combines multiple active components in a single formulation that synergistically interacts with a variety of pharmacological targets in a complex disease pathway at an early stage. This is a more intelligent approach to the management of NCDs.

Sri Lanka, being rich source of bio-diversity and traditional wisdom in the healthcare domain provides numerous opportunities circumvent the costly and time-consuming blockbuster-drug development procedure in a clever and cost-effective manner using above approach. Innovators however, face significant challenges in this process that include identifying and conserving traditional knowledge, validating traditional wisdom in terms of scientific principles, standardizing and optimizing formulations, scaling-up for commercial operations, developing a total quality management system (TQM), and addressing clinical trial issues related to demonstrating efficacy and safety of multicomponent plant extracts.

This session will provide an overview of the opportunities that Sri Lanka offers towards ethnomedicine-inspired drug development and the challenges scientific efforts should be focused on.