



Conference on  
**Fourth Industrial Revolution  
 and Healthcare**



COUNTRY OFFICE FOR  
**Sri Lanka**

**World Health  
 Organization**

**24-26 October 2018  
 at The Kingsbury - Colombo**

**Day 1- 24 October 2018- Inauguration of the Conference**

*The Balmoral*

<p>5.00 pm 6.30 pm</p>	<p>Welcome Speech - Dr. Sujatha Senaratne, President, College of Medical Administrators of Sri Lanka</p> <p>Objectives of the Conference - Honourable Dr. Rajitha Senaratne, Minister of Health, Nutrition and Indigenous Medicine</p> <p>Key Note Address by Honourable Ranil Wickremesinghe, the Prime Minister of Democratic Socialist Republic of Sri Lanka</p>
<p>6.30 pm 7.30 pm</p>	<p>Introduction of International faculty to the Chief Guest by Vidya Jyothi - Prof. Bandula Wijay, Ambassador for Science Technology and Innovation in Sri Lanka</p> <p><b>'World free of Cancers: The Wonder of Technological Transformations'</b> by Prof. Ronald A. DePinho, President of the University of Texas MD Anderson Cancer Center in Houston, Texas, USA</p>

	Vote of Thanks, Dr. Sudath Samaraweera, Deputy Director General (Education, Training and Research), Ministry of Health, Nutrition and Indigenous Medicine	
<b>Day 2- 25 October 2018</b>		
9.00 am 11.00 am	<p><b>Session 1 Personalized Medicine: Opportunities and Challenges in Sri Lankan Context</b> <i>The Balmoral</i></p> <p>Personalized and precision medicine as a new healthcare model- Prof. Ronald A. DePinho</p> <p>Ayurveda: Centuries of Practice of Personalized Medicine - Dr. Senaka Pilapitiya</p> <p>Applications of Personalized Medicine: Opportunities and Challenges- Global to Local- Ms. Sitara Waidyaratne</p> <p>Moderated discussion</p>	<p><b>Session 2 Next Generation Diagnostics and Treatments</b> <i>Winchester</i></p> <p>Use of stem cell therapy to repair hearts and cardiovascular vessels injury (via video) -Prof. James Willerson</p> <p>Revolutionising Forensic Practice through Technological Innovations: The dead helps the living -Dr. Sameera Gunawardena</p> <p>Nanotechnology applications enhancing rapid diagnostics in the 4th industrial revolution -Dr. Dharshan De Silva</p> <p>Applications of Nanobiotechnology in Clinical Diagnostics -Dr. Janaka Bandara</p> <p>Moderated discussion</p>
11.00 am 12.30 pm	<p><b>Panel discussion - Personalized Medicine in Sri Lanka: Mission Possible?</b> <i>The Balmoral</i></p> <p>Panel: Prof. Ronald A. DePinho, Prof Michael T. Lewis, Prof. Bandula Wijay, Ms. Sitara Waidyaratne, Dr. Harsha Subasinghe, Dr. Subha Fernando, Prof Sirmali Fernando</p> <p>1. Centralized support facility- education and training requirements and setting up unified protocols – form a (FDA style) governing agency for clinical research</p>	<p><b>Session 3- Additive Manufacturing</b> <i>Winchester</i></p> <ul style="list-style-type: none"> <li>• Additive manufacturing in healthcare: Fundamentals and Applications</li> <li>• Point of care manufacturing- 3D printing in hospital</li> <li>• Regulation and quality assurance of 3D printed medical devices</li> </ul> <p>Dr. Ashan Amarasinghe</p>

	<p>2. Develop a MD Anderson style moonshot program to identify and prioritize the treatment of cancer common in Sri Lanka.</p> <p>3. Development of an intelligent patient and physician friendly patient care based on artificial intelligence, evidence-based medicine and Sri Lankan customary patient care</p>	<p>Moderated discussion</p>
<p>12.30 pm 1.30 pm</p>	<p>Lunch and viewing of exhibition</p>	
<p>1.30 pm 4.00 pm</p>	<p><b>Sri Lankans Championing Fourth Industrial Revolution Declare the past, diagnose the present, foretell the future: Cutting-Edge Science to Meet the Needs of Patients</b></p> <p>Short presentations/demonstrations highlighting the application of the following themes in Sri Lanka</p> <p><i>The Balmoral</i></p> <ul style="list-style-type: none"> <li>• Infection Control and Air Purification with Nano Semiconductor Photocatalysis: A Promising Solution in Hospital Acquired Infections</li> <li>• Developing a Decision Support Tool to Detect the Severity of Dengue</li> <li>• Universally Accessible Medicine Dispensers</li> <li>• Automatic Eye Screening System</li> <li>• Wearable Sensors for Analysing Throwing Related Injuries</li> </ul>	<p><b>Sri Lankans Championing Fourth Industrial Revolution Declare the past, diagnose the present, foretell the future: Cutting-Edge Science to Meet the Needs of Patients</b></p> <p>Short presentations/demonstrations highlighting the application of the following themes in Sri Lanka</p> <p><i>Winchester</i></p> <ul style="list-style-type: none"> <li>• A System to Monitor Vascular Dysfunction</li> <li>• Power-Walk-Self Energizing Smart Shoe</li> <li>• Hydrogel Based Insoles for Diabetic Feet</li> <li>• Novel Rice Fortification Technology</li> <li>• Development of a Soft Orthotic Device for Lower Limb Assistance</li> <li>• Non-Invasive Blood Glucose Monitoring</li> <li>• SmartOne Water Bottle</li> <li>• iChair</li> </ul>

	<ul style="list-style-type: none"> <li>• ArcGIS Location Intelligence for Public Health and Healthcare Administration</li> <li>• Assessment of the Risk of Cardiovascular Disease Using Endothelial Dysfunction</li> <li>• Biometric Smart Security System with Child Care</li> <li>• Health by Stealth: The Age of Drones</li> </ul>	<ul style="list-style-type: none"> <li>• eWater - Smart Water Quality Monitoring System: Be Smart. Drink Pure Water. Stay Healthy</li> </ul>	
4.00 pm 4.30 pm	Tea and viewing of exhibition		
<b>Day 3- 26 October 2018</b>			
9.00 am 11.00 am	<p><b>Precision Cancer Care – Bridging the gap in the Sri Lankan Setting</b> <i>The Victorian Foyer</i></p> <ul style="list-style-type: none"> <li>• Cancer care pathways in Sri Lanka-Dr. Sudath Samaraweera</li> <li>• High throughput DNA sequencing: Impact on detection and treatment of cancer- Prof. Ronald A. DePinho</li> <li>• Targeted Chemotherapy to Enhance Immune Therapy through Checkpoint Inhibition- Dr. Varatharasa Thiviyanathan</li> <li>• Application of Molecular biology in cancer care in Sri Lanka: Current status - Dr. Sumadee De Silva</li> <li>• Bridging the gap: Way forward- Dr. Sanjeeva Gunasekera</li> </ul>	<p><b>Session 4- Digital Patient</b> <i>Winchester</i></p> <p>Electronic health records, Omics and Big Data analytics- Laying foundation for personalized medicine in Sri Lanka -Dr. Indika Jagoda</p> <p>Simulation in Medical Education-Dr. Praveen Weerathunga/ Prof Saroj Jayasinghe</p> <p>Digital Health a paradigm shift for Quality of Care-Dr Venki Balasubramaian, Prof. Tony Sama, Dr Andrew Stranieri (via video)</p> <p>Moderated discussion</p>	<p><b>Session 5- Artificial Intelligence and Big Data in Healthcare</b> <i>The Victorian</i></p> <p>Development patient and physician friendly health care based on artificial intelligence to health care in Sri Lanka - Prof. Bandula Wijay</p> <p>Using Big Data and Analytics to Improve Healthcare- Dr. Sanjeeva Weerawarana</p> <p>Artificial Intelligence in Medical Diagnosis as a Decision Support System -Dr. Harsha Subasinghe/ Dr. Subha Fernando</p> <p>Moderated discussion</p>

	• Discussion		
11.00 am 12.30 pm	<p style="text-align: center;"><b>Session 6 Disruptive Innovations</b> <i>Winchester</i></p> <p>Strengths and limitations of breast cancer xenografts for translational personalized medicine -Prof. Michael T. Lewis</p> <p>The chicken egg chorioallantoic membrane (CAM): a rapid and low-cost platform for patient-derived xenografts and personalized medicine- Prof. Andrew Sikora</p> <p>Disruptive Innovation and Industry 4.0 in an Era of Technology Convergence -Prof Ajith de Alwis</p> <p>Current trends in anti-cancer drug screening research in Sri Lanka -Dr. Sameera Samarakoon</p> <p>Moderated discussion</p>	<p style="text-align: center;"><b>Session 7 Pharmacogenomics</b> <i>The Victorian</i></p> <p>“Does one size fits all?” -Prof. Priyadarshani Galappatthy</p> <p>Monoclonal Antibodies targeting neoantigens, basic and translational research -Prof. Laura Bover</p> <p>Targeted drug delivery using personalized nanoparticles -Dr. Varatharasa Thiviyathan</p> <p>Moderated discussion</p>	
12.30 pm 1.30 pm	Lunch and viewing of exhibition		
1.30 pm 3.00 pm	<p><b>Health Moonshot</b> <i>The Victorian</i></p> <p>Panel: Prof. Ronald A. DePinho, Prof. Andrew Sikora, Prof. Laura Bover, Prof. Saroj Jayasinghe, Dr. Champika Wickremasinghe, Prof. Michael T. Lewis</p>		

	<p>Participants will make 10-minute presentations with the invited panel and conference participants in the audience. Panel to provide feedback on improvements and opportunities to collaborate with MDA or BCM for further development or mentorship</p> <ul style="list-style-type: none"> <li>• Screening methods to detect early diabetes via the macro vascular tortuosity</li> <li>• A Smart IOT enabled Hemoglobin Detection System for a Healthy Life</li> <li>• Trans-radial prosthetic arm controlled by the EMG signals of the forearm muscles</li> <li>• EEG-SSVEP based Brain Machine Interface for Controlling of Wheelchair and Home Appliances with Bluetooth Localization System</li> <li>• AD-Mini: Memory Improvement Tool for Dementia Alzheimer's Patients</li> </ul>
<p>3.00 pm 4.00 pm</p>	<p style="text-align: center;">Public private Partnerships for advancement of health Technologies Moderated by Ms. Stephanie Young <i>The Victorian Foyer</i></p>
<p>4.00 pm 4.30 pm</p>	<p style="text-align: center;"><b>Concluding Session</b> <i>The Victorian</i> Summing up and Way forward. Dr. Sujatha Senaratne, Dr. Champika Wickramasinghe, Dr. Indika Jagoda</p>