

The Achutha Menon Centre for Health Science Studies (AMCHSS) lectures on: Genetics and Epigenetics of complex diseases 11th December, 2019

The Achutha Menon Centre for Health Science Studies (AMCHSS) conducted two lectures themed on “Genetics and Epigenetics of complex diseases”. These talks were intended to create awareness about how genetic and epigenetic information can infer risk factors and social determinants of health and also to build on the commitment of the AMCHSS to engage with health inequity.

The lectures were well attended by the staff and students of SCTIMST as well as scientists and students from the Govt. Medical College, Thiruvananthapuram, Rajiv Gandhi Centre for Biotechnology and University of Kerala.

The talk by Prof. George Davey Smith focused on the how germline genetic variation can be used as a proxy for exposures both social and environmental to infer causality of health outcomes- referred to as Mendelian Randomization (MR). He gave examples of how MR can be used as a cost effective starting point for initiating clinical trials. He also demonstrated how educational attainment is causally linked to health outcomes such as the risk of dementia and cardiovascular diseases.

Prof. Caroline Relton provided insights on how epigenetic variation plays a role in altering the expression of genes in response to both social and environmental factors. She gave example of how epigenetic information can be used as biomarker in absence of exposure measurement or bias. She gave an example of how DNA methylation can be used as a proxy for childhood adversity and can be used as a molecular marker of sensitive periods of development.

These talks also served as a platform for initiating collaborations between SCTIMST and the University of Bristol, UK in the areas of utilizing molecular genetics/epigenetics in health science studies.

