Cancer Science Institute of Singapore

Distinguished Speakers' Series 2017

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Genome Instability and Carcinogenesis: Insights from the Breast Cancer Gene, BRCA2

Date: Tuesday, 23 May 2017
Time: 11am – 12pm
Venue: Auditorium, Level 1, Clinical Research Centre (MD11)
(10 Medical Drive, Singapore 117597)
Chair: Dr Anand Jeyasekharan

Abstract:

Most epithelial cancers exhibit instability of chromosome structure and number, which arises early during carcinogenesis, and is a key determinant of their clinical behavior and therapeutic responsiveness. Following our earlier discovery that the breast cancer susceptibility gene, BRCA2, maintains chromosome integrity during cell division, my laboratory has exploited familial cancer predisposition associated with BRCA2 mutations as a powerful model system in which to explore the mechanisms and clinical impact of genome instability (1). In this talk, I will discuss our recent findings concerning the cellular functions of BRCA2 in the maintenance of chromosome structure, which engender a new model for carcinogenesis in mutation carriers with implications for early therapeutic or preventive intervention.

1. Venkitaraman, A.R. (2014). Cancer suppression by the chromosome custodians, BRCA1 and BRCA2. Science *343*, 1470-1475.

Biography:

Prof. Venkitaraman is the Ursula Zoellner Professor of Cancer Research at the University of Cambridge, and the Director of the Medical Research Council (MRC) Cancer Unit there. Prof. Venkitaraman is recognized for his research on the molecular mechanisms that preserve the integrity of the human genome, and how defects in these mechanisms cause cancer. His discoveries shed light on how genome instability contributes to carcinogenesis, and provide scientific foundations underpinning new approaches to therapy. He is an elected Fellow of the Academy of Medical Sciences, London and a member of the EMBO European academy, Heidelberg.