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## Long QT and brugada syndromes – insights from Asian populations

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Cardiac arrhythmias can cause deaths in asymptomatic young individuals with structurally normal hearts. Generally considered rare syndromes, Brugada syndrome (BrS) and Long QT syndrome are reported in upwards of 5 individuals per 10,000 in Southeast Asian populations, and are thus amongst the most common forms of arrhythmias in these regions. Arrhythmias have a high heritability component, much of which has been attributed to ion channelopathies. Genetic sensitivities of up to 25% and 70% have been reported for Brugada and Long QT, respectively, using documented candidate genes (which include KCNQ1, KCNH2 and SCN5a). Arrhythmias are however poorly studied in Asia, and this lack of information greatly contrasts the wealth of data coming from Caucasion populations. It is important to correct this imbalance because of the many controversies raised when mutations considered to be diseasecausing in Caucasion populations appear to be polymorphic and hence benign in other populations in the world. This highlights that we have not yet learnt enough about these diseases, to accurately project their molecular complexity. Studying arrhythmias in an Asian population (like Singapore) provides unique perspectives, which will be described in this talk.

### Biography

Mahesh Uttamchandani is a Research Scientist at DSO National Laboratories. He is also an Adjunct Assistant Professor with the Departments of Chemistry and Biological Sciences, National University of Singapore (NUS). He has published 36 peer-reviewed articles in international journals, 6 book chapters and also recently edited a book on Small Molecule Microarrays. His work has been cited over 850 times. He is an editorial board member for several journals, including the Journal of Biochemistry Letters and the Journal of Biochips and Tissue Chips. Mahesh has won the Lee Kuan Yew Global Business Plan competition, the Wang Gungwu Medal and Prize and the Sung Kah Kay memorial prize for his entrepreneurial and scientific achievements.