OMICS Group Conferences
Accelerating Scientific Discovery

3rd International Conference and Exhibition on
Metabolomics & Systems Biology

March 24-26, 2014 San Antonio, USA

'Omics' as a paradigm shift in investigating endometrial cancer risk among women with polycystic ovarian syndrome (PCOS)

Mohamad Nasir Shafiee

The University of Nottingham, UK

Abstract

Endometrial cancer (EC) has emerged as the commonest gynaecological cancer among women in the developed world. Although it has been demonstrated that women with PCOS have a three-fold increase in the risk of developing endometrial cancer compared to women without PCOS, the precise molecular mechanisms which increase EC risk in women with PCOS remain perplex. Owing to its scarce evidence, the clinical strategies to prevent EC in PCOS are therefore poorly understood and weak. Although raised estrogen levels, hyperinsulinaemia and, reduced apoptosis have been suggested as potential mechanisms, there is a lack of clarity about how these factors and other factors may interact to increase EC risk in PCOS.

In oncology, metabolomic research is gaining its popularity. In breast cancer research for instance, a study overlay gene expression on top of the proteins in the network to search for collections of sub-networks that could provide better discrimination between breast cancer patients with good prognosis and those with poor prognosis. Metabolomic was also able to unfold the mystery of castrate resistant prostate cancer. However to date, there have not been any published research on metabolomic biomarkers of endometrial cancer risk in women with PCOS.

This topic covers the available literature, on the potential molecular links between PCOS and EC but argues for a paradigm shift, to a systems-biology based approach in future research into the molecular links between PCOS and EC. The potential challenges of a systems biology based approach are outlined but not considered insurmountable.

Biography

Mohamad Nasir Shafiee completed his Medical Degree from National University of Malaysia (UKM) in 2002. He then pursued master's degree in Obstetrics and Gynaecology in the same university hospital and completed his speciality training in Obstetrics and Gynaecology in both Malaysia and the United Kingdom. He was honoured with MRCOG (UK) in 2009. Following that, he enrolled a Ph.D. course in Obstetrics and Gynaecology in the University of Nottingham. He has specific interest in Reproductive Medicine and Cancer Prevention/Pre-invasion. He has published 21 articles in various indexed journals and textbooks.

Email: **mgxmnsh@nottingham.ac.uk**