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DSECT/DSEN Monthly Seminar Series

"Pharmacogenomic Prediction of Anthracycline-induced Cardiotoxicity in Childhood Cancer"

Thursday, Jan 22, 2015 at 3:00-4:00pm EST
Online webinar (GoToWebinar*)
RSVP: https://attendee.gotowebinar.com/register/300000000010754997

Presented by **Dr. Folefac Aminkeng, BMLS, MSc, PhD (Medical Sciences)**

The Canadian Pharmacogenomics Network for Drug Safety (CPNDS)
Centre for Molecular Medicine and Therapeutics (CMMT) – Researching Life to Change Lives
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*Audio is VOIP - you must have a speaker or headset to hear the webinar

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Anthracyclines are highly effective anticancer drugs used to treat over 70% of all childhood cancer patients, and have contributed to the improved survival rates for many childhood malignancies to approximately 80% today. However, their clinical utility is limited by anthracycline-induced cardiotoxicity, manifesting as asymptomatic cardiac dysfunction in up to 57% of treated children and as congestive heart failure in up to 16-20% of treated children. Therefore, predicting and preventing anthracycline-induced cardiotoxicity, in addition to understanding its underlying pathophysiology, may significantly improve outcomes in survivors of childhood cancer. The wide variability in the susceptibility to anthracycline-induced cardiotoxicity however suggests a strong genetic contribution to this adverse drug reaction. The identification of risk variant in multiple genes from candidate gene studies and a recent genome-wide association study have confirmed that susceptibility to anthracycline-induced cardiotoxicity is influenced by host genetic background. In this presentation, I will be focusing primarily on the work done by the Canadian Pharmacogenomics Network for Drug Safety Consortium.

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Learning Objectives:

1) To understand the process of performing pharmacogenomics studies.
   - Active Surveillance (patient recruitment and clinical characterisation)
   - Biomarker identification (discovery, replication and validation)
   - Clinical Implementation (risk prediction and modelling)
2) To learn about the current status of research into predicting anthracycline-induced cardiotoxicity in children treated for childhood cancer, primarily focused on the work that has been done by the Canadian pharmacogenomics network for drug safety Consortium.

Resources:

Visscher H, Ross CJ, Rassekh SR, et al. Validation of variants in SLC28A3 and UGT1A6 as genetic markers predictive of anthracycline-induced cardiotoxicity in children. Pediatr Blood Cancer, 60: 1375-81 (2013).

Visscher H, Ross CJ, Rassekh SR, et al. Pharmacogenomic prediction of anthracycline-induced cardiotoxicity in children. J Clin Oncol, 30:1422-8 (2012).

Carleton, B., Poole, R., Smith, M., Leeder, J., Ghannadan, R., Ross, C., et al. Adverse drug reaction active surveillance: developing a national network in Canada“s children”s hospitals. Pharmacoepidemiology and Drug Safety, 18(8): 713–721 (2009).

The ***Drug Safety and Effectiveness Cross-Disciplinary Training (DSECT) program*** and the ***Drug Safety and Effectiveness Network (DSEN)*** are presenting a monthly online seminar series for faculty, staff, trainees, decision-makers, and other stakeholders engaged in the field of drug safety and effectiveness.

For more information, please visit www.safandeffectiverx.com or contact:

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