DukeNUS Medical School

Signature Seminar Series

Macrophage derived WNTs in Tissue Repair and Cancer

ABOUT THE LECTURE

Macrophages are an extremely diverse population of cells found in all tissue where they can constitute up to 20% of the cells. Tissue macrophages have marked distributions and functions and are often given specific names such as Kupffer cells in the liver, microglia in the brain and osteoclasts in the bone. Although it was thought that most adult tissue resident macrophages are derived from bone marrow produced monocytes, recent data indicates that the majority of these macrophages are in fact derived from yolk sac progenitors and not from the bone marrow. There are exceptions however, such as intestine where most macrophages are bone marrow in origin and other tissues that have hybrid populations.

Macrophages have roles in development and repair as well as being involved in most diseases being first line defenders against pathogens and responders to tissue damage. However, in addition to reparative functions their over-activity can also lead to pathologies such as fibrosis and their recruitment to tumours can promote malignant progression and metastasis. In these acute responses the majority of macrophages are recruited from circulating bone marrow-derived monocytes and not from yolk sac progenitors.

Our studies have focused upon these diverse roles of macrophages in development, repair and cancer. We have documented diverse macrophage sub-populations with individual phenotypes involved in these processes. A common feature in many of these sub-populations is the ability of the recruited macrophages to synthesized WNTs. In this seminar I will describe the roles for these macrophage WNTs in developmental and pathological angiogenesis as well as their functions in stimulating stem cell survival and recovery after tissue damage.

Speaker: ***Professor Jeffrey W. Pollard***
Director, MRC University of Edinburgh Centre for Reproductive Health
Professor of Resilience Biology
College of Medicine and Veterinary Medicine

Host: **Professor David Virshup**
Professor and Director, Cancer & Stem Cell Biology Programme
Duke-NUS Medical School

Date: **Tuesday, 23 August 2016**

Time: **12:00 PM— 1:00 PM**
(Light refreshment will be served at 11:30 AM)

Venue: **Duke-NUS Medical School**
Meeting Room 7C, Level 7

Contact Person: **Ms Kathleen Chan, Duke-NUS Research Affairs Department**
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ABOUT THE SPEAKER



Professor Jeffrey W. Pollard became Director of the Medical Research Council Centre for Reproductive Health in 2013 at the University of Edinburgh, UK. He is Professor of Resilience Biology, holds a Royal Society Wolfson Research Merit Award and is a Wellcome Trust Senior Investigator. Before taking this position in Edinburgh he spent two decades at the Albert Einstein College of Medicine in New York where he was the Louis Goldstein Swann Chair in Women's Health, Deputy Director of the NCI funded Cancer Center and Director of the NIH funded Center for the Study of Reproductive Biology and Women's Health.

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