Title: **The metastasis suppressor, NDRG1: A signaling guru in inhibiting cancer migration and growth**

Presenter: **Professor Des Richardson,** Chair of Cancer Cell Biology
NHMRC Senior Principal Research Fellow
The University of Sydney

When: **Monday 16 July, 2018 @ 1pm**

Venue: Room 1.81, Anatomy, Physiology & Human Biology Building North
The University of Western Australia (off Hackett Entrance No. 2)

Speaker: Professor Des Richardson holds the Chair of Cancer Cell Biology at the University of Sydney, Australia, and is a National Health and Medical Research Council (NHMRC) of Australia Senior Principal Research Fellow.

He has published > 407 articles, reviews, patents, chapters *etc.*, over his career with >93% as first, senior or corresponding author (H-index: 80; >24,255 citations over entire career; with >13,750 citations over the past 5 years and H-index: 55 over past 5 years: Google Scholar Accessed 10 Jan, 2018).

He is Executive Editor of *BBA-General Subjects* and has served on the Editorial Boards of >40 international journals, including *J. Biol. Chem., Antioxidants Redox Signaling, Biochem. J., BBA-Mol Cell Res, Mol. Pharmacol., Pharmacol. Res.,* etc.

As a major translational research achievement, he has developed the anti-cancer and anti-metastatic drug, DpC, which overcomes P-glycoprotein mediated drug resistance.

This has led to commercialisation of DpC and the development of the international company, Oncochel Therapeutics LLC, USA and its Australian subsidiary, Oncochel Therapeutics Pty Ltd. Notably, DpC has entered multi-centre Phase I clinical trials for the treatment of advanced and resistant cancer.

Abstract: The iron-regulated metastasis suppressor N-myc downstream-regulated gene 1 (NDRG1) has been shown to inhibit numerous oncogenic signaling pathways in cancer cells. Recent findings have demonstrated that NDRG1 inhibits the ErbB family of receptors, which function as key inducers of carcinogenesis. NDRG1 attenuates ErbB signaling by inhibiting formation of epidermal growth factor receptor (EGFR)/human epidermal growth factor receptor 2 (HER2) and HER2/HER3 heterodimers and by down-regulating EGFR via a mechanism involving its degradation. Understanding the complex interplay between NDRG1, iron, and ErbB signaling is vital for identifying novel, more effective targets for cancer therapy.