

Seminar Announcement

(Department of Biological Sciences & Office of Life Sciences, NUS)



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Pleiotropic And Context-dependent Roles Of Growth Factors In Tumor Development — A Case Study Of Placental Growth Factor In Human Hepatocellular Carcinoma In Mice

Cancer is a typical proliferative disease driven by uncontrolled blood vessel growth. Hepatocellular carcinoma (HCC) is one of the highly vascularized tumors whose growth is dependent on tumor angiogenesis. Placental Growth Factor (PGF or PlGF) is a member of the Vascular Endothelial Growth Factor (VEGF) family of angiogenic factors. It shares more than 50% identity with VEGF, a major angiogenic growth factor that plays critical roles in both physiological angiogenesis as well as many pathological angiogenesis diseases including cancer. PGF binds VEGFR1 and can readily form heterodimers with VEGF. Similar to VEGF, differential splicing generates at least two human PGF isoforms (PGF1 and PGF2). However, the role of PGF and its isoforms in angiogenesis particularly tumor angiogenesis has been controversial. Using a mouse HCC model, we studied the role of human PGF1 and PGF2 in tumor development and tumor angiogenesis. We found that PGF1 and PGF2 have contrasting roles in HCC development through distinct molecular mechanisms depending on the local environments in the tumor.

Date: 23 April 2004, Fri
Time: 4 pm
Venue: LT 20
Host: Dr Chan Woon Khiong

All are welcome