DukeNUS Medical School

Signature Seminar Series (Virtual)

# Non genetic, Non epigenetic Inhibition of the Tumour Suppressor LKB1/STK11: New Insights and Opportunities

## ABOUT THE LECTURE

LKB1/STK11 is a constitutively active kinase important for a range of physiological processes and diseases. LKB1 controls a group of up to 14 other kinases, comprising AMPK and AMPK-related kinases and is a well characterised tumour suppressor. Loss of function of LKB1 results in upregulation of cellular proliferation, protein synthesis and glycolysis, mediated in part through activation of mTOR. LKB1 is somatically mutated in up to 30% of non-small cell lung cancers, 20% of cervical cancers (with biallelic mutations identified in most cervical cancer cell lines, including HeLa) and also in pancreatic and colonic cancers. In my talk I will show that while it has been thought to date that LKB1/STK11 is not regulated by phosphorylation, this turns out not to be true, which has implications for immunometabolism and cancer biology.

**Speaker:** **Prof Stuart Cook**
**Programme Director**
**Cardiovascular & Metabolic Disorders Programme**
**Duke-NUS Medical School**



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

**Date:** **Wednesday, 10 November 2021**

**Time:** **12.00 PM - 1.00 PM**

**Registration:** **For virtual seminar (via Zoom), please register HERE.**
***(Note: Please rename your login name to include your institution to facilitate admission)***

**Contact Person:** **Ms Kathleen Chan (kathleen.chan@duke-nus.edu.sg)**
**Duke-NUS Research Affairs Department**

## ABOUT THE SPEAKER

Dr Cook grew up in Kenya, went to high school at St Edward's, Oxford and studied medicine at St Bartholomew's Medical School, London. He did a PhD at the National Heart and Lung Institute, UK and a Postdoctoral Fellowship at Harvard. He trained in cardiology and sub-specialized in cardiac MRI. He is Professor at Imperial College, London and Duke-NUS. His team helped define the central role of titin in dilated cardiomyopathy and developed a gene-based test for inherited cardiac conditions that was commercialised by Illumina and is now used in clinical practice. His group discovered a critical role for the IL11 cytokine in fibrosis, inflammation and tissue regeneration, which addressed a major misunderstanding in the published literature. He is a co-founder of Enleofen, a biotechnology company that developed first-in-class antibody therapeutics against IL11. Enleofen's therapeutic platform was acquired by Boehringer Ingelheim in the largest Biotechnology deal from Singapore in late 2019. The overarching goal of his research is to understand disease mechanisms and to translate basic science discoveries to healthcare.