

MIEN1 in Regulation of Migration and Invasion in Prostate and Breast Cancers

ABOUT THE LECTURE

Dissemination of cancer cells from the primary tumor and their spread to metastatic sites is the leading cause of mortality in cancer patients. Metastatic cancer cells invade surrounding tissues by forming F-actin-rich protrusions known as filopodia, which degrade the extracellular matrix and enable invasion of tumor cells. The recent evidence demonstrates direct molecular link between filopodia formation and cancer metastasis. However, there is no clear understanding of the molecular mechanism of filopodia formation and cancer metastasis. MIEN1, is a novel gene abundantly overexpressed in breast and prostate tumors. MIEN1 promoter has a SINE Alu region that is hypomethylated in cancer, resulting in an increased expression of MIEN1 in cancer. MIEN1 is a membrane-anchored signal protein, with important structural motifs such as the ITAM and a prenylation sequence. MIEN1 plays a critical role in regulating filopodia formation and promote metastases through activation of FAK and N-WASP, which results in increased actin polymerization and cell motility. Hence, MIEN1 target might represent a promising means to prevent cancer metastasis.

Speaker: **Prof Jamboor K. Vishwanatha**
 Regents Professor & Vice President
 University of North Texas Health Science Centre

Host: **Prof Patrick Casey**
 Senior Vice Dean, Research
 Duke-NUS Medical School

Date: **Friday, 12 April 2019**

Time: **12.00 PM - 1.00 PM**
(Light refreshments will be served at 11.30 AM)

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

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ABOUT THE SPEAKER

Dr. Vishwanatha is a Regents Professor and Vice President, and Founding Director of the Texas Center for Health Disparities at the University of North Texas Health Science Center at Fort Worth. He is a principal investigator of the National Research Mentoring Network, a NIH Common Fund initiative and PI of the NIH Specialized Center of Excellence in Minority Health and Health Disparities. His research is funded by NIH, DOD and CPRIT.



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