CSCB Seminar Series

Title:

"Targeting telomerase in human cancer and aging-what is new?"

Date:	Venue:	Time:
27 March 2017 (Monday)	**Meeting Room 7C, Level 7** Duke-NUS Medical School 8, College Road, Singapore 169857	**12:00 - 1:00 p.m.** *(Refreshment at 11:30 a.m.)*

Abstract:

Telomere elongation by telomerase is critical for the cell proliferation. However, telomerase activity is hardly detectable in the majority of human adult somatic cells, except in stem cells and germ cells. Therefore, telomeres in adult somatic cells shorten progressively after each cell division. Critically short telomeres trigger cellular senescence that function as a barrier to prevent cancer initiation. In contrast, telomerase up-regulation is observed in >85-90% of human cancers.

Telomerase is detectable in human adult stem cells, which is essential to prevent the accelerated telomere shortening in these tissue stem cells and supports the continue cell renewal that is necessary for tissue regeneration and repair through our lifespan. Genetic mutations in telomerase-associated genes can lead to telomere syndromes that are characterized by accelerated telomere shortening and premature aging.

On the one hand, we would like to inhibit telomerase in tumors to suppress cancer cell proliferation; on the other hand, we need to stimulate the telomerase activity of normal stem cells to prevent early onset of aging. How do we achieve these two opposing goals? By understanding the fundamental mechanisms underlying the regulation of hTERT expression in cancer cells and normal stem cells, we have identified new targets and designed innovative strategies to achieve these opposing goals.

Speaker:



Shang LI, Ph.D.
Assistant Professor
Programme in Cancer and Stem Cell Biology
Duke-NUS Medical School

Host:

Kanaga Sabapathy, Ph.D., FRCPath
Professor
Programme in Cancer & Stem Cell Biology
Duke-NUS Medical School
Singapore

No registration is required. All are welcome.

Any enquiries, please contact: Lilian Poon (+65 6601 3779)