Institute of Molecular and Cell Biology
A*STAR

SEMINAR ANNOUNCEMENT

DATE:	9 April 2012, Monday
TIME / VENUE:	11:00AM @ Level 3, IMCB Seminar Room 3-46, Proteos, Biopolis
SPEAKER:	Prof. Eric Gilson
TITLE OF SEMINAR:	**Non canonical functions of the telomeric protein TRF2 modulate natural killer (NK) cell activation and neo-angiogenesis**

Telomeres protect the chromosome extremities from being repaired and recognized as accidental double strand DNA breaks. For instance, the loss of TRF2, a major telomere protein in mammals, triggers an ATM-dependent DNA-damage response, telomere fusion and growth arrest. An increased dosage of TRF2 is observed in various human malignancies and contributes to carcinogenesis in mice. A reduced dosage of TRF2 can impairs tumorigenicity without engaging a cell intrinsic program of proliferation arrest but by an ATM-independent mechanism activating natural killer (NK) cells and reducing neo-angiogenesis. Conversely, TRF2 overexpression in various types of transformed cells decreases their ability to activate NK cells. During the early stages of human colon cancer development the progressive upregulation of TRF2 correlated with a decrease in the density of NK cells. Collectively, these findings suggest that the increased level of TRF2 measured in many human tumors can favor cancer progression by a contributing to bypass innate immune surveillance and to stimulate angiogenesis.

Host: Dr. Dmitry Bulavin

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