

Hong Kong university finds way to delay aging

24 December 2012 | News | By BioSpectrum Bureau

Hong Kong Uni reveals anti-aging genetic mechanism



Singapore: Researchers from the Department of Biochemistry of University of Hong Kong's (HKU) Li Ka Shing Faculty of Medicine have identified Lamin A protein as an activator of the longevity gene SIRT1. They found that Resveratrol, a substance in grape, enhances the binding between Lamin A and SIRT1 to activate SIRT1.

Through targeting SIRT1, the team restored stem cells and thus delayed the onset of aging and extends healthy lifespan in mouse model of Hutchinson-Hill Progeria Syndrome (HGPS).

The team had in 2005 discovered that the malfunction of Lamin A protein caused problems in DNA repair and unstable genome, leading to HGPS, a severe early onset of premature aging disorder in human.

It is believed that these findings can be further developed into a novel therapeutic strategy in the management of premature aging and aging-associated degenerative diseases. The study also has a profound impact on the solution of the problems brought about by aging population to our society. The research findings have just been published in the latest issue of a leading scientific journal, *Cell Metabolism*.

The research team, led by Associate Professor Dr Zhou Zhongjun, come from the Department of Biochemistry, HKU Li Ka Shing Faculty of Medicine. It comprises research staff and postgraduate students, namely Professor Dr Liu Baohua research assistant at the Department of Biochemistry, Ms Shrestha Ghosh, Yang Xi and Wang Zimei. Dr Zhou's group is now looking for new molecules mimicking Lamin A that can significantly enhance SIRT1 activity, aiming to develop new drugs targeting on stem cells to treat aging related degenerative diseases, such as osteoporosis, cardiovascular and neurological disorders.