Physical Research Laboratory, Ahmedabad

Colloquium 16-03

Speaker: **Dr. Ravikumar Hosamani**

Research Associate Professor, University of New Mexico/NASA Ames Research Center, Space Biosciences Division Moffett Field, USA.

Title: **"How tiny fruit flies are helping us better understand the astronaut's health in space?"**

Time: **Wednesday, 17 February 2016, 16.00 hrs.**

Venue: **K. R. Ramanathan Auditorium, PRL**

Abstract

Outer space is deep, dark and challenging, coupled with reduced gravity and radiation makes it worst experience for any life form. Fundamentally, all living organisms are evolutionarily adapted to Earth's gravity. Microgravity has an adverse impact on an organism at various levels such as cells, molecules and genes. NASA's historic landing of Curiosity on Mars surface and subsequent science findings elevated the hope of humanity to become multi - planetary species in near future. However, to realize this dream, one needs to understand the ill effects of microgravity and outer space environments on human health extensively. We know from ongoing research on the International Space Station (ISS), staying in this confined isolated microgravity environment for few weeks has devastating effects on the astronaut's health. Some of the pressing health issues are loss of bone structure, muscle loss, compromised immune response, cardiovascular effects, and altered behavior. In this talk, I am going to highlight some of this research we carried out on the ISS using fruit fly as a model organism.

The Speaker

Dr. Ravikumar Hosamani received B. Sc. (2003) from University of Agricultural Sciences, Dharwad, Karnataka & M. Sc. (2005) from Chaudhary Charan Singh Haryana Agricultural University, Hisar, Haryana. He obtained Ph.D. (2010) from the Department of Biochemistry & Nutrition Central Food Technological Research Institute, Mysore, Karnataka. He was a Post Doctoral Fellow at the Space Bioscience Division, NASA Ames Research Center, Moffett Field, California (2011 –2013), University Space Research Association (USRA), office of EAP, Columbia, USA. This was followed by NASA Postdoctoral Program Fellow in NASA (2016) Moffettfield, California. His area of research is Space Biosciences, which is a part of NASA's life science research. Dr. Ravikumar is a recipient of NASA Ames Honor Award (2015) and Space Flight Awareness Team Award (2014).

Tea at 15:30 hrs.

ALL ARE WELCOME