



Department of Biotechnology  
Ministry of Science and Technology  
Government of India  
**DBT**



National Institute of  
Advanced Industrial Science  
and Technology  
**AIIST**

# DBT - AIIST International Laboratory for Advanced Biomedicine

## DAIILAB

## Classroom for Advanced & Frontier Education CAFE

## DAIILAB-CAFE

### Series - 004

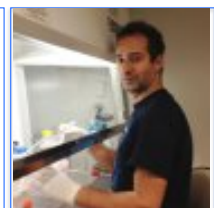
Date and Time - Sept. 29, 2014 (1:30 PM ~2:30 PM)

Venue - Central 4-1; 5F (Room-5105)

Speaker – **Fayaz Ahmad MALIK**

Affiliation – **Indian Institute of Integrative Medicine, Jammu, India**

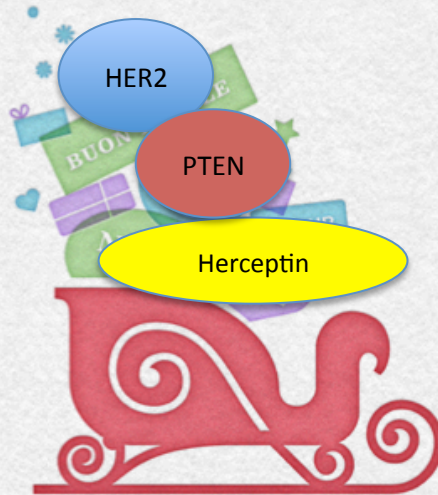
E-mail: [fmalik@iiim.ac.in](mailto:fmalik@iiim.ac.in)



### Title – Inflammatory circuit and drug resistance in breast Cancer: Role of cancer stem cells

Breast cancer has been one of the leading cause of cancer related deaths worldwide and drug resistance is a major challenges that patients encounter during the process of the treatment. Exploring the mechanisms that mediate de novo or acquired resistance to available drugs could potentially lead to novel targets for improving the efficacy anticancer drugs. Trastuzumab (HERCEPTIN), remains the gold standard therapy for patients having HER2 amplified breast cancers, however it was observed that some patients are insensitive to this treatment because of deletion of tumor suppressor PTEN. During Our in vitro and mice studies, we have been able to demonstrate that trastuzumab resistance in PTEN null cells may be mediated by the constitutive expression of an IL6 inflammatory loop. We found that the activated IL6 inflammatory loop lead to the expansion of drug resistant Cancer Stem Cell (CSC) population by facilitating epithelial mesenchymal transition (EMT). We also suggest that blocking this inflammatory loop may provide alternative strategy to overcome trastuzumab resistance in cancer patients.





DAILAB-CAFE 004



Dear Dr Malik

Thanks for accepting to visit DAILAB and present your  
work at DAILAB-CAFE 004

We all enjoyed your talk and hope to have a close  
collaboration with you.

With best wishes,  
DAILAB-BRI (Tsukuba)