

DBT/ Institute of Life Sciences, Bhubaneswar

### **An early marker of HBV leading way to diagnostic and prognostic measures in clinical settings**

By Sunderarajan Padmanabhan

New Delhi, February 21: Untreated Hepatitis B kills and persistent low levels of the virus (HBV) eventually leads to cirrhosis and to cancer of liver (Hepatocarcinoma). To make things worse, the virus is transmittable and although vaccination can prevent the disease, extreme caution is advised for personnel connected. The immune system specifically the adaptive arm that consists of Cytotoxic T cells and T helper cells play a critical role in fighting viral infections including HBV and HIV.

A team led by Dr Satish Devadas of Institute of Life Sciences, Bhubaneswar (ILS) inferred that cytotoxic cell capabilities could predict patient death and survival in HBV infections based on very early cytotoxic T cell response. The joint team of scientists from ILS, SUM Hospital, Bhubaneswar and National Institute of Immunology report that early cytotoxic T cell response could be a pivotal marker for patient response to both acute and chronic HBV infections.

The authors have corroborated these findings with clinical and biochemical parameters and with mice studies and demonstrated that chronic intra cellular infections leading to chronic activation of the immune system has dangerous and deleterious consequences to the patient.

The significance of these findings especially for the early cytotoxic response will open new avenues for checking early immune responses to acute and chronic intra cellular infections and could have diagnostic and prognostic value in clinical settings, as observed by the team from the Institute of Life Sciences.

The study team included Ms. S Mohanty, Dr S Devadas from ILS, BBSR, Dr. N Debata from SUM hospital, BBSR, Dr N Perumal from NII, New Delhi. These findings have been accepted in Frontiers in Immunology in Jan 2020. Contact Person & Contact Details: Dr Mamoni Dash (Communication officer) Dr Satish Devadas (Scientist E).