

# Global Cancer Conference & Medicare Summit

September 15-17, 2014 Hyderabad International Convention Centre, India

## Targeting signal transducer and activator of transcription (STAT) 3 signaling pathway for prevention and therapy of hepatocellular carcinoma: Evidence from cell based and preclinical studies

**Gautam Sethi**

National University of Singapore, Singapore

Hepatocellular carcinoma (HCC) is one of the most lethal malignancies, and is also the fourth most common cancer worldwide with around 700,000 new cases each year. Currently, first line chemotherapeutic drugs used for HCC include fluorouracil, cisplatin, doxorubicin, paclitaxel and mitomycin, but most of these are non-selective cytotoxic molecules with significant side effects. Sorafenib is the only approved targeted therapy by the U.S. Food and Drug Administration for HCC treatment, but patients suffer from various kinds of adverse effects, including hypertension. The signal-transducer-and-activator-of-transcription 3 (STAT3) protein, as a member of STATs transcription factor family, has been implicated in signal transduction by various cytokines, growth factors and oncoproteins. In normal cells, STAT3 activation is strictly controlled to prevent unscheduled gene regulation, whereas constitutively activated STAT3 is found to participate in oncogenesis through upregulation of genes encoding apoptosis inhibitors, cell cycle regulators and inducers of angiogenesis. Thus, pharmacologically safe and effective agents that can block STAT3 activation have the potential both for prevention and treatment of HCC. In the present talk, the author will discuss the potential role of STAT3 signaling cascade and its interacting partners in HCC initiation and progression.

### Biography

Gautam Sethi after completion of his PhD in Cellular Immunology from India, joined University of Texas MD Anderson Cancer Center, and worked in the area of inflammation and cancer research for his Post-doctoral studies. The focus of his research over the past few years has been to elucidate the mechanism (s) of activation of pro-inflammatory transcription factors by carcinogens and inflammatory agents and the identification of novel inhibitors of these oncogenic molecules for prevention of and therapy for cancer. So far his research work have been published in high impact factor peer reviewed journals and has received several international research awards.

[gautam\\_sethi@nuhs.edu.sg](mailto:gautam_sethi@nuhs.edu.sg)