TIFR Centre for Interdisciplinary Sciences
21 Brundavan Colony, Narsingi, Hyderabad 500075

Seminar

H_2S mediated Ca^{2+} signalling in Obesity-Inflammation-Diabetes

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Increased fatty acid storage in expanded adipose tissues causes obesity. Low grade chronic inflammation is well recognised as a key factor of obesity which causes insulin resistance and type-2 diabetes. In obesity, changes in adipose tissue biology and endocrine profile activate resident adipose tissue macrophages (ATM) to secrete more pro-inflammatory cytokines. The mechanism for this switch is poorly understood in obesity/diabetes. Pro-inflammatory cytokines (IL-6, IL1-β and TGF-β) induce insulin resistance in adipose tissue, liver hepatocytes and ultimately results in diabetes.

Very recently, hydrogen sulfide (H_2S) has been identified as a gaseous cell signalling molecule and its homeostasis is altered in obesity/diabetes. In my talk, I will discuss about how the bioavailability of cellular H_2S levels are altered under inflammatory condition and obesity/diabetes which impinges on Ca^{2+} signalling and inflammatory cytokine production in macrophages.

Tuesday, May 26th 2015

11:30 AM (Tea/Coffee at 11:15 AM)

Seminar Hall, TCIS