TIFR Centre for Interdisciplinary Sciences
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Internal Seminar

A Spectroscopic Characterization of nNOS N terminus fragments and DLC1 interaction invitro

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The neuronal nitric oxide synthase (nNOS) is an essential enzyme involved in the synthesis of nitric oxide (NO), a potent neurotransmitter. Although previous studies have indicated that the dynein light chain 1 (DLC1) binding to nNOS could inhibit the NO synthesis, the claim is challenged by contradicting reports. Thus, the mechanism of nNOS regulation remained unclear. nNOS has a heme-bearing, Cytochrome P450 core, and the functional enzyme is a dimer. The electron flow from NADPH to Flavin, and finally to the heme of the paired nNOS subunit within a dimer, is facilitated upon calmodulin (CaM) binding. Here, we have shown using different spectroscopic methods that upon binding with DLC1, nNOS N terminus fragments show structural changes.

Monday, Apr 3rd 2017

2:00 PM (Tea/Coffee at 1:45 PM)

Seminar Hall, TCIS