
Seminar

Regulating a chromatin remodeling enzyme complex: From modifications to subunit architecture

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Among the ATP-dependent chromatin remodelers, the evolutionary conserved Swi/Snf complex is the founding member. This 1.1 megadalton complex is made up of 12 subunits in yeast and 11-15 subunits in human. In trying to understand regulation of this complex, our studies show that acetylation of Snf2, the catalytic subunit, allows for intra-molecular interaction within itself, which negatively regulates its activities both in vitro and in vivo. In addition using a proteomics approach, we find that yeast Swi/Snf complex, often thought to act as one single unit, is in fact modular in nature. This modularity within Swi/Snf plays critical roles in regulating complex stability and changes in gene expression. These findings have direct bearing on understanding how disease-causing mutations in orthologous subunits of human Swi/Snf, regulate altered composition and functioning of this complex.

Wednesday, Dec 23rd 2015

4:00 PM (Tea/Coffee at 3:45 PM)

Seminar Hall, TCIS