



**TIFR Centre for Interdisciplinary Sciences,
Narsingi, Hyderabad 500075**

Seminar

**Multiple functions of Beclin1/Autophagy specific gene-6
(Atg6) during Drosophila development**

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Abstract: *Atg6* (*Beclin1* in mammals) is a known tumor suppressor and a core component of Vps34 complex. The tumor suppressor function of *Beclin1* (*Becn1*) is attributed to its role in autophagy, and the potential functions of *Atg6/Becn1* in membrane trafficking pathway in tumor development have not been considered. I have used the fruitfly, *Drosophila melanogaster* to address these issues. First, I will describe the generation of *Atg6* null mutant. I will then talk about my results identifying essential role of *Atg6* in autophagy and endocytosis. I have also identified an important function of *Atg6* in protein secretion. Interestingly, unlike other autophagy mutants, *Atg6* mutants have enlarged lymph glands, elevated blood cell numbers and melanotic blood cell masses. Finally, I will elaborate on the defects in blood cell differentiation caused by lack of *Atg6* function.

I am currently trying to understand the role of autophagy in stem cell maintenance, differentiation and their aging. I will discuss preliminary results showing how autophagy regulates stem cell maintenance.

Date: Thursday, July 04th 2013

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

Venue: Conference Hall, TCIS

All are cordially invited