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## **Seminar**

### **Exploring the mechanisms underlying maintenance of *Drosophila* neural stem cells using novel genetic approaches**

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Neural Stem Cells (NSCs) differentiate and generate neurons, as well as self-renew to maintain a stem cell population during development. By contrast, in adults, the vast majority of adult NSCs are relatively quiescent, and only a fraction of them divide rarely to ensure replacement of damaged cells. The fundamental question in the field is: how neural Stem Cells maintain self renewal and quiescence? To systematically elucidate this, the first step is to identify genes underlying these processes. For this, I used MiMIC and CRISPR/Cas9 based tools and methods that I developed during my postdoctoral research and established screening paradigms. Through which, I have identified novel genes whose knockdown in self renewing neural stem cells results in overgrowth or undergrowth of the developing brains. In my talk, I will elaborate on these tools and techniques and discuss their application in understanding neural stem cell homeostasis.

***Monday, Jan 25<sup>th</sup> 2016***

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

***Seminar Hall, TCIS***