



University of Cyprus  
Department of Biological  
Sciences

# *Postgraduate Seminars*

*Seminar Series 2018-2019*

## **Dr. Dani Osman**

**Azm Center for Research in Biotechnology and its Applications, EDST, Lebanese University, Tripoli, Lebanon**

### **“Shavenbaby proteins orchestrate the proliferation versus differentiation switch of Intestinal Stem Cells”**

**Tuesday, 11 September 2018, at 12:00**

**Building CTF 02, Room B105, Panepistimioupoli Campus**

***This seminar is open to the public***

In order to conserve body fitness, gut homeostasis should be maintained by a continuous replacement of lost cells through the activity of Intestinal Stem Cells (ISCs). In *Drosophila*, an ISC self-renew to generate a new ISC and a daughter progenitor called enteroblast, which differentiate into either an enterocyte or an enteroendocrine cell. The intrinsic genetic program required to coordinate this process is not completely understood. Our results show that Shavenbaby (Svb) transcription factor directly integrates Wnt and EGFR signaling pathways to regulate both the maintenance and proliferation of ISCs. Interestingly, Svb is also required to the differentiation of the enterocyte lineage. This dual Svb function is modulated by the local activity of pri sORF peptides, which results in the processing of Svb protein to generate a short transcriptional active form in the ISCs. Other data related to the mode of action of Svb in the gut will be discussed.