

## Ph.D. projects in progress

**Mentor:** Ferenc Jankovics

**Doctoral school:** University of Szeged, Faculty of Science and Informatics, Doctoral School of Biology

**Ph.D. student:** Alexandra Brigitta Szarka-Kovács

**Title of the research topic:** Development and function of the ovarian stem cell niche in *Drosophila*

**Description of the research topic:** In metazoans, tissue homeostasis is maintained by stem cells, which are characterized by their ability to self-renew and generate differentiating daughter cells. Stem cells reside in specific microenvironments, called niches. Although discoveries of the last decades have improved our understanding of the biology of stem cells, the mechanisms that govern the formation, size, and signalling of the niches remain less well understood. Analysis of stem cell niches in model organisms, such as *Drosophila* provides valuable information about their general organisation and function. *Drosophila* ovarian germ line stem cell niche is one of the best studied niches, though some basic questions remain to be answered. The project investigates the function of germ cells in niche formation, the origin of the niche cells and the signalisation events during niche development.