

*Faculty of Engineering and Natural Sciences
Seminar*

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Salt Inducible Kinases in *Drosophila* Neural Development

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Abstract

Drosophila melanogaster is fruit fly, a well defined and commonly used model organism to dissect genetic interactions and signaling pathways, *in vivo*. Our aim is to characterize Salt inducible kinases (SIKs), Ser/Thr kinases from AMPK-RK family in *Drosophila* model.

SIKs mainly work in the process of insulin metabolism, adipocyte development; frequently mentioned in tumor formation and cancer progression as well. Upon regulation by PKA signal, SIKs regulate CRTC activity. We started to elucidate the function of SIK2 - SIK3 in nervous system development using the *Drosophila* compound eyes as a model, using the conventional *Drosophila* genetic techniques.

We have seen that SIK modulation causes tumors, showing a role in cancer too. Besides, we show that both SIK2 and SIK3 are involved in eye development, regulating eye size and cell specification events, interacting with the developmentally important pathways.

Biography

Dr. H. Bahar Şahin completed her BSc in Bilkent University in 2005 and PhD in Molecular Biology and Genetics at IGBMC – Universite Strasbourg I. She was a post-doctoral researcher at Boğaziçi University for two years. Her research interests span the study of some specific genes in the context of fruit fly eye development. She has undermined the function of genes from different pathways in cell specification events and cell cytoskeleton regulation during morphogenesis.

