

Regular Wednesday IMG seminar



Imtissal Krayem, Ph.D.

Laboratory of Leukocyte Signalling

“Transmembrane adaptor protein OPAL1 regulates leukocyte hematopoiesis and thymus development”

Expression of transmembrane adaptor protein Outcome predictor of acute leukemia 1 (OPAL1), has been linked to the ETV6-RUNX1 translocation and favorable prognosis in childhood leukemia. Our research also suggests that it has an important role in leukocyte development. We show that in mice with germline deletion of OPAL1, hematopoiesis is dysregulated early on, affecting mainly hematopoietic stem cells and early progenitors. Dysregulations in this compartment also contribute to more efficient engraftment of OPAL1-deficient cells following hematopoietic stem and progenitor cell transplantations. In addition, the thymi of OPAL1-deficient mice are enlarged, housing increased numbers of thymocytes across all subsets. This phenomenon may be attributed to the elevated generation of MPP4/LMPP progenitors in the bone marrow, which subsequently give rise to thymus-seeding progenitors. In summary, WBP1L emerges as a key player in leukocyte homeostasis, maintaining leukocyte numbers during steady-state conditions and after bone marrow transplantation.

The seminar will be held

on Wednesday 13th March 2024 at 15:00

in the Milan Hašek Auditorium at IMG

(Institute of Molecular Genetics of the Czech Academy of Sciences, Vídeňská 1083, Prague 4)