



BİLKENT UNIVERSITY
MOLECULAR BIOLOGY AND GENETICS
DEPARTMENTAL SEMINAR

ABCG1: A link between cholesterol homeostasis and tumor immunity

Assist. Prof. Duygu Sağ

Izmir International Biomedicine and Genome Institute (iBG-izmir), Dokuz Eylül University

ATP-binding Cassette Transporter G1 (ABCG1) promotes cholesterol efflux from cells and regulates intracellular cholesterol homeostasis, which is crucial for survival and function of cells. We have recently made the novel discovery that the absence of ABCG1 in macrophages inhibits tumor growth and metastasis, and prolongs survival of mice through the modulation of macrophage function within the tumor. In particular, in the absence of ABCG1, the tumor-associated macrophages shift from a tumor-promoting M2 (anti-inflammatory) to a tumor-fighting M1 (proinflammatory) phenotype. *Abcg1*^{-/-} macrophages exhibit an intrinsic bias towards M1 polarization with increased NF- κ B activation and direct cytotoxicity for tumor cells in vitro. Our study identifies the cholesterol transporter ABCG1 as a novel mediator of tumor immunity and provides a link between cholesterol homeostasis and cancer.

Date-Time : Wednesday, Apr 20th , 2016 – at 15:40

Location : SBZ-14

Host : Çağlar Çekiç