



BİLKENT UNIVERSITY
MOLECULAR BIOLOGY AND GENETICS
DEPARTMENTAL SEMINAR

"Drug transporters in predicting efficacy of anti-cancer drug treatment"

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Success of chemotherapy rely on a narrow-therapeutic window, often with a high-dose treatment schedule requiring a delicate balance between efficacy and toxicity. Ideally, active forms of anticancer agents should accumulate in the tumor tissue to be effective, whereas their high concentrations are not desired in other tissues. Drug transporters, such as ABC efflux and OATP uptake proteins can have major roles in determining the tissue/tumor disposition of many anti-cancer agents. These transporters are ubiquitously expressed in several pharmacokinetically relevant tissues such as liver, small intestine and blood-brain/testis barriers and mediate critical steps for drugs to reach their target and become effective. Their function include deciding the systemic availability, organ (e.g. kidney or intestinal) toxicity, liver uptake or brain accumulation of a wide-range of anti-cancer drugs, from classical chemotherapeutics such as doxorubicin, paclitaxel and docetaxel to recently developed targeted agents such as vemurafenib, regorafenib, sunitinib, rucaparib and many more. Thus, studying the functions of these transporters help us to improve clinical efficacy and design better drugs. This talk will provide an insight on the critical impact of ABC and OATP transporters in chemotherapy and on the promising preclinical approaches that may be translated to clinical studies for better efficacy.

Date-Time : Wednesday, October 14, 2015 – at 15:40

Place : SBZ-14

Host : Serkan Göktuna