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Doctoral College
Metabolic & Cardiovascular Disease

Medical University of Graz

UNI GRAZ TU Graz Graz University of Technology

MITOCHONDRIAL Ca^{2+} SIGNALING IN COLORECTAL CANCER INVASION

GUEST LECTURE by

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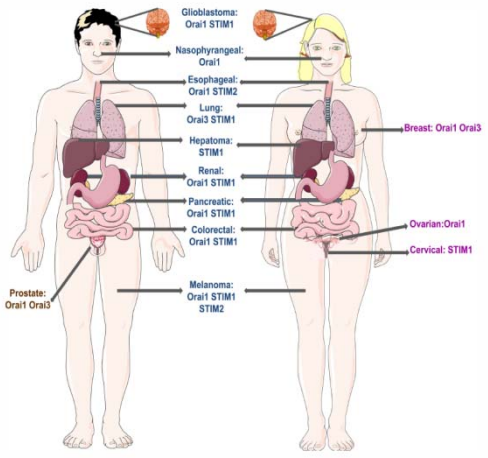
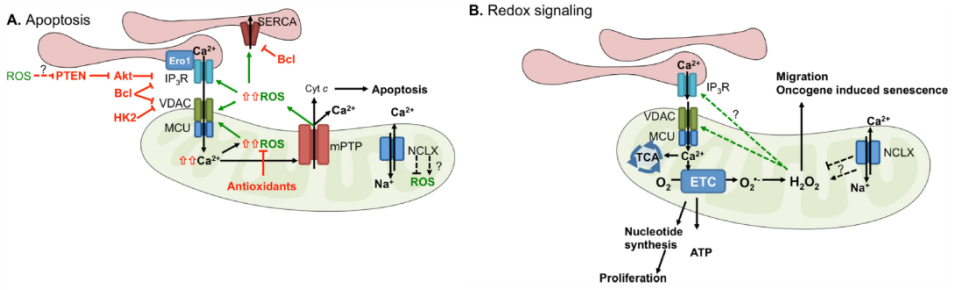
Monday, 11.09.2017
17:00

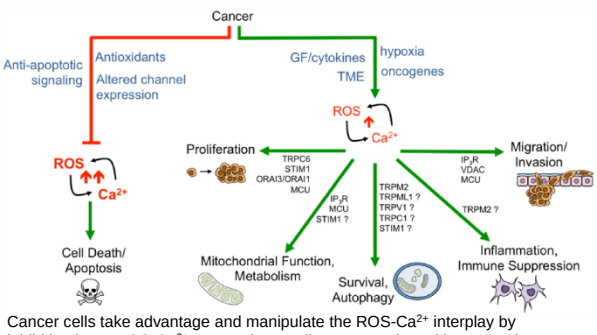
HS E1, Lecture Hall Center, MUG (Auenbruggerplatz 15)



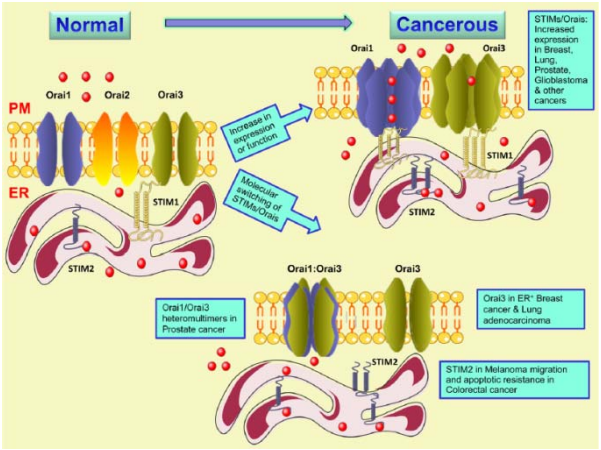
Contribution of STIM and Orai proteins to different types of cancers. Vashint et al. (2015) Am J Physiol Cell Physiol 309:C457-C469



Cancer cells have developed several mechanism to evade the pro-apoptotic ROS-Ca^{2+} cross talk at the ER-mitochondrial interface (**A**), while maintaining regulatedmitochondrial Ca^{2+} influx that can regulate mitochondrial redox signaling to support tumor survival, growth and metastasis (**B**). Hempel & Trebak (2017) Cell Calcium 63:70-96



Cancer cells take advantage and manipulate the ROS-Ca^{2+} interplay by inhibiting large ROS-Ca^{2+} surges that mediate apoptosis and by promoting pro-tumorigenic signaling pathways in response to sublethal changes in ROS/Ca^{2+} levels. Hempel & Trebak (2017) Cell Calcium 63:70-96



Mechanisms driving STIM and Orai proteins mediated tumorigenesis. Vashint et al. (2015) Am J Physiol Cell Physiol 309:C457-C469