DBT - AIST International Laboratory for Advanced Biomedicine

Classroom for Advanced & Frontier Education CAFE
Title: Hypoxia-regulated oncomiRs as attractive targets for cancer therapy

Hypoxia is a regular feature of the tumor microenvironment and correlated to increased tumor proliferation, migration, invasion and therapy resistance thus, leading to poor prognosis. The molecular mechanisms responsible for the hypoxic survival of neoplastic cells are not well characterized, however it is widely agreed that a better understanding of this process may lead to novel approaches for pharmacological intervention. Our work shows that hypoxia induces a specific set of microRNAs in HIF dependent manner in cancer cells. A vast majority of hypoxia-induced microRNAs is also overexpressed in several cancers indicating their probable role in cancer initiation or progression. Select members of this group seem to affect important processes such as apoptosis, proliferation, differentiation or DNA repair in a hypoxic environment and also target genes of critical importance for tumor biology. We show a critical roles of hypoxia-inducible miR-210 and miR-191 in cancer progression and suggest that their inhibition may offer a novel therapy for select tumors.
Series 27

Speaker: Ritu KULSHRESHTHA

Topic: Hypoxia-regulated oncomiRs as attractive targets for cancer therapy

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Host:
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Thanks for participation!