

CCR – Lecture Series

Monday, December 1st, 2025, 11:00 AM

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The role of Fumarate Hydratase in cancer

The role of mitochondrial dysfunction in cancer has been debated for over a century. The discovery that mutations of core metabolic enzymes in the mitochondria, such as Fumarate Hydratase (FH), cause renal cancer strongly indicates that mitochondrial dysfunction can drive cancer. Today, I will provide an overview of our recent findings about the molecular mechanisms through which mitochondrial dysfunction can drive transformation. In particular, using a novel genetically modified mouse model, I will show that FH loss has different outcomes in different tissues, and whilst the kidneys are very robust to FH loss, other tissues don't tolerate FH loss, and here, FH-deficient cells are negatively selected. Our work provides some insights into potential mechanisms of tissue-specific tumorigenesis.

Venue: Lecture Hall B1, Borschkegasse 4a

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Host: Saverio Tardito



CENTER FOR CANCER RESEARCH
MEDICAL UNIVERSITY OF VIENNA