Title:
Fumarate Hydratase loss and renal cancer

Abstract:
The role of mitochondrial dysfunction in cancer has been debated for over a century. Recent bioinformatic data analyses revealed that mitochondrial genes are suppressed in cancer with poor clinical outcome. Furthermore, the fact 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 caused by the loss of FH can drive transformation and shape cancer progression.