CCR – Impromptu Seminar

Monday, January 29th 2024, 10:00

Saverio Tardito

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UK Scotland Institute

Rethinking Our Approach To Cancer Metabolism To Deliver Patient Benefit

Glutamine is the most abundant amino acid in human blood, and glutamine-dependent reactions directly impact cancer initiation and progression, leading to the development of clinically-safe inhibitors of glutamine metabolism for cancer treatment.

In mammals, glutamine is uniquely synthesized by the enzyme glutamine synthetase. By applying untargeted metabolomics in vivo, Tardito's lab recently demonstrated that hepatic glutamine synthetase produces N5-methylglutamine, a glutamine analogue previously undescribed in mammalian metabolism (Villar et al. Nat Chem Biol 2023). Intriguingly, elevated levels of N5-methylglutamine in urine have been found to predict tumour burden and oncogenic drivers in a mouse model of liver cancer. Furthermore, ongoing unpublished work from Tardito's lab shows that the oncogenic WNT activation in the liver imposes a metabolic vulnerability that can be targeted for hepatocellular carcinoma therapy.

Venue: Lecture Hall B1, Borschkegasse 4a
Time: January 29th 2024 at 10:00
Host: Maria Sibilia

CENTER FOR CANCER RESEARCH
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