Medical Chemistry Seminar

Immunometabolic circuits that control cell viability

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Date: November 6 (Thu), 2025
Time: 16:00–17:00
Venue: Bldg. A Rm 103, 107
11月6日（木）16時より、場所：A棟103, 107室

Activated immune cells are programmed to express enzymes that selectively degrade amino acids such as arginine, tryptophan and tyrosine. This process elicits multiple signaling pathways coincident with the generation of specific metabolites that regulate stress signaling pathways such as NRF2 and AHR, which intersect with anti-death processes, especially ferroptosis. Overall, our hypothesis is that immunological anti-ferroptosis is a pathway necessary for normal resolution of inflammation and tissue restoration that becomes hijacked in cancer. Thus, the metabolites generated by immune cell amino acid metabolism can be oncometabolites in settings of malignancy as they support the ability of stressed tumor cells to escape ferroptosis.

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