Annotating Dysregulated Metabolic Pathways in Cancer using Functional Proteomic and Metabolomic Platforms

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Cancer cells have fundamentally altered metabolism that provides a biochemical foundation upon which cancer cells exert their pathogenicity. These changes include glycolytic addiction (also known as the “Warburg effect”), heightened de novo lipogenesis, and glutamine-dependent anaplerosis that underlie the transformative stages of cancer. However, the dysregulated metabolism that drives aggressive features of cancer is not well understood. We will provide several examples of how functional proteomic and metabolomic platforms can provide penetrating insights into the dysregulated metabolism that drives cancer progression, towards developing novel therapeutics against cancer.