Metabolic Reprogramming in Heart Failure: From Metabolomics to Epigenetics

Energy metabolic reprogramming occurs in the developing and diseased hearts, yet, it remains unclear what directs this orchestra of metabolic remodeling in the heart. Leveraging multi-systems approach, our group identified the histone methyltransferase Smyd1 as a novel epigenetic regulator of cardiac energetics. Dr. Warren will talk about the Smyd1 regulatory axis that controls mitochondrial energetics and cardiac function in the healthy and failing hearts. Mitochondrial therapy in heart failure targeting this novel axis will be also discussed.