Simon Sedej

Dr. Simon Sedej is Associate Professor of Cardiovascular Physiology at the Division of Cardiology, Medical University of Graz in Austria. He is a mid-career biologist and experimental cardiologist, leading a research program on cardiovascular aging and heart failure. Dr. Sedej made notable contributions to basic and translational cardiovascular research by elucidating the cardioprotective mechanisms of caloric restriction mimetics in heart failure induced by most prevalent global comorbidities, namely obesity, hypertension and aging. Dr. Sedej is recognized for revealing that nicotinamide adenine dinucleotide (NAD+)-based therapy can mitigate cardinal signs of heart failure with preserved ejection fraction (HFpEF). In addition, Dr. Sedej elucidated how regulation of the cardiac insulin-like growth factor-1 (IGF-1) receptor signaling in the course of aging promotes health and longevity, transforming our understanding about the role of IGF-1 signaling in an aging and failing heart. Dr. Sedej's pioneering work on the cardioprotective mechanisms of caloric restriction mimetics in HFpEF, cardiac aging and longevity has guided his research on the application of these agents, like spermidine, in cardiovascular medicine.

Currently, the research group led by Dr. Sedej continues advancing research in the area of improving health span to benefit human cardiovascular disease and aging. He is now a key researcher of the Excellence Cluster METAGE (Metabolic control of aging and disease – From models to humans), addressing how disturbances in metabolic control influence age-related cardiac decline.