High-sensitivity mass spectrometry analysis of pericardial fluid derived extracellular vesicles (EVs)

The overall goal of this project is the complex characterization of pericardial fluid derived EVs by immunological and proteomic analysis.

**Results:**

1. Pericardial fluid samples were collected from three different clinical stages: coronary bypass patients (CABG = 60) and both heart transplantation recipients (TxR = 32) and donors (TxR = 18).

2. Extracellular vesicle content of pericardial fluid samples were immunophenotyped by 17 different markers.

3. Complex clinical database was generated from the following data: clinical diagnosis, medication, laboratory parameters, including clinical chemistry and hematology, and echocardiogram. Clinical database was used for determination of samples for further mass spectrometry analysis.

4. Differential centrifugation was used for the separation of microvesicles and exosomes from the selected samples. Both extracellular vesicle fractions were prepared for mass spectrometry analysis.