processes involved during the post MI remodeling process, both at an early phase and a late phase using a proteomic approach.

2. Aims and objectives

Acute oxidative stress is the major damaging factor in case of MI (Hori and Nishida, 2009); however, it is also evident that different regions of the myocardium are subjected to different levels of such oxidative stress depending upon their spatial distance from the occluded coronary artery. Thus, it stands to reason that response to such oxidative stress might vary in the different spatial regions of the heart at immediate and removed time points after MI. Hence, both the stressed infarct region and unstressed non-infarct regions of the heart were considered in the study to determine at once the differential proteins involved in the two regions as well as at the two varied time points post MI in order to get as comprehensive an idea possible about the proteome profile of the heart during the remodeling process after infarction.

Specific objectives:

1. To study the structural and functional condition of the heart during the early and late phases of post MI experimental period in order to determine heart failure or normalcy at those time points.

2. To study the differential proteome profile of the cardiac tissue as a whole with respect to the spatial regions and the time points after MI in order to draw a composite picture of the proteins and their instrumental networks involved during the remodeling process.

3. To study the major/ relevant pathways that may be responsible for the changes in the cardiac tissue during post MI remodeling.