**Poster Contributions**  
**Poster Sessions, Expo North**  
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**Session Title:** Acute Coronary Syndromes: Basic III  
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**Background:** A biomarker that could differentiate between stress cardiomyopathy (SC) and acute myocardial infarction (AMI) is highly desirable. Plasma micro RNAs (miRs) are promising biomarkers that may give insight into relevant pathophysiology. We aimed to test the hypothesis that the blood miR profile of AMI would differ from SC.

**Methods:** Blood was collected from patients presenting with AMI (n=6) or SC (n=2). Plasma, lymphocyte, and platelet miRs were isolated. Samples were screened for a panel of miRs known to be detectable in blood via qRT-PCR. The levels of each miR were normalized to a reference transcript (miR 206) and the ratio of the mean Ct of the miR in AMI versus SC was calculated.

**Results:** The majority of detectable miRs in plasma, platelets, and lymphocytes were higher in AMI than SC patients (Figure). However, 20% (18/88) of detectable miRs were significantly greater in SC patients. Levels of hsa-miR-30e-3p in plasma and platelets were 166 and 125 fold greater in SC than AMI respectively. Interestingly, miR-30 has been previously shown to be highly expressed in cardiomyocytes and to regulate matrix remodeling by negative regulation of connective tissue growth factor.

**Conclusions:** Our results suggest that there are 18 blood miRs which are significantly higher in SC than AMI. In particular, miR-30e-3p is significantly greater in the plasma and platelets of SC patients. Whether or not miR-30e-3p has diagnostic and functional significance in acute coronary syndromes is the goal of future studies.