**SHORT AND LONG NON-CODING RNAs AS BIOMARKERS OF ACUTE CARDIAC CONDITIONS**

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The first draft of the human genome was published in 2001. However, it is only 10 years later that the ENCODE International Consortium revealed that, while more than 80% of the human genome is transcribed into RNAs, only less than 2% of these RNAs are subsequently translated into proteins. This discovery implied that the vast majority of DNA sequences within the human genome are transcribed as non-protein coding RNAs or non-coding RNAs. Multiple types of non-coding RNAs have been uncovered, with distinct biological function and cellular localization. Non-coding RNAs can be classified according to their size: microRNAs (miRNAs) are usually shorter than 25 nucleotides and long non-coding RNAs (lncRNAs) are typically longer than 200 nucleotides. The finding that both miRNAs and lncRNAs are present in the bloodstream led to the investigation of their potential as biomarkers. A plethora of studies revealed that circulating miRNAs are regulated after an acute cardiac event, and some of them reported that miRNAs might constitute a reservoir of novel cardiac biomarkers. For instance, cardiac-enriched miR-208 and miR-499 are highly up-regulated in the blood following acute myocardial infarction as a result of cardiomyocyte necrosis. MicroRNA-150 was found to predict left ventricular remodeling after acute myocardial infarction. A panel of 3 miRNAs, including miR-150, accurately discriminated patients with unstable angina pectoris from patients with non-coronary chest pain. MicroRNA-423 was identified as a biomarker of acute heart failure. Brain-enriched miR-124 predicts neurological outcome and survival after cardiac arrest. The biomarker value of lncRNAs has been only recently revealed by a few studies showing that lncRNAs are present in the blood and predict heart failure after acute myocardial infarction. Therefore, non-coding RNAs represent a novel class of potential cardiac biomarkers. Whether they can be used for personalized healthcare remains to be further investigated.