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Degree Project in Bioinformatics

Masters Programme in Molecular Biotechnology Engineering,
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Title (English) Differential and co-expression of long non-coding RNAs in abdominal aortic aneurysm		
Title (Swedish)		
Abstract <p>This project concerns an exploration of the presence and interactions of long non-coding RNA transcripts in an experimental atherosclerosis mouse model with relevance for human abdominal aortic aneurysm development. 187 long noncoding RNAs, two of them entirely novel, were found to be differentially expressed between angiotensin II treated (developing abdominal aortic aneurysms) and non-treated apolipoprotein E deficient mice (not developing aneurysms) harvested after the same period of time. These transcripts were also studied with regards to co-expression network connections. Eleven previously annotated and two novel long non-coding RNAs were present in two significantly disease correlated co-expression groups that were further profiled with respect to network properties, Gene Ontology terms and MetaCore© connections.</p>		
Keywords <p>LncRNA, lincRNA, abdominal aortic aneurysm, differential expression, co-expression, RNA-seq, WGCNA</p>		
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