Cardiovascular Gene Annotation Initiative
providing annotation to genes associated with cardiovascular processes

Newsletter November 2016

Biocurators at UCL
In September we welcomed back Nancy from maternity leave, and were pleased that Barbara was able to stay with the annotation team, she has moved over to the Parkinson’s UK funded annotation project.

Gene annotation
Our three MSc students provided over 1000 GO annotations. Zara captured the role of the microRNA29 family in the regulation of extracellular matrix deposition, and how this impacts on aortic aneurism. Alex provided annotations which described the role of TGFbeta and BMP signalling pathways in endocardial cushion development. In addition, Fiona improved the alignment of annotations between SwissLipids and the GO database with annotations describing lipid metabolism and transport. Nancy is now focused on finishing the annotation of proteins and RNAs involved in telomere maintenance.

Based on the EBI statistics, 1st October 2016, the cardiovascular gene annotation team has associated 40,000 GO annotations with 5,600 gene products, 27,880 of which are to 3,340 human gene products.

More molecular interaction data
We are very grateful for a new pipeline generated by Tony Sawford, the software engineer at the EBI in part supported by the BHF. This pipeline now enables the GO annotations which describe the association of a microRNA to a specific mRNA target to be included in network analysis tools, such as Cytoscape (see figure on right). This data is available from the PSICQUIC site, as EBI-GOA-miRNA.

Community engagement
Barbara has written a Blog for the BHF explaining what a biocurator does and what GO annotations are.

Meetings attended
In August Ruth, Rachael and Barbara attended a 3-day LEGO workshop, LEGO, Logical Extension of the Gene Ontology, enables GO annotations to be connected together to create pathways that describe biological programs. In October, Rachael attended the 2nd Computational RNA Biology conference at the Wellcome Genome Campus in Hinxton where she presented a poster entitled “Functional annotation of cardiovascular microRNAs using GO”.

Promoting alternative careers
Rachael is co-organising a meeting entitled “Professional Careers: Where can your PhD take you?” to be held at UCL on 7th November. The meeting will showcase careers for cardiovascular scientists who have completed their Ph.D. or post-doctoral studies and who do not wish to follow a traditional academic route. Please visit the registration page for more details.

Publications

www.ucl.ac.uk/functional-gene-annotation/cardiovascular
www.ebi.ac.uk/GOA/CVI
Contact goannotation@ucl.ac.uk to subscribe to the cardiovascular newsletter, or follow us: @UCLgene