

Cardiovascular Gene Annotation Initiative

providing annotation to genes associated with cardiovascular processes

Newsletter November 2013

Gene annotation

Based on the EBI [statistics](#), 12th October 2013, this project has associated 29,547 GO terms to 4,000 proteins, 20,370 of which are to 2,300 human proteins. During the process of GO annotation we have curated 1100 papers that described protein-protein interactions (PPIs). This information has been captured in GO, but the data is not exported to public PPI databases. Therefore, our current annotation focus is to re-annotate these papers and submit protein-protein interaction (PPI) data to the EBI database [IntAct](#). IntAct announced that the BHF-UCL annotation team will be contributing PPIs in their [newsletter](#).

All three of us have needed considerable training in order to capture PPI data to IMeX standard and therefore progress has been relatively slow. We have started re-annotating papers describing cardiac conduction, telomere protection and maintenance, WNT signalling and lipid metabolism. To date 43 papers have been re-annotated leading to the creation of 285 PPIs. Specifically, for WNT signalling: 114 PPIs have been captured from 14 papers, with 35 more papers pending. The impact of these annotations can already be seen in a network analysis of 6 telomere associated proteins, where we have more than doubled the number of binary interactions (from 13 to 29) and increased the number of associated proteins from 17 to 31 (see figure). Also, two newly-linked clusters have been created. However, the elements of the shelterin complex, which is responsible for telomere capping and includes a well-studied set of six proteins such as POT1, are notably absent. These will be the focus of future annotation efforts.

Community engagement

Registration to our seventh 2-day [Bioinformatics and GO Annotation Workshop](#) (1-2 May 2014) is now open. This 2-day course provides hands-on training in the use of GO, as well as other bioinformatics resources, such as UniProt, Ensembl, Biomart, IntAct and Cytoscape. As always this workshop is freely available to all biological or biomedical PhD and Post-Doc research scientists. If you wish to attend, please [register online](#).

Grant success

In a new collaboration with John Hardy and Paul Denny the gene annotation team will be extending our annotation focus to neurological and immunological processes following a successful grant application to [Parkinson's UK](#). Paul Denny will join the group in January and we will be advertising soon for an additional biocurator.

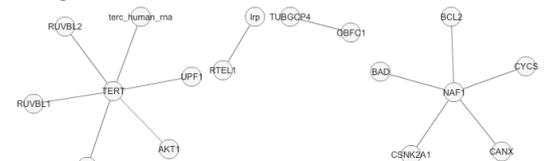
Meetings attended

In October Ruth attended the GO Consortium (GOC) meeting in Bar Harbor. This was a very productive meeting with lively discussions about how to capture information in the new 'annotation extension' field and how to make the new GOC web site more informative to a variety of users as well as many other GO related topics. The team also attended the [Cardiac Failure 2013: Epigenetics, MicroRNA and Mitochondria](#), London recently.

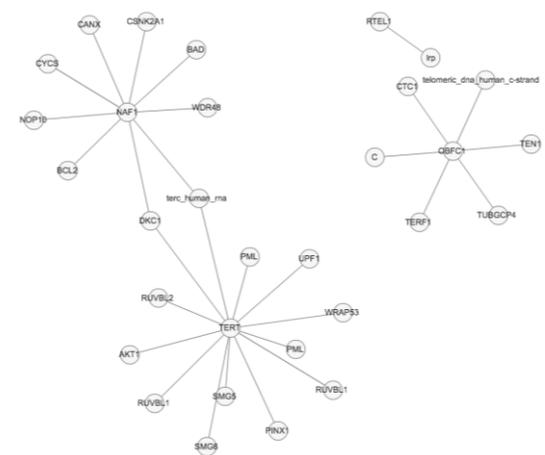
Upcoming meetings

The annotation team will be attending the November [RA Fisher Centre for Computational Biology Meeting](#).

September 2013



October 2013



IntAct views of PPIs associated with TERT, NAF1 and OBFC1.