

Cardiovascular GO Annotation Initiative

providing full GO annotation to genes associated with cardiovascular processes

Newsletter July 2010

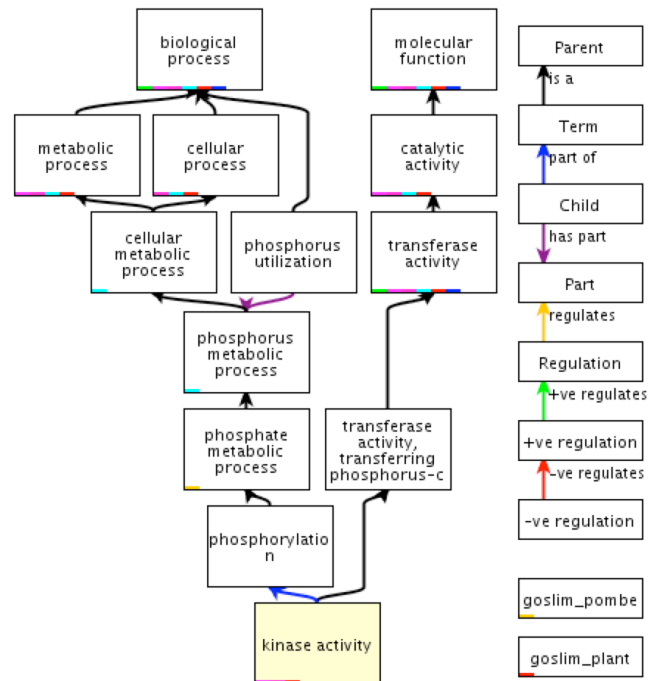
Gene annotation

Last month we created our first high-throughput annotations, following the publication of Manuel Mayr's paper describing the proteomic analysis of the human aortic extracellular matrix (PMID: [20551380](https://pubmed.ncbi.nlm.nih.gov/20551380/)). This resulted in 100 proteins being annotated with the GO term 'extracellular matrix' or 'extracellular space' or both. In the future we hope to improve these annotations by including tissue specific information, using the Foundational Model of Anatomy ontology 'FMA:3736 ascending aorta'. If you have proteomic data you would like included in the GOC database please [contact us](#). Based on the EBI [statistics](#), 29th June 2010, this project has associated 13,000 GO terms to over 1,700 proteins.

Changes to GO

There are now a limited number of new relationships between the *molecular function* and *biological process* terms in the Gene Ontology, reflecting a change in the structure of GO. The [QuickGO](#) ancestor chart (right) shows that the GO term '*kinase activity*' is now a child of both the *molecular function* and *biological process* ontologies.

This cross-ontology format will be extended across the whole of GO, but will require considerable editorial input to create new process specific function terms and ensure their correct placement within the ontology. However, these new links will help annotation consistency by automatically creating the relevant parent associations, for example a protein with '*kinase activity*' is involved in the *biological process* '*phosphorylation*'.



Meetings attended

Ruth and Varsha attended the [GO annotation camp](#), Geneva in June. The GO annotation camp provides the opportunity for GO curators to discuss and improve the consistency of GO annotation. During the camp a variety of annotation guidelines and quality consistency checks that had been proposed by several different working groups were agreed. Ruth co-chaired a lively discussion on improving consistency in the annotation of 'binding' and Varsha co-chaired a productive session on annotating 'downstream' events. In addition, the various procedures being used to transfer annotations to orthologs and paralogs were outlined. In addition, the recent improvements to the GO browsers, [AmiGO](#) and [QuickGO](#), were demonstrated. Finally, Jim Hu presented an interesting community [annotation competition](#) which led to 150 annotations being created by 16 undergraduates, Jim will be extending this competition to enable UK scientists to take part.

Upcoming meetings and workshops

Ruth and Varsha will be presenting posters at the UCL partners Cardiometabolic Network - Scientific Meeting, 17th September. We are also organising a 2-day [GO annotation workshop](#) in September, aimed at providing information about GO and other bioinformatic resources to research scientists throughout UCL and to encourage their participation in the process of gene annotation. This event is now fully booked, but [contact us](#) if you are interested in attending this, hopefully, regular event.