



BEATING HEART DISEASE TOGETHER



# Cardiovascular GO Annotation Initiative

*providing full GO annotation to genes associated with cardiovascular processes*

## Newsletter July 2009

### Gene annotation

Over 9700 GO terms have been associated with 1200 proteins by this project, of these over half of the GO terms are to 780 human proteins. In addition, over 200 human proteins from the BHF priority list are marked as comprehensively annotated. Since April we have focused our annotations on the following processes: insulin signalling, reverse cholesterol transport, vitamin D metabolism and inhibitory SMAD signalling. The GONUTS wiki page is continuing to be of great help for checking annotation consistency, and its use has led to many additional annotations to [enzymes](#), [receptors](#) and [apolipoproteins](#) involved in reverse cholesterol transport. As always, suggestions for processes or proteins to annotate are welcome, along with suggestions for publications to use as a source of annotation data.

### Gene Ontology development

The process of GO annotation continues to drive requests for new GO terms, and consequently the BHF-UCL team have submitted over 40 requests to the GO editorial team since April. This has led to a variety of new GO terms including: vitamin D 25-hydroxylase activity, vitamin D receptor signaling pathway, vitamin D response element binding, zymogen granule exocytosis, high-density lipoprotein receptor binding, histone acetyl-lysine binding, pre-small nucleolar ribonucleoprotein complex, response to cholesterol and leucine binding. Varsha's review of SMAD signalling pathways has led a comprehensive revision of the TGF-beta signalling, BMP signalling and SMAD signalling ontologies. Ruth has been involved with a GO working group, which has reviewed the consistency issues associated with annotating to 'binding terms'. Recommendations from this group will be presented to the GOC in September.

### Meetings attended

In April Varsha attended the Third International Biocurator Conference, held in Berlin, where she met biocurators from around the world and discussed the challenges associated with biocuration. She presented a well received poster entitled Cardiovascular Gene Ontology Annotation Initiative, this poster is available online at [natureprecedings](#).

### Upcoming meetings

September will be a busy month, with Ruth and Varsha will be attending the three-day GO Consortium (GOC) meeting, in Cambridge. Varsha is also organising a Heart Development Ontology workshop to be held in London, this workshop aims to improve heart development GO terms and their placement within GO. An 'in progress agenda' is [available](#). In addition, Ruth will be presenting 'Gene Ontology' at the British Atherosclerosis Society Meeting in Cambridge.

[www.cardiovasculargeneontology.com](http://www.cardiovasculargeneontology.com)  
[www.ebi.ac.uk/GOA/CVI](http://www.ebi.ac.uk/GOA/CVI)

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