



BEATING HEART DISEASE TOGETHER



Cardiovascular GO Annotation Initiative

providing full GO annotation to genes associated with cardiovascular processes

Newsletter October 2008

Updated website

We are pleased to announce that our new and improved website is now online. The updated site incorporates several new features, including; a link to the Search CV gene list, which enables scientists to search the BHF-UCL Cardiovascular gene list; and a feedback form for scientists to comment on any aspect of GO or to subscribe to this newsletter.

Meetings Attended

In August Ruth attended the 7th Human Proteome Organisation World Congress in Amsterdam. Ruth made contact with several senior scientists who have agreed to help with the annotation of genes in the BHF-UCL Cardiovascular gene list. Ruth's presentation generated a lively discussion about the inclusion of high-throughput data in the GOC dataset.

Gene annotation

To date, this initiative has associated over 5,000 GO terms to more than 600 proteins, of which 4,317 are to 438 human proteins. 132 prioritised genes have been comprehensively annotated using GO terms, including AGT, CHRD, CST3, CYP26B1, CYP26C1, DRD2-4, ECE1, EDN2, G6PD, NOG, NOS1, NOS3, RARA, RBP4, SOD2, SRF, TGFB2. Furthermore, a total of 24 genes have had first pass annotation including AGT, DRD1, FKBP1A, FKBP1B, NRG1, NOS2A, SIRT1, TGFBR2, VEGFA. We hope to revisit these genes next year, and would welcome additional annotation suggestions from expert scientists.

Gene Ontology

Over 90 cardiovascular issues have been raised with the Gene Ontology Editorial team since the start of the project, resulting in the creation of 183 new GO terms. Many of these requests have led to the creation of new terms to describe the regulation of specific processes, such as regulation of ventricular cardiomyocyte membrane repolarization, regulation of sarcomere organization, regulation of respiratory burst during acute inflammatory response, although some provide new cardiovascular relevant terms such as cardiac epithelial to mesenchymal transition, elastin catabolic process.

GO Consortium membership

In July the Cardiovascular GO Annotation Initiative became one of 16 full members of the GO Consortium. For more information about the GO Consortium members and associate members see <http://www.geneontology.org/GO.consortiumlist.shtml>.

Publications (some pdfs available at www.cardiovasculargeneontology.com)

The Gene Ontology - Providing a functional role in Proteomic Studies, Emily C Dimmer, Rachael P Huntley, Daniel G Barrell, David Binns, Sorin Draghici, Evelyn B Camon, Mike Hubank, Philippa J Talmud, Rolf Apweiler, Ruth C Lovering. *Proteomics* 2008 July Epub. PMID: 18634107.

Access to immunology through the Gene Ontology, Ruth C Lovering, Evelyn B Camon, Judith A Blake, Alexander D Diehl. *Immunology* 2008 Oct;125(2):154-60. PMID: 18798919.

Upcoming Meetings

In November Ruth will be attending the British Society for Immunology Congress taking place in Glasgow. She will be giving a short talk ('Immunology's time to GO') during the first plenary session and will have a poster in the registration area. If you are attending this meeting please come and discuss any GO issues with Ruth.

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