Renal GO Annotation Initiative

Providing full GO annotation to genes associated with renal development, function and disease processes

Newsletter January 2011

Welcome to the 7th quarterly Newsletter highlighting the progress of the Renal GOA Initiative.

Renal target list
The list of renal curation targets now comprises 1,736 distinct renal-related proteins which include human, murine and other mainly mammalian orthologues. This also includes a list of differentially expressed kidney-related proteins in response to overexpression of neuropilins and a list from the GUDMAP consortium of proteins expressed in the developing mouse genitourinary system that currently have no GO annotations.

The current GO annotations for 1,651 of these proteins that have been tagged with the acronym KRUK can be viewed using the EBI’s GO browser QuickGO (http://www.ebi.ac.uk/QuickGO/GAnnotation?protein=KRUK).

Protein Annotation
To date, since 1st April 2009, this initiative has associated 10,655 GO terms to 1,079 distinct UniProtKB proteins from the prioritized renal-related list. Of these, 307 prioritized proteins have been comprehensively annotated using GO terms.

Annotation is now complete for the list of gene products provided by the GUDMAP Consortium Edinburgh team.

GO annotation for the list of differentially expressed kidney-related proteins in response to overexpression of neuropilins, is ongoing.

Gene Ontology Development
A final note on the achievements as a result of the Kidney Development Ontology Content Meeting (held in January 2010); the total number of new kidney development GO terms created is 446. The new terms detail not only the anatomical description but also the biological processes that contribute to the development of the renal system, and are applicable to renal development across species: i.e. metanephros (mammalia), pronephros (amphibia), mesonephros (fish) and renal system/ Malpighian tubule (insecta).

The list of all the new renal development GO terms can be viewed at http://wiki.geneontology.org/index.php/Agenda_for_Kidney_Development_Ontology_Content_Meeting#Ontology_Editing.
This is a great achievement and represents 1.34% of the total terms in the current Gene Ontology! I would like to take this opportunity to say a big thank-you to all the curators, Gene Ontology editors and the renal experts involved in this part of the project.

Meetings:
- I will be presenting the Renal Gene Ontology Annotation Initiative at the SysKid Workshop and Annual General Meeting, to be held 25-28th January 2011 in Innsbruk, Austria.
- I will be submitting an abstract to present this initiative at the Joint British Renal Society/ Renal Association meeting to be held in Birmingham, June 2011.

New renal interest mailing list
I have set up a new renal interest mailing list (renal@ebi.ac.uk) and plan to send future newsletters through this list. It will be low traffic and it would be a more convenient way of sending out information relating to the Renal GOA Initiative. So, if you are interested in continuing to receive these newsletters please could you sign up to it at http://listserver.ebi.ac.uk/mailman/listinfo/renal. You can also use this list for discussion of any issues relating to the Renal GOA Initiative. Similarly, please do let me know me if you no longer wish to be on the original mailing list which I have been using to send out these quarterly newsletters.

Call for contributions from the renal biomedical research community
If you are interested in providing suggestions/ advice/ discussions on renal gene/ protein-related issues in this initiative then please contact the UniProtKB-GOA group at http://www.ebi.ac.uk/GOA/contactus.html or email goa@ebi.ac.uk. If you have a specific renal-related gene/ protein of interest that is not on the current curation target list, or would like a particular one to be prioritized for GO annotation then please do let me know. Similarly, let me know if you are aware of any large dataset or set of proteins that are involved in a particular kidney function/ development/ disease pathway requiring annotation. If you know of anyone in the biomedical scientific research community working on any aspect involving the genitourinary tract who you feel would be interested in this effort, please could you forward this newsletter onto them - your assistance with this would be greatly appreciated.

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