



# Renal GO Annotation Initiative

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

Newsletter April 2011

Welcome to the 8<sup>th</sup> quarterly Newsletter highlighting the progress of the Renal GOA Initiative.

## Renal target list

The list of renal curation targets now comprises 2,296 distinct renal-related proteins which include human, murine and other mainly mammalian orthologues. This includes a list of proteins expressed in the podocyte, recently supplied by Professor Moin Saleem, Bristol University.

The current GO annotations for all the 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 1<sup>st</sup> April 2009, this initiative has associated 20,636 GO terms to 1,702 distinct UniProtKB proteins from the prioritized renal-related list. Of these, 536 prioritized proteins have been comprehensively annotated using GO terms.

GO annotation for the list of differentially expressed kidney-related proteins in response to overexpression of neuropilins, is ongoing and I have also started to annotate the list of proteins associated with podocyte development and function.

## Gene Ontology Development

A Webex meeting was held last month with renal experts Professors Randy Thomas and Adrian Woolf, along with the GO editors and myself, to discuss renal excretion representation within GO. This originated from a query about the definitions of the current GO terms diuresis and natriuresis; it was concluded that these terms would be obsoleted since they were incorrectly defined and new terms would be created under the parent term 'regulation of biological quality; GO:0065008', describing the 'regulation of urine volume'; diuresis would become a synonym of 'positive regulation of renal volume' and antidiuresis would become a synonym of 'negative regulation of urine volume'. Similarly, natriuresis would become a synonym of a new biological process term 'positive regulation of renal sodium excretion' which would be a child of the new term 'renal sodium excretion'. Further details about this discussion and the new proposed structure for diuresis and natriuresis can be viewed at

[http://wiki.geneontology.org/index.php/Diuresis\\_and\\_Natriuresis\\_call,\\_Thursday\\_24th\\_March\\_2011](http://wiki.geneontology.org/index.php/Diuresis_and_Natriuresis_call,_Thursday_24th_March_2011).





## Meetings:

- I gave a presentation on the Renal Gene Ontology Annotation Initiative at the SysKid Workshop and Annual General Meeting in January 2011 in Innsbruck, Austria.
- I attended the campus GO workshop held at the Chesterford Research Park on 7<sup>th</sup> April 2011. The aim of this workshop was to get an overview of how GO annotation is created, distributed and used by the groups at the EBI and Swiss Institute of Bioinformatics (SIB) in order to identify any synergies, overlaps or future collaborations.
- I will be presenting a poster focusing on the representation of kidney development in the Gene Ontology, at the Joint British Renal Society/ Renal Association meeting being held in Birmingham, June 2011.

## Renal interest mailing list

Just a reminder that there is a renal interest mailing list ([renal@ebi.ac.uk](mailto:renal@ebi.ac.uk)) through which I plan to send future newsletters. It will be low traffic and it would be a more convenient way of sending out information relating to the Renal GOA Initiative. The list can also be used for discussion of any issues 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>. Similarly, please do let me know 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](mailto: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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