



Renal GO Annotation Initiative

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

Newsletter July 2010

Welcome to the 5th quarterly Newsletter highlighting the progress of the Renal GOA Initiative.

Renal target list

The list of renal curation targets now comprises nearly 1500 distinct renal-related proteins which include murine orthologues and additional proteins involved in the developing genitourinary system.

The current GO annotations for this dataset can be easily viewed using the GOA group's QuickGO browser (<http://www.ebi.ac.uk/QuickGO/GAnnotation?protein=KRUK>).

Protein Annotation

To date, since 1st April 2009, this initiative has associated 5942 GO terms to 745 distinct UniProtKB proteins from the prioritized renal-related list. Of these, 147 prioritized proteins have been comprehensively annotated using GO terms.

Annotation is ongoing for the list of over 160 gene products provided by the GUDMAP Consortium Edinburgh team, which are expressed in the developing mouse genitourinary system, but previously had no associated GO terms.

Also, GO annotation for a list of differentially expressed kidney-related proteins in response to overexpression of neuropillins, is ongoing.

Gene Ontology Development

As a result of the Kidney Development Ontology Content Meeting (held in January 2010) and collaboration with renal experts, an additional 21 pronephros-specific terms describing kidney development in the *Xenopus* have been created (highlighted in Figure 1), bringing the total of new kidney development GO terms to 336. The mesonephros-specific terms relating to zebrafish kidney development are currently being created and this will be followed by the creation of new GO terms relating to renal system development for fly.





Renal Gene Ontology Annotation

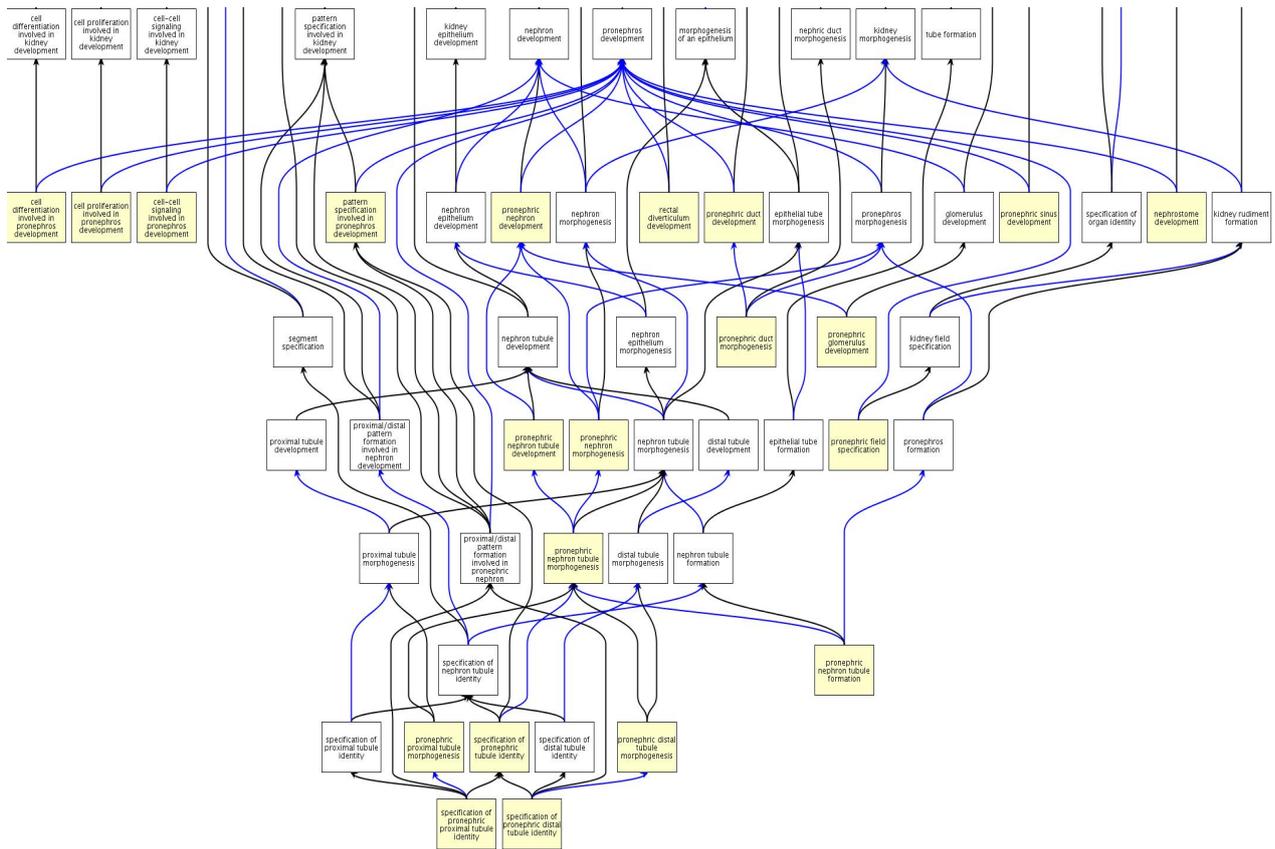


Figure 1: Section of the Gene Ontology highlighting the pronephros-specific kidney development terms following the focused ontology development effort.

Meetings

- In May 2010, I presented a poster about the Renal GO Annotation Initiative at the joint Renal Association/ British Renal Society Annual Conference held in Manchester. Dr. Rolf Apweiler also gave a talk at this meeting, highlighting the Renal GOA Initiative as one of the bioinformatics resources available for the renal biomedical research community.
- In June 2010, I attended the Gene Ontology Consortium’s Annotation Camp which was held at the Swiss Institute of Bioinformatics in Geneva. The aim of this was to improve guidelines for various aspects of annotation and to improve annotation consistency between the various Consortium members.





Renal Gene Ontology Annotation

- I will be attending the Kidney Research UK Fellows Day in September 2010, being held at Warwick University in Coventry, where I will present the progress to date within the Renal GOA Initiative.
- The initiative will also be presented to members of the pharmaceutical industry at the Industry Ontology Workshop being held at the EBI in October 2010.

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 UniProt-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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