

PROPOSAL TO TERM CHANGES: FRIDAY MARCH 25TH 2011.

UPDATED: TUESDAY APRIL 12th 2011.

DIURESIS:

regulation of biological quality ; GO:0065008

--[isa]regulation of urine volume ; GO:NEW

----[isa]positive regulation of urine volume ; GO:NEW

----[isa]negative regulation of urine volume ; GO:NEW

-----[isa]renal water retention ; GO:0003092

regulation of urine volume ; GO:NEW

Any process that modulates the amount of urine excreted from the body over a unit of time.

exact synonym: regulation of urine flow

exact synonym: regulation of urinary volume

negative regulation of urine volume ; GO:NEW

Any process that decreases the amount of urine excreted from the body over a unit of time.

broad synonym: antidiuresis

exact synonym: reduction of urinary volume

related synonym: decrease in urine flow

positive regulation of urine volume ; GO:NEW

Any process that increases the amount of urine excreted from the body over a unit of time.

broad synonym: diuresis

exact synonym: elevation of urinary volume

exact synonym: increase in urine flow

NATRIURESIS:

excretion ; GO:0007588

--[isa]renal sodium excretion ; GO:NEW

----[R]regulation of renal sodium excretion ; GO:NEW

-----[isa]positive regulation of renal sodium excretion ; GO:NEW

-----[isa]negative regulation of renal sodium excretion ; GO:NEW

--[isa]renal potassium excretion ; GO:NEW

----[R]etc for regulation terms....

renal system process ; GO:0003014

--[isa]renal sodium excretion ; GO:NEW

sodium ion homeostasis ; GO:0055078

--[partof]renal sodium excretion ; GO:NEW

renal sodium excretion ; GO:NEW

The elimination by an organism of sodium in the urine.

regulation of renal sodium excretion ; GO:NEW

Any process that modulates the amount of sodium excreted in urine over a unit of time.

positive regulation of renal sodium excretion ; GO:NEW

Any process that increases the amount of sodium excreted in urine over a unit of time.

broad synonym: natriuresis

Comment: The amount of sodium excreted in urine over a unit of time can be increased either by increasing the volume of urine produced (diuresis) or by increasing the concentration of sodium in the urine.

negative regulation of renal sodium excretion ; GO:NEW

Any process that decreases the amount of sodium excreted in urine over a unit of time.

Comment: The amount of sodium excreted in urine over a unit of time can be decreased either by decreasing the volume of urine produced (antidiuresis) or by decreasing the concentration of sodium in the urine.

renal potassium excretion ; GO:NEW

The elimination by an organism of potassium in the urine.

RENAL WATER HOMEOSTASIS:

renal water homeostasis ; GO:0003091

Renal process involved in the maintenance of an internal steady state of water in the body.

NEW EXACT SYNONYM: water homeostasis by kidney

renal water homeostasis ; GO:0003091

--[partof]renal water transport ; GO:0003097 (existing relationship)

----[isa]renal water absorption ; GO:0070295 (existing relationship)

-----[isa]renal water absorption involved in regulation of urine volume ; GO:NEW

regulation of urine volume ; GO:NEW

--[partof]renal water absorption involved in regulation of urine volume ; GO:NEW

renal water absorption involved in regulation of urine volume ; GO:NEW

Any process where water is taken up from the collecting ducts and proximal and distal loops of the nephron, which contributes to regulating the amount of urine that is excreted from the body per unit time.

renal absorption ; GO:0070293

--%renal sodium ion absorption ; GO:0070294

----%renal sodium ion absorption involved in regulation of renal sodium excretion ; GO:NEW

renal sodium excretion ; GO:NEW

--[partof]renal sodium ion absorption involved in regulation of renal sodium excretion ; GO:NEW

renal sodium ion absorption involved in regulation of renal sodium excretion ; GO:NEW
Any process where sodium ions are taken up from the collecting ducts and proximal and distal loops of the nephron, which contributes to regulating the amount of sodium that is excreted in urine per unit time.

REMOVE THE FOLLOWING RELATIONSHIPS:

renal system process involved in regulation of systemic arterial blood pressure ; GO:0003071
--[isa]renal sodium ion transport ; GO:0003096
--[isa]renal water transport ; GO:0003097

renal system process involved in regulation of blood volume ; GO:0001977
--[partof]renal sodium ion transport ; GO:0003096
--[partof]renal water transport ; GO:0003097

OBSOLETIONS:

diuresis ; GO:0030146
suggested new term: negative regulation of urine volume ; GO:NEW

regulation of diuresis ; GO:0003074
suggested new term: regulation of urine volume ; GO:NEW

negative regulation of diuresis ; GO:0003077
suggested new term: negative regulation of urine volume ; GO:NEW

positive regulation of diuresis ; GO:0003103
suggested new term: positive regulation of urine volume ; GO:NEW

natriuresis ; GO:0030147
suggested new term: positive regulation of renal sodium excretion ; GO:NEW

negative regulation of natriuresis ; GO:0003080
suggested new term: negative regulation of renal sodium excretion ; GO:NEW

positive regulation of natriuresis ; GO:0003079
suggested new term: positive regulation of renal sodium excretion ; GO:NEW

positive regulation of diuresis by angiotensin ; GO:0003102
NO SUGGESTED NEW TERM: TERM IS MISLEADING.

positive regulation of natriuresis by angiotensin ; GO:0003107
NO SUGGESTED NEW TERM: TERM IS MISLEADING.

positive regulation of renal output by angiotensin ; GO:0003082
NO SUGGESTED NEW TERM: TERM IS MISLEADING.

Note: Randy Thomas suggested the obsolescence of GO:0003102, GO:0003107 and GO:0003082 because the terms are misleading: angiotensin causes an increase in Na⁺ reabsorption by the kidney and DECREASES urine volume and urine sodium content. (It can also act indirectly by stimulating aldosterone).
Note: Randy Thomas also questioned whether there was merit in keeping the angiotensin terms. With the number of hormones that affect renal processes, angiotensin does not necessarily warrant its own term. This may be something that can be covered by cross-products in the future. The terms were originally added at the cardio meeting.

NB: I would like to obsolete these terms rather than merge or rename them, because we are altering the definition of 'diuresis' and 'natriuresis' in GO, and if annotations are remade to the new terms, it will ensure that all annotations are correct and remove confusion (hopefully).

NEW ANGIOTENSIN TERM:

regulation of renal output by angiotensin ; GO:0002019
--[isa]negative regulation of renal output by angiotensin ; GO:0003083
----[isa]negative regulation of urine sodium excretion by angiotensin ; GO:NEW
----[isa]negative regulation of glomerular filtration by angiotensin ; GO:0003106 [NAME UPDATE]
--[isa]positive regulation of renal output by angiotensin ; GO:0003082

negative regulation of urine sodium excretion by angiotensin ; GO:NEW
The process in which angiotensin decreases the amount of sodium that is excreted in urine over a unit of time.

regulation of glomerular filtration by angiotensin ; GO:0003106
The process in which angiotensin directly decreases the rate of glomerular filtration in the kidney. Glomerular filtration is the process whereby blood is filtered by the glomerulus into the renal tubule.

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negative regulation of glomerular filtration by angiotensin ; GO:0003106
[definition to stay the same]

PRESSURE NATRIURESIS:

Current set up:
renal system process involved in regulation of blood volume ; GO:0001977
--%pressure natriuresis ; GO:0003095
----[partof]positive regulation of diuresis by pressure natriuresis ; GO:0014917
----[partof]positive regulation of natriuresis by pressure natriuresis ; GO:0014918

CHANGE TO:
renal system process involved in regulation of blood volume ; GO:0001977
--%pressure natriuresis ; GO:0003095
----[isa]positive regulation of urine volume by pressure natriuresis ; GO:0014917
----[isa]positive regulation of renal sodium excretion by pressure natriuresis ; GO:0014918

Tweak definition of GO:0003095 to make it clearer.
pressure natriuresis ; GO:0003095
The process in which the volume of blood increases renal pressure and results in an increase in natriuresis and diuresis.

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The process in which the volume of blood increases renal pressure and thereby results in both diuresis (an increase in the volume of urine excreted over a unit of time) and natriuresis (an increase in the amount of sodium excreted in the urine over a unit of time).

positive regulation of diuresis by pressure natriuresis ; G0:0014917
The process in which pressure natriuresis increases the rate of diuresis.

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positive regulation of urine volume by pressure natriuresis ; G0:0014917
synonym: diuresis resulting from pressure natriuresis
An increase in the amount of urine excreted a unit of time, that contributes to pressure natriuresis.

positive regulation of natriuresis by pressure natriuresis ; G0:0014918
The process in which pressure natriuresis increases rate of natriuresis.

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positive regulation of renal sodium excretion by pressure natriuresis ; G0:0014918
synonym: natriuresis resulting from pressure natriuresis
An increase in the amount of sodium excreted in the urine over a unit of time, that contributes to pressure natriuresis.

NB: Changing the relationships from 'part-of' to 'is_a', fits with the 'by' nomenclature in the term names.
