

Textpresso Ontology -- A Vocabulary for Biological Literature

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Under Development: Last updated 02-01-2003 by eek.

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• Biological Entities

A) Gene (Attribute: none)

Definition: A group of physical features on a chromosome that act together in such a way to eventually (via transcription and perhaps translation) result in a gene product.

Example: let-60

B) Transgene (Attribute: none)

Definition: An artificially constructed gene (or genes) that is inserted into the germline in a manner that ensures its function, replication and transmission as a normal gene. [top](#)

Example: syls9

C) Allele (Attribute: none) [top](#)

Definition: One of a number of different forms of a gene that occur at the same locus but differ in base sequence.

Example: ad606

D) Cell and Cell Group (Attribute Type: (Name, Lineage, Group)) [top](#)

Definition: The basic subunit of any living thing, typically containing genetic material, an energy-producing system, and

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other components, all surrounded by a wall and/or membrane. A cell group is a collection of cells that show very similar, if not identical phenotypic characteristics.

Example: sensory neuron, muscle, AB.p

E) Cellular component (Attribute Source: (Go, Janus)) [top](#)

Definition: Subcellular structures, locations, and macromolecular complexes.

Examples: SnoRNA, mitochondrion, nucleus, telomere, and origin recognition complex.

F) Nucleic Acid (Attribute Type: (DNA, RNA, other)) [top](#)

Definition: Nucleotides that are the subunits of DNA and RNA..

Example: Cytosine, Uracil

G) Organism (Attribute: none) [top](#)

Definition: A virus or a unicellular or multicellular prokaryote or eukaryote.

Example: C. elegans, Homo sapiens, S. pombe

H) Entity Feature (Attribute Type: (Protein, DNA, RNA, other)) [top](#)

Definition: A feature or component of a biological entity.

Example: Transposon, Codon, Valine

I) Life Stage (Attribute: none) [top](#)

Definition: The functional, morphological or time stages through which an organism passes.

Example: Embryo

J) Phenotype (Attribute: none) [top](#)

Definition: A set of observable physical characteristics of an individual organism.

Example: Fog, Dumpy, Phenotype, Wildtype

K) Strain (Attribute: none) [top](#)

Definition: An intraspecific group of organisms that possess only one or a few distinctive traits and are maintained as an

artificial breeding group.

Example: N2

L) Sex (Attribute Type: (male, female, hermaphrodite)) [top](#)

Definition: The state of condition of an organism which comes to expression in the production of germ cells.

Example: male

M) Drugs and Small Molecules (Attribute Type: (antibiotic, unknown))

[top](#)

Definition: Any chemical substance that affects the functioning of living things directly or indirectly.

Example: Ampicillin

O) Molecular Function (Attribute Source: (Go, Janus); Attribute Protein: (yes, no)) [top](#)

Definition: The tasks performed by individual gene products.

1st example: Transcription factor

2nd example: DNA helicase

P) Mutant (Attribute: none) [top](#)

Definition: Indicates that something is produced by or follows a mutation; also a mutant gene.

1st example: ced-1 [mutant](#) background.

2nd example: [Deformed](#) tail region.

P) Clone (Attribute: none) [top](#)

Definition: A vector used for cloning DNA.

Examples: Cosmid, cDNA, YAC, yk1215d07

• Actions, Facts or Circumstances that Relate Two Entities or Describe One [top](#)

A) (Physical) Association (Attribute Type: (positive, negative, unknown))

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Definition: A spatial connectivity supported by noncovalent bonds.

Example: The PHA-4 protein binds to a regulatory region of the pharynx myosin-encoding myo-2 gene.

B) Consort (abstract association) (Attribute Type: (positive, negative, unknown)) [top](#)

Definition: An abstract connectivity established by an abstract concept or unspecified process or function.

1st example: Another partner for sdc-2 is sdc-3.

2nd example: Dpy genes and sdc genes work together in all aspects of dosage compensation.

C) Effect (Attribute Type: (positive, negative, unknown)) [top](#)

Definition: The power to bring about a result upon an entity.

1st example: We examined tkr-1 and tkr-2 transgenics for effects on stress resistance and longevity.

2nd example: Therefore , the possibility existed that RNAi of pdk-1 actually abolishes pdk-1 gene activity.

D) Purpose (Attribute: none) [top](#)

Definition: Indication that a thing or part is specially fitted or used as or for which a thing exists.

Example: UNC-45 is a component of thick filaments and functions as a stabilizer for MHC B.

E) Pathway (Attribute Type: (downstream, upstream, parallel, bypass, redundant, unknown)) [top](#)

Definition: A (hierarchical) sequence, network, or part of it, of reactions or processes that involve biological entities.

Example: Therefore, the genes acting downstream of gsk-3 in the Wnt pathway are not required for proper EMS spindle orientation.

F) Regulation (Attribute Type: (positive, negative, unknown)) [top](#)

Definition: The act of fixing or adjusting a quality (time, amount, degree, or rate) of an entity upon itself (autoregulation) or on another entity or entities (A regulates B).

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1st example: Third , son-1 (sy549) enhances the phenotypes of a weak allele of lin-17 to null-like phenotypes.

2nd example: Interestingly, pie-1 mutants inappropriately derepress the transcription of several genes in germline blastomeres.

G) Comparison (Attribute Type: (similar, identical, different)) [top](#)

Definition: An examination of two or more items to establish similarities and dissimilarities.

1st example: Unc-129 mutants on their own exhibit defects in dorsalward axonal projection that resemble those caused by unc-6 or unc-5 mutations.

2nd example: The general gene organization is similar to that of Drosophila and vertebrates but the gene expression mechanism was somewhat different.

H) Spatial Relation (Attribute Type: (close, distant, unknown)) [top](#)

Definition: An aspect or quality (as resemblance) that connects two or more things or parts in space.

1st example: However, unc-25 and unc-47 are 0.15 map units apart .

2nd example: Reporter gene transformation studies demonstrated that regulation of this gene is mediated by a compact region close to the transcription start site.

I) Time Relation (Attribute Type: (earlier, later, simultaneously)) [top](#)

Definition: An aspect or quality (as resemblance) that connects two or more things or parts in time.

Example: The factors that regulate these genes will be expressed in the same cell lineage but earlier than the expression of target genes.

J) Involvement (Requirement: (yes, no)) [top](#)

Definition: To be present in an event or process as an active element or member.

1st example: mec-7 is a b-tubulin gene required for the production of 15-protofilament microtubules in Caenorhabditis elegans.

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2nd example: Two predicted transcription factors, *skn-1* and *pop-1*, are necessary for the MS developmental program, including the production of pharyngeal cells.

3rd example: This mutual exclusivity of cell fates presumably involves a network of gene activity that not only activates genes appropriate to that cell type but represses all others, thereby ensuring an either-or decision.

4th example: *Pop-1* is involved in Wnt-dependent asymmetric cell division of the EMS blastomere.

K) Characterization (Attribute: none) [top](#)

Definition: The description of the character or quality of something.

1st example: Similarly, the *ges-1* gene promoter contains a pair of GATA motifs that are required for proper intestine-specific expression.

2nd example: The gene has nine small introns typical of *C. elegans*.

L) Localization in Time or Space (Attribute Type: (spatial, temporal, general, unknown)) [top](#)

Definition: A position or site occupied or available for occupancy or marked by some distinguishing feature in time or space.

1st example: We ablated all cells in the gonad primordium of *let-23 (sa62) unc-4 (e120) mnC1* or *let-23 (sa62) unc-4 (e120) let-23 (sa62) unc-4 (e120) larvae* before the first division of the somatic gonad precursors Z1 and Z4.

2nd example: We picked *let-23 (sa62) unc-4 (e120)* animals or *unc-4* control animals at the L4 stage.

3rd example: The *ced-4 (n1162)* allele contains an ochre stop mutation at codon 79 and is probably a molecular and genetic null allele.

M) Method (Attribute: none) [top](#)

Definition: A way, technique, or process for doing something.

Example: Cell ablation, Immunoprecipitation

N) Biological Process (Attribute Source: (Go, Janus); Attribute Type: (molecular, cellular, organismal, general); Attribute Biosynthesis:

(transcription, translation, expression, replication, other, no) [top](#)

Definition: Broad biological goals, such as mitosis or purine metabolism, that are accomplished by ordered assemblies of molecular functions.

1st example: The expression of *syn-4* in the seam cells of L1 larvae might indicate that *syn-4* plays a role in secretion of the worm cuticle.

2nd example: All four fly *msl* genes are transcribed in both sexes.

O) Action (Attribute: none) [top](#)

Definition: The exertion of energy or influence on any entity.

1st example: *sel-12* activity facilitates the activity of *LIN-12* and *GLP-1*, two receptors of the *LIN-12*yNotch family.

2nd example: This data supports the idea that *gld-2(lf)::gld-1(lf)* double mutants never enter meiosis.

3rd example: Neither the *sma6(e1482)* nor the *sma-4(e805)* alleles elicit tail defects.

P) Descriptor (Attribute: none) [top](#)

Definition: A word or phrase that has the function of describing the state or condition of an entity.

1st example: Sterility is caused by necrotic death of germ cells during larval development.

2nd example: Thus, fertile *mes-1* adults arise from embryos that undergo an apparently normal lineage.

• Other Entities (mainly used for semantic analysis)

Auxiliary (forms of the verbs 'be' and 'have'), **Bracket**, **Determiner**, **Conjunction** (and, or, because, since, although,...), **Conjecture** (could, might, should, suggests... to indicate the certainty of a statement), **Negation**, **Pronoun**, **Preposition**, **Punctuation**.

28/05/02 *hmm and ek*