

Changes: new is_a parents

Added is_a parents for terms without

7/12/10

PO:0000001 embryo proper: The body of the developing embryo attached to the maternal tissue in the ovule by filamentous suspensor.

>embryo

PO:0000002 anther wall: A multicellular layer with outer epidermis and an inner endothecium.

>p of p tissue

PO:0000031 lenticel: A portion of ground tissue composed of a loosely-packed mass of cork cells occurring especially in the young stem, bark or even leaf of a plant, visible on the surface as a raised, often powdery-appearing spot. Comment: Gas can be exchanged through the lenticel.

>p of ground tissue

Changed part_of stem to part_of shoot axis.

PO:0000035 cotyledon vascular system: A vascular system that is part of a cotyledon.

>vascular system

PO:0006220 central endosperm: The central region of the endosperm composed of cells that are significantly larger than those at the periphery, especially the aleurone and sub-aleurone layers.

>p of p tissue. Was is_a endosperm, but should be part_of

PO:0000201 chalazal cyst: A portion of plant tissue that is the part of the endosperm nearest the chalazal region of the ovule and forming a cyst-like structure.

>p of p tissue

PO:0000200 micropylar endosperm: A portion of plant tissue that is the region of the endosperm closest to the micropyle of the seed.

>p of p tissue

PO:0005360 aleurone layer: A portion of plant tissue that is the outermost layer of endosperm in a seed, its cells being characterized by presence of protein bodies containing seed storage proteins.

>p of p tissue

PO:0000224 central zone: An area of densely packed cells in the shoot apex that divide infrequently.

>meristem, p_o SAM

PO:0000225 peripheral zone: Organogenic region of the meristem, characterized by higher rates of cell division.
>meristem, p_o SAM

PO:0000226 rib zone: The region of the shoot apical meristem that lies below the central zone and is flanked by the peripheral zone.
>meristem, p_o SAM

PO:0009020 meristem L1: The outermost layer of a shoot apical meristem that gives rise to a shoot epidermis.
>meristem, p_o SAM

PO:0009021 meristem L2: A cell layer directly beneath a meristem L1 layer in a shoot apical meristem which gives rise to subepidermal tissue.
>meristem, p_o SAM

PO:0009022 meristem L3: A multicellular layer beneath a meristem L2 layer in a shoot apical meristem which gives rise to internal tissues of leaf and stem.
>meristem, p_o SAM

PO:0000272 protoxylem: A portion of xylem tissue composed of any of the first formed elements of the primary xylem.
>xylem, p_o primary xylem

PO:0000372 metaxylem: A portion of xylem tissue that is part of the primary xylem and differentiates after the protoxylem and before the secondary xylem, if any of the latter is formed.
>xylem, p_o primary xylem

PO:0004519 phloem fiber: A fiber in phloem.
>axial cell
>may want to make parent term fiber (is_a plant cell), and group xylem and phloem fiber there, then get rid of term xylem element and just keep tr

PO:0004524 included phloem: A portion of phloem tissue produced by included vascular cambium.
>secondary phloem (changed from part_of secondary phloem)

PO:0020001 ovary placenta: A placenta that is part of an ovary and to which ovules are attached.
>placenta (new term)

PO:0004535 fruit placenta: A placenta that is part of a fruit and to which seeds are attached.
>placenta (new term)

PO:0004700 middle layer: Usually a single cell layer between tapetum and endothecium which almost invariably degenerates early during angiosperm anther development and is eventually absorbed by adjacent cells.
>p or p tissue (maybe parenchyma?)

PO:0004720 paraclade: Lateral branch which ends in an inflorescence that repeats the main inflorescence.
>branch. removed part_of stem relations. Already part_of shoot system b/c it is a shoot axis.

7/16/10

PO:0005020 vascular bundle: A unit strand of the vascular system containing the vascular tissues, xylem and phloem. In addition vascular cambium is often present.
> p of p tissue Also added comment that it may contain portions of ground tissue.

PO:0005022 ovary wall: A wall of an ovary that is composed of abaxial (outer) and adaxial (inner) epidermis and a middle layer, composed of mesophyll cells and a distinct subepidermal adaxial cell layer (as found in *Arabidopsis*).
> cardinal organ part (because it is part of ovary, and ovary is part of carpel)

PO:0005025 middle layer of ovary wall: A portion of chlorenchyma tissue that is composed of one or more mesophyll layers. It may have a distinct subepidermal adaxial cell layer (as found in *Arabidopsis*).
>chlorenchyma

PO:0005050 phelloderm: A portion of ground tissue often resembling cortical parenchyma produced centripetally by the cork cambium.
> portion of ground tissue

PO:0006005 carpel anlagen: A presumptive region (carpel anlagen) on a floral meristem, where carpel primordia would initiate.
>meristem

PO:0006006 primary parietal cell layer: A primary parietal cell and adjacent cells.
> portion of plant tissue (may be able to be more specific)

PO:0006007 secondary parietal cell layer: The cells of the primary parietal cell layer undergo a periclinal division resulting in the formation of the two secondary parietal layers.
>p of plant tissue

PO:0006012 leaf collar: A thin band of intercalary meristematic tissue at the junction of a leaf blade (lamina) and a leaf sheath found in grasses.

>meristem

PO:0006013 juice sac. As found in citrus the mature juice sac is a swollen sac with a slender stalk and a sac wall lined with layers of tightly arranged cells. It develops from a single cell of the endocarp. Endocarp develops from the carpellary inner epidermis.

>p of plant tissue

PO:0006074 procambium: A portion of primary cambium that undergoes differentiation to form the primary vascular tissue.

>cambium

PO:0006211 separation layer: A portion of plant tissue containing cells that develop an abnormal wall chemistry and swelling resulting in easily being pulled apart along the pectin-rich middle lamella; directly involved in the weakening process of abscission.

>p of p tissue (maybe could be more specific. Ground tissue? Parenchyma?)

PO:0006212 protective layer: A portion of plant tissue composed of a layer of cells in the abscission zone that have lignin and suberin depositions and are found on the axial side of the break or exposed surface of abscission.

>p of p tissue

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PO:0004708 scutellar node: The region in the embryo between the primary root (enclosed in the coleorhiza) and the plumule (enclosed in the coleoptile) to which the scutellum is attached.

>shoot node

PO:0020026 chalaza: Region in the ovule where the integuments and the nucellus join with the funiculus.

>portion of plant tissue (maybe could be more specific)

PO:0006333 seed chalaza: A remnant of the ovular chalaza that is part of the seed.

>p of plant tissue

PO:0020029 obturator: An outgrowth of the funicle, that forms a bridge between the micropyle and other tissues.

>p of p tissue

PO:0006336 seed obturator: An outgrowth of the seed funicle, that forms a bridge between the seed micropyle and other tissues. It is also a remnant form of the obturator found in the ovular funicle.

>p of p tissue

PO:0008004 fruit aleurone layer: An aleurone layer of the grass caryopsis, its cells being characterized by presence of protein bodies containing seed storage proteins.
>aleurone layer

PO:0020020 nucellus: A portion of subepidermal tissue in the ovule surrounding the megasporocyte.
>p of plant tissue

PO:0008005 fruit nucellus: A nucellus in the grass caryopsis.
>nucellus

PO:0008006 nucellar epidermis: A portion of plant tissue that is the morphologically distinct outer layer of the nucellus.
>p of p tissue

PO:0008007 nucellar projection: A portion of plant tissue that is the morphologically distinct portion of the nucellus overlying the vascular strands in the grass caryopsis.
>p of p tissue

PO:0008008 modified aleurone: A morphologically distinct aleurone layer located adjacent to the nucellar projection.
>aleurone layer

PO:0008009 abaxial nucellar projection: A portion of plant tissue that is the abaxial/lower portion of the nucellus overlying the vascular strands in the grass caryopsis.
>p of p tissue

PO:0008010 adaxial nucellar projection: A portion of plant tissue that is the adaxial/upper portion of the nucellus overlying the vascular strands in the grass caryopsis.
>p of p tissue

PO:0020138 leaf vein: A strand of vascular tissue in the leaf blade.
>p of vascular tissue. Changed part_of leaf lamina to part_of vascular leaf

PO:0008021 tertiary vein: A leaf vein arising from a secondary vein.
>leaf vein. Deleted develops_from secondary vein relation, b/c that is wrong.

PO:0008022 quaternary vein: A leaf vein arising from a tertiary vein.
>leaf vein. Deleted develops_from tertiary vein relation, b/c that is wrong.

PO:0008023 higher order vein: A leaf vein arising from a quaternary or higher vein order.
>leaf vein. Deleted develops_from quaternary vein relation, b/c that is wrong.

PO:0008029 petiole abaxial epidermis: A portion of leaf epidermis that covers the abaxial/lower surface of the petiole.
>leaf epidermis

PO:0008027 petiole adaxial epidermis: A portion of leaf epidermis that covers the adaxial/upper surface of the petiole.
>leaf epidermis

PO:0008030 trichome cell: A cell that is part of a trichome.
>plant cell

PO:0008042 stem internode differentiation zone: Region in stem internode where cells are becoming specialized to form cortex, endodermis, or vascular tissue.
>cardinal organ part

PO:0008041 stem internode elongation zone: Zone of pronounced cell elongation in stem internode.
>cardinal organ part

PO:0008045 floral guard cell: One of a pair of cells flanking the stomatal pore of floral organs.
>guard cell

PO:0008047 scutellar vascular system: A vascular system in a scutellum.
>vascular system

PO:0008048 scutellar epithelium: A continuous layer of cylindrical cells covering the endosperm side of the scutellum. Thought to act as a secretory and absorptive organ.
>p of p tissue

PO:0009071 tapetum: Innermost part of the anther wall, involved in the nutrition of the pollen.
>p of p tissue

PO:0009081 inflorescence branch: Any branch forming from the primary or the higher order inflorescence axis.
>branch

PO:0009084 pericarp: A wall of a fruit, developed from the ovary or carpel wall.
>p of p tissue

PO:0009085 epicarp: A portion of plant tissue that is the outer layer of a pericarp.
>p of p tissue

PO:0009086 endocarp: A portion of plant tissue that is the innermost differentiated layer of a pericarp.
>p of p tissue

PO:0009087 mesocarp: A portion of plant tissue that is the middle layer of a pericarp.
>p of p tissue

PO:0009088 seed coat: A portion of plant tissue that is the covering of a seed derived from ovular - mainly integumentary - tissue.
>p of p tissue

PO:0019024 seed operculum: A plug-like structure formed in the micropylar region of the seed coat.
>p of p tissue

PO:0019026 tracheid bar: A distinct ring-like structure, composed of tracheid cells, which surrounds the hilum of some taxa e.g., Phaseolus, and forms a groove in the surface of the pericarp (immediately adjacent to the hilum).
>p of vascular tissue

PO:0020021 integument: One of the layers of tissue that usually covers an ovule, enveloping a nucellus and forming the micropyle at the apex.
>p of plant tissue

PO:0020024 endothelium: Cells of the inner epidermis of the inner (or only) integument of the ovule that are radially elongated and metabolically very active.
>p of plant tissue

PO:0020032 plumule: The somewhat differentiated terminal bud in several embryo types above the cotyledonary node, in which one or more internodes and leaves or scales can be discerned in a primordial stage.
>terminal bud

PO:0020034 coleorhiza: A portion of plant tissue surrounding the radicle in the embryo or seedling of some monocots.
>p of plant tissue

PO:0020036 epiblast: A flap of tissue in an embryo or seedling arising opposite to the insertion of the cotyledon/scutellum.
>p of plant tissue

PO:0020035 epicotyl: The first internode of a stem above the hypocotyl. In literature also used for the entire embryonic axis, consisting of several internodes, above the cotyledonary node.
>stem internode

PO:0020037 mesocotyl: The internode between the cotyledon or cotyledons and the leaf or leaves at the next node of a young sporophyte.
>stem internode

PO:0020041 stipule: One of (usually) a pair of appendages at the bases of leaves in many broad-leaved angiosperms.
>phyllome

PO:0020056 tegmen: That part of the seed coat that develops from the inner integument.
>p of plant tissue

PO:0020057 testa: That part of the seed coat that develops from the outer integument, or from the single integument when there is only one.
>p of plant tissue