Greek and Latin in Scientific Terminology, Lecture 8

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# Your Test Next Thursday

## Roots for Reading

* Essentially the same as the last test, but dealing with Latin this time (up to the end of Lecture 9).
* Multiple choice section will be cumulative, but concentrate on the most recent readings.
* There will be no Greek transliteration.
* Instead, you will be given a set of English roots and be asked to construct words from the corresponding Latin roots.
* In addition, you will be given a text from a scientific journal and be asked to select several words, providing their Greek or Latin roots (i.e. what you have been doing every week, but without a dictionary).
* The Greek vocabulary will not be tested separately, but keeping it fresh will make your life easier, since some of the same roots show up in Latin. It will also give you a larger selection of words to use for the reading selection (and you need to know it for the final on 20 August anyway).

# Suffixes I

## -al, (-ial, -eal)

* ‘pertaining to’, ‘like’, ‘belonging to’, ‘having the character of’ (*-alis*)
* abdominal, legal, oral, corporal

## -ile, -il

* ‘pertaining to’, ‘like’, ‘belonging to’, ‘having the character of’ (*-ilis*)
* hostile, juvenile, virile, civil

## -ar

* ‘pertaining to’, ‘like’, ‘belonging to’, ‘having the character of’ (*-aris*)
* lunar, solar, popular

## -ine

* ‘pertaining to’, ‘like’, ‘belonging to’, ‘having the character of’ (*-inus*)
* bovine, marine, feminine

## -ic, -tic

* ‘pertaining to’, ‘like’ (*-icus, -ticus*)
* pelvic, civic, lunatic

## -ary

* ‘pertaining to’, ‘connected with’, ‘having the character of’ (*-arius*)
* military, literary, sanguinary

## -an, -ane

* ‘pertaining to’, ‘like’, ‘belonging to’, ‘having the character of’ (*-anus*)
* urban, veteran, Canadian

## -form (usually -iform)

* ‘like’, ‘having the shape of’ (*-formis*)
* reniform, muriform, oviform

## -ate (occasionally -ite)

* ‘having’, ‘having the shape of’, ‘characterized by having’ (*-atus*)
* effeminate, accurate, dentate, favourite

## -(u)lent, -(o)lent

* ‘full of’, ‘disposed to’ (*-lentus*)
* fraudulent, purulent, sanguinolent, virulent

## -ose

* ‘full of’ (*-osus*)
* verbose, rugose, comatose

## -ous (-ious, -eous)

* ‘full of’, ‘having the character of’ (*-osus, -us*)
* various, populous, nervous

## -aceous

* ‘belonging to’, ‘resembling’
* herbaceous, cretaceous, chartaceous

# Isidore of Seville

## How not to write etymologies

* Isidore of Seville was a bishop living in seventh-century Spain; his book *Etymologies* was a very popular reference work up to the end of the Middle Ages

## Trans. by Dirckx (2007)

Frenesis is so called either because it is a disorder of the mind (G. *phrenes*) or because its victims grind their teeth (L. *frendere* 'to gnash the teeth'). This is a form of mental disturbance with violent behavior and dementia, a choleric affliction.

Hydrophobia is literally ‘fear of water’ (G. hydor ‘water’, phobos ‘fear’); compare the Latin term morbus lymphaticus, from lympha ‘water.’ This is caused by the bite of a mad dog, or even by coming into contact with its saliva spilled on the ground, which will provoke either man or beast to madness and rage.

Lues derives its name from labes [‘destruction’] and luctus [‘mourning’], because it progresses so rapidly that the patient has no time either to hope for recovery or to wish for death, but sinks at once into a fatal languor.

Pestilentia is a contagion that spreads swiftly from one person to another. It is engendered by corrupt air and gains a foothold by penetrating to the inward parts. (The power of that malignant air notwithstanding, it can do nothing without the consent of almighty God.) The term is a variant of pastulentia [‘feeding, pasturage’], because pestilence devours like fire; as Virgil says, ‘The destruction [of a fire] rages indiscriminately through everything’ (Aeneid 5, 683). It is also called contagium from ‘contacting’ [contingendo], because whatever it touches it pollutes.

Epilemsia amounts to an attack or assault (G. epilepsia) on both mind and body. It arises from a superabundance of black bile acting on the brain. It is also called the falling (L. caduca) sickness because during an attack the patient falls down. Lay persons call victims of this disorder lunatici because they imagine that the demons follow the phases of the moon in playing their tricks, and also larvatici. Still other names are the great, divine, or comitial disease. Great it certainly is, in that it can make a healthy man fall down and foam at the mouth. It is called comitialis because, in pagan times, if someone had such an attack on a day set aside for a public assembly [L. comitium], the assembly was postponed. Among the Romans such a day was set aside each year in January.

Vertigo means a whirlwind that stirs up earth and throws it around. In the vertex of the human body, arteries and veins can likewise stir up a wind from undue moisture and relaxation, and cause the eyes to spin, and that too we call vertigo.

Cancer, Latin for ‘crab,’ is named for its similarity to the sea creature. According to the physicians, no medicine can cure such a lesion. Although the part in which it arises is often excised so as to prolong the patient’s life, death nonetheless eventually ensues.

* Manuscripts of the *Etymologies*:
  + [Zofingen, Stadtbibliothek, Pa 32](http://www.e-codices.unifr.ch/en/list/one/zos/pa0032)
  + [St. Gallen, Stiftsbibliothek, Cod. Sang. 236](http://www.e-codices.unifr.ch/en/list/one/csg/0236)
  + [St. Gallen, Stiftsbibliothek, Cod. Sang. 231](http://www.e-codices.unifr.ch/en/list/one/csg/0231)
  + [St. Gallen, Stiftsbibliothek, Cod. Sang. 879](http://www.e-codices.unifr.ch/en/list/one/csg/0879)
* Manuscript of *On the Nature of Things*
  + [Staatsbibliothek Bamberg Msc.Patr.61](http://bsbsbb.bsb.lrz-muenchen.de/~db/0000/sbb00000157/images/index.html?seite=00173&signatur=Msc.Patr.61).

# Roots, Part I

## ACIN-

* ‘grapes in a cluster’ (*acinus*)
* ACIN-ar, pertaining to an acinus, a small seed or kernel, as of a grape; inter-ACIN-ar, among alveoli of a racemose gland; ACIN-iform, grape- or berry- shaped (applies to a type of silk gland in a spider)

## AL-

* ‘wing’, (*ala*)
* ALA, any winglike projection or structure; ex-AL-ate, not having winglike appendages, apterous; ALI-FER-ous, having wings; ALI-NOT-um, the dorsal plate of an insect to which wings are attached

## ANNUL-

* ‘ring’ (*annulus*)
* ANNULUS, any ringlike structure; ANNUL-ose, possessing rings

## APIC-

* ‘tip’, ‘summit’, ‘apex’ (*apex*)
* sub-APIC-al, nearly at the apex; peri-APIC-al, around an apex; APIC-ul-ate, forming abruptly to a small tip, as a leaf

## ARGENT-

* ‘silver’ (*argentum*)
* ARGENT-eous, like silver; ARGENTI-FER-ous, producing or containing silver; ARGENT-in-idae, family of small, silvery marine fishes

## CAN-

* ‘dog’ (*canis*)
* CAN-in-idae, family which includes dogs, wolves and jackals; CAN-in-iform, having the form of a typical canine tooth

## CAPIT- (-CIPIT-)

* ‘head’ (*caput*)
* CAPIT-al; BI-CEPS; CAPIT-ulum or CAPIT-ellum, knoblike swelling on the end of bone; CAPIT-ell-idae, family of worms with small heads

## DUR-

* ‘hard’ ‘dura mater’ (*durus*)
* en-DURE; ob-DUR-ate; in-DUR-at-ion, the hardening of a tissue or part; epi-DUR-al, space between the dura mater and the wall of the vertebral canal; DUR-amen, hard darker central region of a tree stem, heart-wood

## EQU-

* ‘horse’ (*equus*)
* EQU-estrian; EQU-it-at-ion; EQU-it-ant, overlapping saddle-wise, as leaves in a leaf-bud; EQU-idae, family of mammals having a single extant genus, Equus, which includes the horse, ass and zebra

## LACRIM- (LACHRYM-)

* ‘tear’ (*lacrima*)
* LACRIM-al, pertaining to tears or to tear-secreting organs, the lacrimal bone; NASO-LACRIM-al, pertaining to the nose and lacrimal apparatus

## LACUN-

* ‘small pit’, ‘gap’ (*lacuna*)
* LACUNA, a space between cells; a sinus; a cavity in bone; a small cavity or depression on the surface of lichens; a leaf gap; LACUN-oso-RUG-ose, having deep furrows or pits, as some seeds and fruits

## LIMIN-

* ‘threshold’ (*limen*)
* e-LIMIN-ate; LIMEN, threshold, minimum stimulus or quantitative difference in stimulus that is perceptible, or boundary; LIMEN NASI, boundary between the osseous and cartilaginous portions of the nasal cavity; LIMIN-al, pertaining to a threshold, applies to stimulus, sensations

## MAL-

* ‘cheek’, ‘cheekbone’ (*mala*)
* MAL-ar, pertaining to the cheek or to the zygoma

## OCUL-

* ‘eye’ (*oculus*); OCELL-, ‘little eye’ (*ocellus*)
* MON-OC-le; OCELL-ate, like an eye or eyes, applies to marking in many animals; TRANS-OCUL-ar, extending across the eye; MON-OCULE, a one-eyed animal

## PALAT-

* ‘palate’, ‘roof of the mouth’ (*palatum*)
* PALAT-ine, pertaining to or in the region of the palate (said of artery, bone, foramen); PALAT-itis, inflammation of the palate; PALAT-iform, resembling the palate

## PARIET-

* ‘wall’ (*paries*)
* PARIES, wall of a hollow structure; PARIET-al, pertaining to or forming part of the wall of a structure (of cells, membrane, etc.), also the parietal bone in the roof of the skull; UTERO-PARIET-al, pertaining to the uterus and abdominal wall

## PLANT-

* ‘sole of the foot’, ‘sprout’ (*planta*)
* PLANTA-, the sole of the foot, or the first tarsal joint of insects; PLANTI-GRADE, walking on the full sole of the foot; im-PLANT; trans-PLANT-at-ion

## PONT-

* ‘bridge’ (*pons*)
* PONT-oon; PONTI-FF; PONS, a process or bridge of tissue connection two parts of an organ, or a convex white eminence situated at the base of the brain; CEREBRO-PONT-ine, relating to cerebrum and pons; PONTO-BULB-ar, pertaining to the pons and the medulla oblongata

## PULVIN-

* ‘cushion’ (*pulvinus*); PULVIL-, ‘little cushion’ (*pulvillus*)
* PULVINUS, a cellular swelling at the junction of axis and leaf stalk; PULVILLUS or PULVIN-ulus, pad, process or membrane on the foot or between the claws, the lobe between each claw

## SEN-

* ‘old’ (*senex*)
* SEN-ior; SEN-ate; pre-SEN-il-ity, premature old age; SEN-OP-ia, the change of vision in the aged in which persons formerly myopic acquire what seems to be normal vision because of presbyopia

# [A ‘Terror of Tyrannosaurs’](http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0103613)

## Your Words

* pathology
* tyrannosaurids, tyrannosauridae
* gregariousness
* palaeontology
* locomotion, locomotor
* oviraptorosaurian
* osteology, osteological
* ichnologic, ichnofamily
* metatarsus
* proximodistal
* daspletosaurus
* *Gorgosaurus libratus*
* phalanges
* tibiotarsus
* astragalus
* tridactyl
* mesaxonic
* palaeoichnological
* Cretaceous
* theropod
* intertarsal

# Final Assignment

## In-Depth Vocabulary Analysis

* A slightly more advanced version of your weekly vocabulary analyses:
  1. Select twenty terms from two recent (2014) articles in peer-reviewed scientific journals.
  2. Analyse their etymology and meaning, showing their breakdown into individual roots (as in the vocabulary list).
* You should use at least three professional dictionaries (or other appropriate scholarly sources; a bibliography will be distributed) to support your findings. Sources are only acceptable if they have gone through a peer-review process (any academic dictionary).
* Articles must be fully cited using either the author-date system of the [*Chicago Manual of Style*](http://www.chicagomanualofstyle.org.myaccess.library.utoronto.ca/) (used in the syllabus) or another style relevant to your discipline. You must include links to the articles.
* Should be written in a prose format, similar to what you find in [Soutis (2006)](http://dx.doi.org/10.1016/j.jpedsurg.2006.03.011).

# Roots, Part II

## AQU(A)-

* ‘water’ (*aqua*)
* AQUA-tic, AQUE-DUCT; AQUI-FER, a water-bearing bed or stratum of permeable rock, sand or gravel; AQUA REGIA, a mixture of nitric and hydrochloric acids which dissolves gold

## BREV-

* ‘short’ (*brevis*)
* BREV-ity; ab-BREVI-ate; BREVI-PED, having short legs; BREVI-FOLI-ate, having short leaves; BREVI-LINGU-al, with a short tongue

## CAPILL-

* ‘hair’ (*capillus*)
* CAPELL-ini; CAPILL-ary; CAPILL-ar-ec-TAS-ia, dilatation of the capillaries; CAPILL-aceous, having hairlike filaments

## COLL-

* ‘neck’ (*collum*)
* COLL-ar bone, the clavicle; TORTI-COLL-ar, affected with wry-neck or TORTI-COLL-is

## CORON-

* ‘crown’ (*corona*); COROLL-, ‘little crown’ (*corolla*)
* COROLLA, the petals of a flower; COROLL-aceous, pertaining to a corolla; CORON-illa, genus of flowers named for crown-shaped flowers

## CORTIC-, CORT-

* ‘bark’, ‘outer layer’ (*cortex*)
* CORTEX, outer or more superficial part of an organ, the cerebral cortex; infra-CORTIC-al, beneath the cortex; CORTICI-PET-al, conducting toward the cortex

## CRUC-

* ‘cross’ (*crux*)
* CRUCI-FY; ex-CRUCI-at-ing; CRUCI-FER, a plant with four petals and tetradynamous stamens, a member of the family Cruciferae; CRUCI-ate, cross-shaped

## CUNE-

* ‘wedge’ (*cuneus*)
* CUNE-iform; CUNE-ate, wedge-shaped; prae-CUNE-us, the medial surface of the parietal or the quadrate lobe of the cerebrum

## ENS-

* ‘sword’ (*ensis*)
* ENS-iform, sword-shaped, as the ensiform cartilage

## FALC-

* ‘sickle’ (*falx*)
* FALX, sickle-shaped fold of dura mater; FALC-ate, sickle-shaped, hooked

## FUG-

* ‘to flee’, ‘to put to flight’
* re-FUGE; FUGI-tive; NIDI-FUG-ous, leaving the nest soon after hatching; CEREBRI-FUG-al, applies to nerve fibres which pass from the brain to the spinal cord; LACTI-FUGE, a drug or agent that lessens the secretion of milk

## LINE-

* ‘line’ (*linea*)
* LINE-ar; de-LINE-ate; LINE-at-ion, an arrangement of lines; LINE-ol-ate, marked by fine lines or striae

## LUC-

* ‘light’, ‘to shine’ (*lux*)
* LUC-id; e-LUC-id-ate; NOCTI-LUC-ent, phosphorescent, luminescent; LUCI-FUG-al, fleeing from or avoiding light

## MATR-, MATERN-

* ‘mother’ (*mater, maternus*)
* MATRO-CLIN-ous, derived from or inherited from the maternal line; MATR-ix, something within which something else originates or takes form or develops

## MONT-

* ‘mountain’ (*mons*)
* MONTI-COL-ous, inhabiting mountainous regions; MONT-iculus, largest part of the superior vermis of the cerebellum; MONT-icules, small eminences or prominences

## MULT-

* ‘many’ (*multus*)
* MULTI-CARIN-ate, having many carinae or ridges; MULTI-COST-ate, with many ribs, ridges or veins; MULTI-OCUL-ur, many-eyed

## RET-

* ‘net’, ‘network’ (*rete*)
* RETE, a network or net; RET-ina, the light-receptive layer and terminal expansion of the optic nerve in the eye; RET-icle or RET-iculum, a delicate network of cell protoplasm

## ROSTR-

* ‘beak’ (*rostrum*)
* ROSTRUM, beak or beaklike process; LONGI-ROSTR-al, with a long beak; ROST-ell-iform, shaped like a small beak

## TORQU-, TORT-, TORS-

* ‘to twist’
* TORT; re-TORT; TORT-ure; dis-TORS-ion, the act of twisting; LATERO-TORS-ion, a twisting to one side; con-TORTU-PLIC-ate, applies to a bud with contorted and plicate leaves

## VERM-

* ‘worm’ (*vermis*)
* VERMI-celli; VERM-icul-at-ion, wormlike or peristaltic movement, or fine, wavy markings; VERMI-LINGU-al, having a worm-shaped tongue; VERMI-PAR-ous, producing wormlike young, as do blowflies

# Negation

## [Džuganová (2006)](http://www.bmj.sk/2006/10708-13.pdf)

* Negative prefixes:
  + a-
  + dis-
  + in-
  + non-
  + un-
* Only one negative suffix: -less

# Roots, Part III

## BULL-

* ‘bubble’, ‘blister’ (*bulla*); BULLI-, ‘to boil’
* BULLA, a large bleb or blister forming either within or beneath the epidermis and filled with lymph; VESI-oluo-BULL-ous, characterized by both vesicles and bullae at the same time

## COL-

* ‘to inhabit’
* FUNGI-COL-ous, living in or on fungi; LATEBRI-COL-ous, inhabiting holes; DESERTI-COL-ous, desert-inhabiting; RADICI-COL-ous, with the flower seated immediately upon the crown of a root, or dwelling in the root, as a parasite

## CORI-

* ‘skin’ (*corium*)
* CORIUM, the deep layer of the skin; CORI-aceous, leathery (applies to leaves); CORI-aria, a genus of poisonous shrubs used in dyeing and tanning

## CRIST-

* ‘crest’ (*crista*)
* CRISTA, a crest; CRISTA TERMIN-alis, crest on the wall of the right atrium; inter-CRIST-al, between the surmounting ridges of a bone, organ or process (used particularly in intercristal diameter of pelvis, the distance between two clear crests)

## FEC-

* ‘excrement’, ‘sediment’ (*faeces* or *feces*)
* FECA-LITH, concretion or calcified mass of faecal material (= COPRO-LITH); FEC-al-oid, resembling faeces; FEC-ula, the faecal pellet of an insect

## FLA-, FLAT-

* ‘to blow’
* ex-suf-FLAT-ion, forced discharge of breath; FLAT-ul-ence, having gas in the stomach and intestinal tract

## FLOR-

* ‘flower’ (*flos*)
* FLOR-ist; FLOR-id; ef-FLOR-esc-ence, eruption of exanthemous disease; extra-FLOR-al, situated outside the flower; pre-FLOR-at-ion, the form and arrangement of flowers in the bud

## FORNIC-

* ‘arch’ (*fornix*)
* FORNIX, an arched body or surface, such as the fornix cerebri; FORNIC-al, like or pertaining to a fornix

## GER-, GEST-

* ‘to carry’, ‘to bear’
* di-GEST, to convert food in assimilable form; in-GEST, to take substances into the body; OVI-GER, a leg modified for carrying the eggs in some pycnogonids (sea spiders)

## GUTT-

* ‘drop’ (*gutta*)
* GUTT-er; GUTT-ate, having drop-like markings; GUTT-at-ion formation of drops of water on plants; GUTT-iform, drop-shaped; GUTT-ul-ate, in the form of a small drop, as markings

## NAEV- (NEV-)

* ‘birthmark’, ‘mole’ (*nevus*)
* NAEVUS, birthmark; NAEV-al, of or related to a naevus; NAEVO-XANTHO-endo-THELI-oma, a group or group of yellowish brown nodules sometimes found on extremities in early childhood

## NID-

* ‘nest’ (*nidus*)
* NID-at-ion, the renewal of uterine lining between menstrual periods; de-NID-at-ion, disintegration and ejection of superficial part of uterine mucus; NID-ament-al, applies to glands which secrete material for an egg-covering

## PULVER-, PULV-

* ‘dust’ (*pulvus*)
* PULVER-ize; PULVI-PLUME, a powder-down feather; PULVER-aceous, covered with a layer of powdery granules

## RADIC-

* ‘root’ (*radix*)
* RADIC-al; e-RADIC-ate; RADIC-ul-ose, having many rootlets; MONO-RADIC-ul-ar, having only one root; MYELO-RADIC-ul-itis, inflammation of spinal cord and roots of spinal nerves

## RAM-

* ‘branch’ (*ramus*)
* RAMI-fic-at-ion; RAM-ate,branched; BI-RAM-ose, divided into two branches; RAMI-FLOR-ous, having flowers on branches

## SAX-

* ‘rock’ (*saxum*)
* SAXI-CAV-ous, applies to rock-borers (as some molluscs), lithophagous; SAXI-FRAGE, plant of the family Saxifraga, perennial herbs frequently found growing in rock crevices; SAXI-COL-ous, inhabiting or growing around rocks

## SCUT-

* ‘shield’ (*scutum*)
* ESCUT-cheon; SCUTE, an external scale, as of reptiles, fish or scaly insects; SCUT-ate protected by large scales or horny plates

## SERR-

* ‘saw’, ‘saw-tooth’ (*serra*)
* SIERRA; SERR-at-iform, like a saw; sub-SERR-ate, somewhat notched or saw-toothed; SERRI-CORN-ia, a genus of beetles with saw-toothed antennae

## STERCOR-, STERC-

* ‘excrement’ (*stercus*)
* STERCO-BIL-in, the brown pigment of faeces; STERC-oma, a fecalith, a hard faecal mass, usually in the rectum; STERC-ul-ia, a type of plant with a fetid odour

## SULC-

* ‘furrow’, ‘groove’ (*sulcus*)
* SULC-ate, furrowed, grooved; BI-SULC-ate, having two grooves; SULCO-MARGIN-al, situated at the margin of the spinal cord adjacent to the ventral median fissure