

Appendix B

Origins of Scientific Terms

This list of Greek and Latin roots will help you interpret the meaning of biological terms. The column headed *Root* gives many of the actual Greek (GK) or Latin (L) root words used in science. If more than one word is given, the first is the full word in Greek or Latin. The letter groups that follow are forms in

which the root word is most often found combined in science words. In the second column is the meaning of the root as it is used in science. The third column shows a typical science word containing the root from the first column. Most of these words can be found in your textbook.

Root	Meaning	Example	Root	Meaning	Example
A			C		
a, an (GK)	not, without	anaerobic	caedere, cide (L)	kill	insecticide
abilis (L)	able to	biodegradable	capillus (L)	hair	capillary
ad (L)	to, attached to	appendix	carn (L)	flesh	carnivore
aequus (L)	equal	equilibrium	carno (L)	flesh	carnivore
aeros (GK)	air	anaerobic	cella, cellula (L)	small room	protocells
agon (GK)	assembly	glucagon	cervix (L)	neck	cervix
aktis (GK)	ray	actin	cetus (L)	whale	cetacean
allas (GK)	sausage	allantois	chaite, chaet (GK)	bristle	oligochaeta
alleclon (GK)	of each other	allele	cheir (GK)	hand	chiropteran
allucinari (L)	to dream	hallucinate	chele (GK)	claw	chelicerae
alveolus (L)	small pit	alveolus	chloros (GK)	pale green	chlorophyll
amnos (GK)	lamb	amniot	chondros (GK)	cartilage	Chondrichthyes
amoibe (GK)	change	amoebocyte	chondros (GK)	grain	mitochondrion
amphi (GK)	both, about, around	amphibian	chorda (L)	cord	urochordata
amylum (L)	starch	amylase	chorion (GK)	skin	chorion
ana (L)	away, onward	anaphase	chroma, chrom (GK)	colored	chromosome
andro (GK)	male	androgens	chronos (GK)	time	chronometer
angeion, angio (GK)	vessel, container	angiosperm	circa (L)	about	circadian
anthos (GK)	flower	anthophyte	cirrus (L)	curl	cirri
anti (GK)	against, away, opposite	antibody	codex (L)	tablet for writing	codon
aqua (L)	water	aquatic	corpus (L)	body	corpus luteum
archaios, archeo (GK)	ancient, primitive	archaebacteria	cum, col, com, con (L)	with, together	convergent
arthron (GK)	joint, jointed	arthropod	cuticula (L)	thin skin	cuticle
artios (GK)	even	artiodactyl	cyte D	cell	lymphocyte
askos (GK)	bag	ascospore	daktylos (GK)	finger	perissodactyl
aster (GK)	star	Asteroidea	de (L)	away, from	decompose
autos (GK)	self	autoimmune	decidere (L)	to fall down	deciduous
B			degradare (L)	to reduce in rank	biodegradable
bakterion (GK)	small rod	bacterium	dendron (GK)	tree	dendrite
bi, bis (L)	two, twice	bipedal	dens (L)	tooth	edentate
binarius (L)	pair	binary fission	derma (GK)	skin	epidermis
bios (GK)	life	biology	deterere (L)	loose material	detritus
blastos (GK)	bud	blastula	dia, di (GK)	through, apart	diastolic
bryon (GK)	moss	bryophyte	dies (L)	day	circadian
bursa (L)	purse, bag	bursa	diploos (GK)	twofold, double	diploid
			dis, di (GK)	twice, two	disaccharide
			dis, di (L)	apart, away	disruptive

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dormire (<i>L</i>)	to sleep	dormancy
drom (<i>GK</i>)	running, racing	dromedary
ducere (<i>L</i>)	to lead	oviduct
E		
echinos (<i>GK</i>)	spine	echinoderm
eidos, old (<i>GK</i>)	form, appearance	rhizoid
ella (<i>GK</i>)	small	organelle
endon, en, endo (<i>GK</i>)	within	endosperm
engchyma (<i>GK</i>)	infusion	parenchyma
enteron (<i>GK</i>)	intestine, gut	enterocolitis
entomon (<i>GK</i>)	insect	entomology
epi (<i>GK</i>)	upon, above	epidermis
equus (<i>L</i>)	horse	Equisetum
erythros (<i>GK</i>)	red	erythrocyte
eu (<i>GK</i>)	well, true, good	eukaryote
evolutus (<i>L</i>)	rolled out	evolution
ex, e (<i>L</i>)	out	extinction
exo (<i>GK</i>)	out, outside	exoskeleton
extra (<i>L</i>)	outside, beyond	extracellular
F		
ferre (<i>L</i>)	to bear	porifera
fibrilla (<i>L</i>)	small fiber	myofibril
fissus (<i>L</i>)	a split	binary fission
flagellum (<i>L</i>)	whip	flagellum
follicle (<i>L</i>)	bag	follicle
fossilis (<i>L</i>)	dug up	microfossils
fungus (<i>L</i>)	mushroom	fungus
G		
gamo, gam (<i>GK</i>)	marriage	gamete
gaster (<i>GK</i>)	stomach	gastropoda
ge, geo (<i>GK</i>)	the Earth	geology
gemma (<i>L</i>)	little bud	gemmae
genesis (<i>L</i>)	origin, birth	parthenogenesis
genos, gen, geny (<i>GK</i>)	race	genotype
gestare (<i>L</i>)	to bear	progesterone
glene (<i>GK</i>)	eyeball	euglenoid
globus (<i>L</i>)	sphere	hemoglobin
glotta (<i>GK</i>)	tongue	epiglottis
glykys, glu (<i>GK</i>)	sweet	glycolysis
gnathos (<i>GK</i>)	jaw	Agnatha
gonos, gon (<i>GK</i>)	reproductive, sexual	gonorrhea
gradus (<i>L</i>)	a step	gradualism
graphos (<i>GK</i>)	written	chromatograph
gravis (<i>L</i>)	heavy	gravitropism

Root	Meaning	Example
gymnos (<i>GK</i>)	naked, bare	gymnosperm
gyne (<i>GK</i>)	female, woman	gynoecium
H		
haima, emia (<i>GK</i>)	blood	hemoglobin
halo (<i>GK</i>)	salt	halophile
haploos (<i>GK</i>)	simple	haploid
haurire (<i>L</i>)	to drink	haustorium
helix (<i>L</i>)	spiral	helix
hæm (<i>GK</i>)	half	hemisphere
herba (<i>L</i>)	grass	herbivore
hermaphroditos (<i>GK</i>)	combining both sexes	hermaphrodite
heteros (<i>GK</i>)	other	heterotrophic
hierarches (<i>GK</i>)	rank	hierarchy
hippos (<i>GK</i>)	horse	hippopotamus
histos (<i>GK</i>)	tissue	histology
holos (<i>GK</i>)	whole	Holothuroidea
homo (<i>L</i>)	man	hominid
homos (<i>GK</i>)	same, alike	homologous
hormæin (<i>GK</i>)	to excite	hormone
hydor, hydro (<i>GK</i>)	water	hydrolysis
hyper (<i>GK</i>)	over, above	hyperventilation
hyphe (<i>GK</i>)	web	hypha
hypo (<i>GK</i>)	under, below	hypotonic
I		
ichthys (<i>GK</i>)	fish	Osteichthyes
instinctus (<i>L</i>)	impulse	instinct
insula (<i>L</i>)	island	insulin
inter (<i>L</i>)	between	internode
intra (<i>L</i>)	within, inside	intracellular
isos (<i>GK</i>)	equal	isotonic
itis (<i>GK</i>)	inflammation, disease	arthritis
J		
jugare (<i>L</i>)	join together	conjugate
K		
kardia, cardia (<i>GK</i>)	heart	cardiac
karyon (<i>GK</i>)	nut	prokaryote
kata, cata (<i>GK</i>)	break down	catabolism
kephale, ceph (<i>GK</i>)	head	cephalopoda
keras (<i>GK</i>)	horn	chelicerae
kinein (<i>GK</i>)	to move	kinetic
koilos, coel (<i>GK</i>)	hollow, cavity, belly	coelom
kokkus (<i>GK</i>)	berry	streptococcus
kolla (<i>GK</i>)	glue	colloid

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kotyl, cotyl (<i>GK</i>)	cup	cotylosaur	neuro (<i>GK</i>)	nerve	neurology
kreas (<i>GK</i>)	flesh	pancreas	nodus (<i>L</i>)	knot, knob	internode
krinoeides (<i>GK</i>)	lilylike	Crinoidea	nomos, nomy (<i>GK</i>)	ordered knowledge	taxonomy
kyanos, cyano (<i>GK</i>)	blue	cyanobacterium	noton (<i>GK</i>)	back	notochord
kystis, cyst (<i>GK</i>)	bladder, sac	cystitis	O		
kytos, cyt (<i>GK</i>)	hollow, cell	lymphocyte	oikos, eco (<i>GK</i>)	household	ecosystem
L			oisein, eso (<i>GK</i>)	to carry	esophagus
lagos (<i>GK</i>)	hare	lagomorph	oligos (<i>GK</i>)	few, little	oligochaeta
leukos (<i>GK</i>)	white	leukocyte	omnis (<i>L</i>)	all	omnivore
libra (<i>L</i>)	balance	equilibrium	ophis (<i>GK</i>)	serpent	Ophiuroidea
logos, logy (<i>GK</i>)	study, word	biology	ophthalmos (<i>GK</i>)	referring to the eye	ophthalmologist
luminescere (<i>L</i>)	to grow light	bioluminescence	organon (<i>GK</i>)	tool, implement	organelle
luteus (<i>L</i>)	orange-yellow	corpus luteum	ornis (<i>GK</i>)	bird	ornithology
lyein, lysis (<i>GK</i>)	to split, loosen	lysosome	orthos (<i>GK</i>)	straight	orthodontist
lymph (L)	water	lymphocyte	osculum (<i>L</i>)	small mouth	osculum
M			osteon (<i>GK</i>)	bone	osteocyte
makros (<i>GK</i>)	large	macrophage	ostrakon (<i>GK</i>)	shell	ostracoderm
marsupium (<i>L</i>)	pouch	marsupial	oura, ura (<i>GK</i>)	tail	anura
meare (<i>L</i>)	to glide	permeable	ous, oto (<i>GK</i>)	ear	otology
megas (<i>GK</i>)	large	megaspore	ovum (<i>L</i>)	egg	oviduct
melas (<i>GK</i>)	black, dark	melanin	P		
meristos (<i>GK</i>)	divided	meristem	palaos, paleo (<i>GK</i>)	ancient	paleontology
meros (<i>GK</i>)	part	polymer	pan (<i>GK</i>)	all	pancreas
mesos (<i>GK</i>)	middle	mesophyll	para (<i>GK</i>)	beside	parenchyma
meta (<i>GK</i>)	after, following	metaphase	parthenos (<i>GK</i>)	virgin	parthenogenesis
metabole (<i>GK</i>)	change	metabolism	pathos (<i>GK</i>)	disease, suffering	pathogenic
meter (<i>GK</i>)	a measurement	diameter	pausere (<i>L</i>)	to rest	decompose
mikros, micro (<i>GK</i>)	small	microscope	pendere (<i>L</i>)	to hang	appendix
mimos (<i>GK</i>)	a mime	mimicry	per (<i>L</i>)	through	permeable
mitos (<i>GK</i>)	thread	mitochondrion	peri (<i>GK</i>)	around	peristalsis
molluscus (<i>L</i>)	soft	mollusk	periodos (<i>GK</i>)	a cycle	photoperiodism
monos (<i>GK</i>)	single	monotreme	pes, pedis (<i>L</i>)	foot	bipedal
morphe (<i>GK</i>)	form	lagomorph	phagein (<i>GK</i>)	to eat	phagocyte
mors, mort (<i>L</i>)	death	mortality	phainein (<i>GK</i>)	to show	phenotype
mucus (<i>L</i>)	mucus, slime	mucosa	phaios (<i>GK</i>)	dusky	phaeophyta
multus (<i>L</i>)	many	multicellular	phase (<i>GK</i>)	stage, appearance	metaphase
mutare (<i>L</i>)	to change	mutation	pherein, phor (<i>GK</i>)	to carry	pheromone
mykes, myc (<i>GK</i>)	fungus	mycorrhiza	phloios (<i>GK</i>)	inner bark	phloem
mys (<i>GK</i>)	muscle	myosin	phos, photos (<i>GK</i>)	light	phototropism
N			phyllon (<i>GK</i>)	leaf	chlorophyll
nema (<i>GK</i>)	thread	nematology	phylon (<i>GK</i>)	related group	phylogeny
nemato (<i>GK</i>)	thread, threadlike	nematode	phyton (<i>GK</i>)	plant	epiphyte
neos (<i>GK</i>)	new	Neolithic	pinax (<i>GK</i>)	tablet	pinacocytes
nephros (<i>GK</i>)	kidney	nephron	pinein (<i>GK</i>)	to drink	pinocytosis

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pinna (<i>L</i>)	feather	pinniped	stellein, stol (<i>GK</i>)	to draw in	peristalsis
plasma (<i>GK</i>)	mold, form	plasmodium	sternon (<i>GK</i>)	chest	sternum
plastos (<i>GK</i>)	formed object	chloroplast	stinguere (<i>L</i>)	to quench	extinction
platys (<i>GK</i>)	flat	platyhelminthes	stolo (<i>L</i>)	shoot	stolon
plax (<i>GK</i>)	plate	placoderm	stoma (<i>GK</i>)	mouth	stoma
pleuron (<i>GK</i>)	side	dipleurula	streptos (<i>GK</i>)	twisted chain	streptococcus
plicare (<i>L</i>)	to fold	replication	syn (<i>GK</i>)	together	systolic
polys, poly (<i>GK</i>)	many	polymer	synapsis (<i>GK</i>)	union	synapse
poros (<i>GK</i>)	channel	porifera	systema (<i>GK</i>)	composite whole	ecosystem
post (<i>L</i>)	after	posterior			
pous, pod (<i>GK</i>)	foot	gastropoda	T		
prae, pre (<i>L</i>)	before	Precambrian	taxis, taxo (<i>GK</i>)	to arrange	taxonomy
primus (<i>L</i>)	first	primary	telos (<i>GK</i>)	end	telophase
pro (<i>GK</i> and <i>L</i>)	before, for	prokaryote	terra (<i>L</i>)	land, Earth	terrestrial
proboskis (<i>GK</i>)	trunk	proboscidean	thele (<i>GK</i>)	cover a surface	epithelium
producere (<i>L</i>)	to bring forth	reproduction	therme (<i>GK</i>)	heat	endotherm
protos (<i>GK</i>)	first	protocells	thrix, trich (<i>GK</i>)	hair	trichocyst
pseudes (<i>GK</i>)	false	pseudopod	rome (<i>GK</i>)	cutting	anatomy
pteron (<i>GK</i>)	wing	chiropteran	trachia (<i>GK</i>)	windpipe	tracheid
punctus (<i>L</i>)	a point	punctuated	trans (<i>L</i>)	across	transpiration
pupa (<i>L</i>)	doll	pupa	trematodes (<i>GK</i>)	having holes	monotreme
R			trope (<i>GK</i>)	turn	gravitropism
radius (<i>L</i>)	ray	radial	trophe (<i>GK</i>)	nourishment	heterotrophic
re (<i>L</i>)	again	reproduction	turbo (<i>L</i>)	whirl	turbellaria
reflectere (<i>L</i>)	to turn back	reflex	tympanon (<i>GK</i>)	drum	tympanum
rhiza (<i>GK</i>)	root	mycorrhiza	typos (<i>GK</i>)	model	genotype
rhodon (<i>GK</i>)	rose	rhodophyte	U		
rota (<i>L</i>)	wheel	rotifer	uni (<i>L</i>)	one	unicellular
rumpere (<i>L</i>)	to break	disruptive	uterus (<i>L</i>)	womb	uterus
S			V		
saeta (<i>L</i>)	bristle	Equisetum	vacca (<i>L</i>)	cow	vaccine
sapros (<i>GK</i>)	rotten	saprobe	vagina (<i>L</i>)	sheath	vagina
sarx (<i>GK</i>)	flesh	sarcomere	valvae (<i>L</i>)	folding doors	bivalvia
sauros (<i>GK</i>)	lizard	cotylosaur	vasculum (<i>L</i>)	small vessel	vascular
scire (<i>L</i>)	to know	science	venter (<i>L</i>)	belly	ventricle
scribere, script (<i>L</i>)	to write	transcription	ventus (<i>L</i>)	a wind	hyperventilation
sedere, ses (<i>L</i>)	to sit	sessile	vergere (<i>L</i>)	to slant, incline	convergent
semi (<i>L</i>)	half	semicircle	villus (<i>L</i>)	shaggy hair	villus
skochein, scop (<i>GK</i>)	to look	microscope	virus (<i>L</i>)	poisonous liquid	virus
soma (<i>GK</i>)	body	lysosome	vorare (<i>L</i>)	to devour	carnivore
sperma (<i>GK</i>)	seed	angiosperm	X		
spirare (<i>L</i>)	to breathe	spiracle	xeros (<i>GK</i>)	dry	xerophyte
sporos (<i>GK</i>)	seed	microspore	xylon (<i>GK</i>)	wood	xylem
staphylo (<i>GK</i>)	bunch of grapes	staphylococcus	Z		
stasis (<i>GK</i>)	standing, staying	homeostasis	zoon, zo (<i>GK</i>)	animal	zoology
			zygotos (<i>GK</i>)	joined together	zygote