C

C • Ca++ Calmodulin Complex

C Abbreviations for 1. carbon element, 2. complement, 3. cysteine, and 4. cytidine or cytosine.
° C Degrees centigrade; degrees Celsius.
¹⁴C Radioactive isotope of carbon with an atomic weight of 14, half-life about 5700 years.
C Band A band (stained with giesma stain) appearing on the chromosome around the centromere.
C Genes The genes that encode the constant region of the light or heavy chain of an immunoglobulin molecule.
C Reactive Protein (CRP) A beta globulin found in the serum of patients with diverse inflammatory diseases. It reacts with the pneumococcal type-C polysaccharide.
C Region Referring to the constant region of the heavy chain or light chain of the immunoglobulin molecule.
C Value The amount of DNA in its haploid genome.
C1 The first component of the classical pathway of complement; it consists of three subcomponents C1q, C1r, and C1s.
C1 Inhibitor A complement regulatory protein that binds to C1r and C1s leading to inactivation of the classical complement pathway.
C2 The second component of complement.
C2 Photosynthesis Referring to the photosynthesis that produces phosphoglycolic acid (a 2-carbon organic acid) from ribulose 1,5-bisphosphate.
C3 The third component of complement.
C3 Convertase A complex of C2b and C4b that acts as a protease converting C3 to C3a and C3b.
C3 Pathway See Calvin cycle.
C3 Photosynthesis Referring to C3 pathway.
C3 Plants Plants that employ only the C3 pathway for conversion of carbon dioxide to carbohydrate. The C4 pathway is absent from the C3 plant.
C4 The fourth component of complement.
C4 Pathway A pathway that catalyzed the conversion of carbon dioxide to the oxaloacetic acid employing the phosphoenolpyruvate system (also known as Hatch-Slack pathway).

C4 Plants Plants that employ both C3 and C4 pathways for conversion of carbon dioxide to carbohydrate. C4 plants also contain vascular bundle sheath cells around the vascular bundle which is absent from C3 plants.
C5 The fifth component of complement.
C5 Convertase A complex of subcomponents of complement (C4b-C2b-C3b) that acts as a protease converting C5 to C5a and C5b.
C6 The sixth component of complement.
C7 The seventh component of complement.
C8 The eighth component of complement.
C9 The ninth component of complement. Polymerization of C9 forms lytic holes in the cell membrane leading to cell lysis.
C₁₈₀ Abbreviation for octadecanoic acid, a saturated fatty acid with 18 carbons (also known as stearic acid or stearate).
CA Abbreviation for 1. capsid; 2. carbonic anhydrase; 3. cold acclimated; 4. cold agglutination; 5. common antigen; 6. a combination drug containing cytoxan and adriamycin.
Ca Symbol for calcium with atomic weight 40, valence 2.
CA-15-3 An antibody specific for an antigen frequently present in the serum of metastatic breast carcinoma patients.
CA-19-9 A tumor associated antigen found on the Lewis A blood group antigen.
CA-125 A cell surface glycoprotein detectable in higher concentration in the serum in patients with adenocarcinomas such as breast, gastrointestinal tract, and uterine cervix cancer.
C₂a Abbreviation for a fragment of C2 component of complement.
C₃a Abbreviation for a fragment of C3 component of complement.
C₄a Abbreviation for a fragment of C4 component of complement.
C₅a Abbreviation for a fragment of C5 component of complement.
Ca++ Calmodulin Complex The complex of calcium and calmodulin formed by the reversible binding of four calcium ions to calmodulin.
Ca\textsuperscript{2+} Calmodulin Dependent Protein Kinase The enzyme catalyzes the following reaction in the presence of calcium and calmodulin:

\[
\text{ATP} + \text{protein} \rightarrow \text{ADP} + \text{phosphoprotein}
\]

Ca\textsuperscript{2+} Mg\textsuperscript{2+}-ATPase The ATPase that requires both calcium and magnesium for activity.

CAA A codon or genetic code for the amino acid glutamine.

CAAT Abbreviation for computer-assisted axial tomography.

CAAT Box A nucleotide sequence about 75 base pairs upstream from the transcription initiation point in eukaryotic cells. It has the consensus sequence of GG(T/C)CAATCT.

Cabenergin An orally active antidote against snake venom isolated from root of a South American plant called Cabeça de Negra. It consists of two active components (cabenergin A1 and Cabenergin A2).

Cabergoline (mol wt 452) A prolactin inhibitor and dopamine receptor agonist.

CABG Abbreviation for coronary artery bypass graft.

CABP Abbreviation for 2-carboxyarabinitol 1,5-bisphosphate.

CaBP Abbreviation for calcium-binding protein.

CaBP3 A calcium-binding protein of endoplasmic reticulum lumen.

CABS Abbreviation for a combination drug containing CCNU, adriamycin, bleomycin, and streptozocin.

CAC A codon or genetic code for the amino acid histidine.

Cac8I A restriction endonuclease from Clostridium acetobutylicum (NEB846) with the following specificity:

\[5'\ldots\text{GCNNGC}\ldots3'\]

\[3'\ldots\text{CGNNCG}\ldots5'
\]

Ca\textsuperscript{2+}/Calmodulin Kinase II Synonym of Ca\textsuperscript{2+}/calmodulin-dependent protein kinase.

Cachet A flat capsule containing an unpleasant-tasting drug. The cachet is swallowed intact by the patient.

Cachexia Severe malnutrition, weakness, and muscle wasting due to chronic illness.

CaCl\textsubscript{2} Transformation See calcium phosphate transformation or calcium phosphate transinfection.

Cacodylic acid (mol wt 138) A substance used for treatment of chronic eczema and anemia. It has been also used as an herbicide.

Cactinomycin An antibiotic complex isolated from Streptomyces chrysomallus. It is a mixture of actinomycin C1, C2 and C3.

Cactus grandiflorus A large flowered cereus. It contains a cardiotonic agent used as a circulatory stimulant.

CAD Abbreviation for a combination drug containing cytoxan, adriamycin, and dacarbazine.

CAD Protein A multifunctional protein found in many eukaryotes containing domains for carbamoyl phosphate synthetase, aspartate transcarbamylase, and dihydroorotase for pyrimidine biosynthesis.

Cadang-Cadang A viroid that infects coconut.

Cadaver Corpse, a dead body.

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Cadaverine (mol wt 102) A biogenic polyamine and a homolog of putrescine produced by de-carboxylation of lysine.

\[
\text{NH}_2-(\text{CH}_2)_5\text{NH}_2
\]

Cadexomer Iodine A hydrophilic, modified starch polymer produced by the reaction of dextrin with epichlorohydrin and iodine. It is used as a vulnerary agent.

Cadherin Referring to cell surface proteins that mediate calcium-dependent cell adhesion in animal tissues.

Cadmium (Cd) A chemical element with atomic weight 112, valence 2.

Cadherin Ionophore A selective ionophore for cadmium.

\[
\begin{array}{c}
\text{H}_3\text{C} \\
\text{N} \\
\text{O} \\
\text{O} \\
\text{S} \\
\text{N} \\
\text{CH}_2\text{CH}_3
\end{array}
\]

Cadmium Mycophosphatin A cadmium-bonding phospho-glycoprotein rich in aspartic and glutamic acids and phosphoserine.

Cadmium Oxide (CdO, mol wt 128) An ascorbic acid.

Cadmium Salicylate (mol wt 387) An antiseptic agent.

\[
\text{Cd(C}_7\text{H}_5\text{O}_3)\text{Cd}
\]

Cadmium Succinate (mol wt 228) A fungicide.

\[
\begin{array}{c}
\text{COO}^- \\
\text{I} \\
\text{CH}_2 \\
\text{I} \\
\text{CH}_2 \\
\text{COO}^- \\
\text{Cd}^{++}
\end{array}
\]

cADP-Ribose Abbreviation for cyclic adenosine diphosphate ribose.

Cadralazine (mol wt 283) An antihypertensive agent.

\[
\text{NH}_4\text{COOCH}-\text{CH}_3
\]

CAE Abbreviation for cellulose acetate electrophoresis.

Caecum A saclike extension or a blind diverticulum on the digestive tract.

Caedibacter A genus of Gram-negative bacteria that are endosymbionts in certain strains of Paramecium aurelia.

CAF Abbreviation for a combination drug containing cyclophosphamide, Adriamycin, and fluorouracil.

Cafaminol (mol wt 267) A nasal decongestant.

\[
\begin{array}{c}
\text{N} \\
\text{N} \\
\text{N} \\
\text{N} \\
\text{O} \\
\text{O} \\
\text{NCH}_3 \\
\text{CH}_3 \\
\text{CH}_3
\end{array}
\]

Cafergot A trade name for a combination drug containing ergotamine and caffeine, used as an adrenergic blocker.

Caffedrine A trade name for caffeine, a purine derivative that has been used as a cardiac and respiratory stimulant and diuretic agent. It also acts as an inhibitor for excision repair of DNA.

Caffeic Acid (mol wt 180) A lipooxygenase inhibitor.

\[
\begin{array}{c}
\text{CH}_2=\text{CHCOOH}
\end{array}
\]

Caffeine (mol wt 194) A substance occurring in tea, coffee; a purine derivative that has been used as a cardiac and respiratory stimulant and diuretic.
agent. It also acts as an inhibitor for excision repair of DNA.

Caffeinism • Calcimar

Caffeinism  A chronic disorder due to excess consumption of beverages containing caffeine.

CAFVP  Abbreviation for a combination drug containing cytoxan, Adriamycin, fluorouracil, vincristine, and prednisone.

CAG  A codon or genetic code for the amino acid glutamine.

Caged ATP  A type of protected ATP analog, e.g., adenosine 5'-triphospho-1-(2-nitrophenyl) ethanol. It releases ATP upon photolysis by a short pulse of light of 360 nm wavelength.

Caged Compound  An organic compound designed to change into an active form upon irradiation with specific wavelengths of light.

CaICaR  Abbreviation for calcium-induced calcium release.

Cairns Mode of DNA Replication  A mechanism of replication of double-stranded circular DNA in which the replication is initiated at a fixed point and proceeds bidirectionally or unidirectionally around the circular DNA.

cAK  Abbreviation for cyclic AMP-dependent protein kinase.

CAK  Abbreviation for CDK-activated kinase.

cal  Abbreviation for small calorie(s).

Cal  Abbreviation for large calorie(s) (1 Cal = 1000 cal).

Calamine  A pink powder of zinc oxide and a skin protectant containing about 98% zinc oxide and 0.5% ferric oxide.

Calamus  Dried rhizome of plant Acorus calamus (e.g., sweet flag, sweet cane) used as an antihelmintic agent.

Calan  A trade name for verapamil hydrochloride, used as an antianginal agent.

Calberla's Solution  A mixture of glycerol (5 ml), ethanol (10 ml), and water (15 ml) used as a microscopic mounting medium.

Calcine Blue (mol wt 321)  A fluorescent indicator.

Calcemia  Abnormally high level of calcium in the blood.

Calcet  A trade name for a combination of calcium and vitamin D.

Calcibind  A trade name for sodium cellulose phosphate, used to bind calcium in the GI tract and to decrease the amount of calcium absorbed.

Calcicolous  Capable of growth in a calcium-rich environment.

Calciosis  A lung disorder due to the prolonged inhalation of dust of lime stone.

Calciday  A trade name for calcium salt used as an antacid.

Calcifediol (mol wt 401)  The circulating form of vitamin D3, formed in the liver. It is a calcium regulator.

Calciferol  Referring to vitamin D2.

Calcification  1. Hardening by deposition of mineral salts in the bones and teeth. 2. Pathological hardening of an organic tissue by the deposition of calcium.

Calcijex  A trade name for calcitriol, a calcium regulator.

Calcilac  A trade name for calcium carbonate, used to reduce the acid load in the GI tract and to elevate gastric pH and pepsin activities.

Calcilean  A trade name for heparin calcium, an anticoagulating agent that prevents the conversion of fibrinogen to fibrin.

Calcimar  A trade name for calcitonin (from salmon), a calcium regulating peptide hormone.
Calcimax • Calcium Carbonate

Calcimax A trade name for calcium carbonate, used to reduce the acid load in the GI tract and to elevate gastric pH and pepsin activities.

Calcimed A calcium-binding protein.

Calcimycin (mol wt 524) A polyether antibiotic isolated from Streptomyces chartreusensis. It is a divalent cation ionophore.

Calcimedin A calcium-binding protein.

Calcimycin (mol wt 524) A polyether antibiotic isolated from Streptomyces chartreusensis. It is a divalent cation ionophore.

Calciparine A trade name for heparin calcium, an anticoagulating agent that prevents the conversion of fibrinogen to fibrin.

Calcipenia Disorder characterized by the deficiency of calcium in the tissue.

Calcipotriene (mol wt 413) An antipsoriatic ointment used for the treatment of psoriasis.

Calcitonin A calcium-regulating peptide hormone secreted from the thyroid gland in mammals; it lowers the level of calcium in the blood, decreases osteoclastic activity, and reduces mineral release and collagen breakdown in bones.

Calcitonin Salmon Calcitonin from salmon used to decrease serum calcium concentration and promote renal excretion of calcium.

Calcitriol (mol wt 417) A biologically active form of vitamin D3 and a calcium regulator.

Calcium (Ca) A chemical element with atomic weight 40 and valence 2.

Calcium 45 (45Ca) Radioactive calcium with a half-life of about 164 days.

Calcium Acetate (mol wt 158) A food stabilizer and corrosion inhibitor.

Calcium Acetylsalicylate (mol wt 398) An analgesic, antipyretic, and anti-inflammatory agent.

Calcium Arsenate (mol wt 398) An insecticide.

Calcium Bromide (mol wt 200) A sedative and an anticonvulsant.

Calcium Carbonate (mol wt 100) A compound used to reduce the total acid load in the GI tract and to elevate gastric pH and pepsin activity.
Calcium Channel • Calcium Peroxide

Calcium Channel The membrane proteins that permit the controlled (gated) passage of calcium ions through the membranes.

Calcium Channel Blocker Any agent or drug that prevents calcium from entering smooth muscle cells, causing smooth muscles to relax and reducing muscle spasms.

Calcium 2-Ethylbutanoate (mol wt 270) A sedative agent.

\[
\text{CH}_2\text{CHOOC}^+ \text{H}_2\text{O} \quad \text{Ca}^{2+} \quad \text{Ca}^{2+}
\]

Calcium Ferrous Citrate (mol wt 514) A hematinic agent.

\[
\text{H}_2\text{C-COO} \quad \text{Ca} \quad \text{OOC} \quad \text{CH}_2 \quad \text{H-OOC} \quad \text{COH} \quad \text{Fe} \quad \text{OOC} \quad \text{CH}_2
\]

Calcium Formate (mol wt 130) A food preservative.

\[
\text{Ca}\text{(HCOO)}_2
\]

Calcium Gluceptate See calcium gluconate.

Calcium Gluconate (mol wt 430) A calcium replenisher.

\[
\text{COO}^- \quad \text{H-COH} \quad \text{H-OCH} \quad \text{H-COH} \quad \text{H-COH} \quad \text{H-OCH}_2\text{OH} \quad \text{Ca}^{2+} \quad \text{Ca}^{2+}
\]

Calcium Iodate (mol wt 390) An antiseptic agent and a nutritional source of iodine.

\[
\text{CaIO}_3
\]

Calcium Ionophore I (mol wt 685) A calcium ionophore used in membrane electrodes to determine calcium activity.

Calcium Ionophore II (mol wt 461) An extremely efficient carrier of calcium ions.

\[
\begin{align*}
\text{N-CH}_2\text{(CH}_2\text{)}_{11} & \text{O} \\
\text{O} & \text{N-CH}_2\text{(CH}_2\text{)}_{11} \\
\text{O} & \text{N}
\end{align*}
\]

Calcium Ionophore III (mol wt 524) A reagent used to prepare an optical chemical sensor for calcium and magnesium.

\[
\begin{align*}
\text{N} & \text{O} \\
\text{O} & \text{O} \\
\text{O} & \text{N}
\end{align*}
\]

Calcium Ionophore IV (mol wt 801) An extremely lipophilic calcium ionophore.

\[
\begin{align*}
\text{N-CH}_2\text{(CH}_2\text{)}_{16}\text{CH}_3 & \text{O} \\
\text{O} & \text{N-CH}_2\text{(CH}_2\text{)}_{16}\text{CH}_3 \\
\text{O} & \text{N}
\end{align*}
\]

Calcium Lactate (mol wt 218) A calcium replenisher.

\[
\text{Ca}\text{(CH}_3\text{CH(OH)COO)}_2
\]

Calcium Mesoxalate (mol wt 156) An oral hypoglycemic agent.

\[
\text{COO}^- \quad \text{O} \quad \text{O} \quad \text{COO}^- \quad \text{Ca}
\]

Calcium Pantothenate (mol wt 477) A vitamin and enzyme cofactor.

\[
\text{[HOCH}_2\text{CH}_3\text{CH}_2\text{CONHCH}_3\text{CH}_2\text{COO]}_2
\]

Calcium Peroxide (mol wt 72) An antiseptic agent.

\[
\text{CaO}_2
\]
Calcium Phosphate Gel  A gel, prepared from calcium chloride and trisodium phosphate, used for purification of protein.

Calcium Phosphate Transfection  Technique used to introduce DNA into mammalian cells with the aid of calcium phosphate.

Calcium Phosphate Transformation  See calcium phosphate transfection.

Calcium Pump  The calcium gradient across the membrane generated by the calcium-dependent ATPase at the expense of ATP.

Calcium Transporting ATPase  A membrane ATPase that forms an essential component of the calcium pump.

Calciumuria  The presence of calcium in the urine.

Calculase  An unclassified enzyme used for softening hard dental plaque.

Calculosis  The presence of multiple calculi (stones) in the body.

Calculex  Stony concretion resulting from the aggregation of mineral salts in various parts of the body.

CaldeCort  A trade name for hydrocortisone.

Caldecrin  A pancreatic protein that lowers serum calcium concentration.

Calderol  A trade name for calciferol.

Caldesmon  A calmodulin-binding protein.

Caldesmon Kinase  The enzyme that catalyzes the following reaction:

\[ \text{ATP} + \text{caldesmon} \rightarrow \text{ADP} + \text{caldesmon phosphate} \]

Caldesmon Phosphatase  The enzyme that catalyzes the following reaction:

\[ \text{Caldesmon phosphate} + \text{H}_2\text{O} \rightarrow \text{Caldesmon} + \text{phosphate} \]

Calelectrin  A protein from the electric organ of *Torpedo marmorata.*

Calf Thymus Ribonuclease H  A ribonuclease that catalyzes the cleavage of RNA to 5′-phosphomonomoester.

Calfactant  An extract of natural surfactant from calf lung, it contains phospholipids and proteins and is used to modify the surface tension.

Calglycine  A trade name for calcium carbonate.

Caliciviridae  A family of plus-stranded RNA viruses (formerly classified as Picornaviridae).

Calculus  A cup-shaped structure.

Calicytic  A trade name for salicylic acid.

California Encephalitis  An acute viral encephalitis caused by a mosquito-transmitted bunyavirus.

California Mastitis Test  A test to estimate the number of white blood cells in the milk for the detection of mastitis (inflammation of mammary gland).

Californium (Cf)  A radioactive element with atomic weight of 249 and half-life of about 45 minutes.

CALL  Abbreviation for 1. common acute lymphoblastic leukemia; 2. common acute lymphocytic leukemia.

CALLA  Abbreviation for 1. common acute lymphoblastic leukemia antigen; 2. common acute lymphocytic leukemia antigen.

Callose  A linear 1,3-β-D-linked glucan.

Callus  Undifferentiated clone of plant cells.

Calm X  A trade name for dimenhydrinate, used as an antiemetic agent.

Calmazine  A trade name for trifluoperazine hydrochloride, used as an antipsychotic agent.


Calnexin  A calcium-binding protein of the endoplasmic reticulum.

Calorie  A unit of energy, the amount of heat required to raise the temperature of 1.0 g of water from 14.5°C to 15.5°C.

Calorific  Heat generating.

Calorimeter  A device to measure heat given off by an individual or by a chemical reaction.

Calothrix  A genus of filamentous cyanobacteria.
Calotropin (mol wt 533)  A poison isolated from the milk sap of Calotropis procera (Asclepiadaceae).

Calpain  A calcium-dependent protease that catalyzes the hydrolysis of peptide bonds involving carboxyl group of tyrosine, methionine, or arginine.

Calpastatin  A protein inhibitor for calpains (protease).

Calphotin  A calcium-binding protein in the cytoplasm of photoreceptor cells of Drosophila melanogaster.

Cal-Plus  A trade name for calcium carbonate; used to reduce the total acid load in the GI tract and to elevate gastric pH and pepsin activities.

Calponin  A thin filament-associated protein implicated in the regulation and modification of smooth muscle contraction.

Calpromotin  A cytoplasmic protein of the erythrocytes which activates calcium-dependent potassium transport.

Calregulin  See calreticulin.

Calreticulin  A calcium-binding protein of the endoplasmic reticulum lumen.

Calsan  A trade name for calcium carbonate, an antacid.

Calsequestrin  An acidic glycoprotein found in the sarcoplasmic reticulum; it binds calcium ion, serves as a calcium reservoir, and releases calcium upon muscle contraction.

Caldesmoterin  Synonym of fodrin, a protein from the bovine brain.

Calstorin  A calcium-binding protein of the microsomal lumen of the rat brain.

Caltine  A trade name for salmon calcitonin.

Caltrate  A trade name for calcium salt used as an antacid.

Caltrin  A small basic protein of the male seminal vesicle fluids which acts as a calcium transport inhibitor.

Calusterone (mol wt 316)  An antineoplastic agent.

Calvin Cycle  The pathway for the reduction of carbon dioxide to carbohydrate (e.g., phosphoglycerate, sugar) in photosynthesis employing the ribulose 1,5-bisphosphate carboxylase system (also called C₅ pathway or Calvin Benson cycle).

Calvinosome  A structure in the prokaryotic photosynthetic cell containing enzymes of the Calvin cycle for reduction of carbon dioxide to carbohydrate.

Calymmatobacterium  A genus of Gram-negative bacteria. It causes granuloma inguinale in humans.

CAM  Abbreviation for 1. a combination drug containing cytoxan, adriamycin, and methotrexate; 2. cell adhesion molecule; 3. chorioallantoic membrane; 4. crassulacean acid metabolism; 4. constitutively active mutant.

CaM  Abbreviation for calmodulin.

[Ca²⁺]m  Abbreviation for mitochondrial matrix Ca²⁺ concentration.

CaM Kinase II  Synonym of Ca²⁺/calmodulin-dependent protein kinase.

Camalox  A trade name for a combination drug containing aluminum hydroxide, magnesium hydroxide, and calcium carbonate, used as an antacid.

CAMB  Abbreviation for a combination drug containing cyclophosphamide, adriamycin, methotrexate, and bleomycin.

Cambendazole (mol wt 302)  An anthelmintic agent.

Cambium  A layer of embryonic cells between the xylem and the phloem (vascular cambium) or between the cork and the phelloderm (cork cambium).

Camcolit  A trade name for lithium carbonate, used to alter chemical transmitters in the CNS.
CAMEO  Abbreviation for a combination drug containing cytoxan, adriamycin, methotrexate, etoposide, and oncovin.

CAMF  Abbreviation for a combination drug containing cyclophosphamide, adriamycin, methotrexate, and fluorouracil.

CaMK1  Abbreviation for calmodulin-dependent protein kinase-1.

CAMKK  Abbreviation for calmodulin-dependent protein kinase 1-kinase.

CAMLO  Abbreviation for a combination drug containing cytoxan, adriamycin, methotrexate, leucovorin, and oncovin.

Camostat (mol wt 398)  An orally active, nonpeptide protease inhibitor.

Camphor (mol wt 152)  An anti-infective agent.

Camphothecin (mol wt 348)  An antitumor alkaloid from the wood stem of the Chinese tree (Camphotheca acuminata).

Canaliculization  The formation of small canals in the tissue.

Canaliculus  A small canal.

Campain  A trade name for acetaminophen, used to block the generation of pain impulses.

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Campholyline (mol wt 320)  An anticholinergic agent.

Campylobacter  A genus of Gram-negative asporogenous bacteria.

Campylobacteriosis  Any infection or disease caused by Campylobacter.

CaMV  Abbreviation for cauliflower mosaic virus.

Canaline (mol wt 139)  A basic non-protein α-amino acid that inhibits pyridoxal-dependent enzymes.

Campylobacteriosis  Any infection or disease caused by Campylobacter.
Canavanase  See arginase.

Canavanine (mol wt 176)  A naturally occurring nonprotein, basic amino acid.

\[
\text{H}_2\text{NCONH}_2\text{CH}_2\text{CH}(_2\text{NH}_2)\text{COOH}
\]

Cancellous  Spongy or honeycomb structure of some bone tissues.

Cancer  Any disease in humans or animals in which the uncontrolled proliferation of cells leads to the formation of malignant tumors.

Cancer Gene  See oncogene.

Cancer-Inducing Virus  Viruses capable of inducing cancers (e.g., retroviruses).

Cancerocidal  Capable of killing cancer cells.

Canceroid  1. A skin tumor of low malignancy. 2. Cancerlike.

Cancerum  An ulcer that spreads rapidly.

Candesartan (mol wt 440)  An angiotensin II receptor antagonist used as an antihypertensive agent.

\[
\text{O} \quad \text{O} \quad \text{CH}_3 \quad \text{CH}_3 \quad \text{O}
\]

Candida  A genus of fungi.

Candidapesin  A protease that catalyzes the preferential cleavage of peptide bonds involving the carboxyl groups of hydrophobic amino acids.

Candidiasis  Any fungal infection or disease caused by species of Candida.

Candidastatin  A trade name for nystatin, an antifungal agent.

Candling  A procedure for the observation of the content of a developing chicken embryo.

Canesten  A trade name for clotrimazole, used as a local anti-infective agent.

Canine  Relating to dogs.

Canavanase  See arginase.

Canavanine (mol wt 176)  A naturally occurring nonprotein, basic amino acid.

\[
\text{H}_2\text{NCONH}_2\text{CH}_2\text{CH}(_2\text{NH}_2)\text{COOH}
\]

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Candling  A procedure for the observation of the content of a developing chicken embryo.

Canesten  A trade name for clotrimazole, used as a local anti-infective agent.

Canine  Relating to dogs.
Capobenic Acid (mol wt 325)  A cardiac depressant (antiarrhythmic).

\[
\text{CH}_3-O\text{-CONH(CH}_3\text{)COOH}
\]

Capoten  A trade name for captopril, used as an antihypertensive agent that inhibits the conversion of angiotensin I to angiotensin II.

Capozide  A trade name for a combination drug containing hydrochlorothiazide and captopril, used as an antihypertensive agent.

CAPP  Abbreviation for ceramide-activated protein phosphatase.

Capped 5′-End  Methylated guanosine added posttranscriptionally to the 5′ end of a eukaryotic mRNA.

\[
\begin{align*}
\text{methylated G} \\
\text{HO} \text{PO}_3 \text{O} \\
\text{HO} \text{PO}_3 \text{O} \\
\text{CH}_3 \\
\text{O} \text{base} \\
\text{HO} \text{H}_2 \text{O} \\
\text{O} \text{CH}_3 \\
\end{align*}
\]

capped 5′ end

Capreomycin  A cyclic peptide antibiotic isolated from *Streptomyces capreolus*.

Capreomycin IA (mol wt 558)  An antibacterial agent.

\[
\begin{align*}
\text{NH}_2 \text{N} \text{H} \text{N} \text{H} \text{NH}_2 \text{H}_2 \text{N} \\
\text{O} \text{OH} \\
\text{O} \text{H}_2 \text{O} \\
\text{O} \text{CH}_3 \\
\text{O} \text{base} \\
\text{O} \text{CH}_3 \\
\end{align*}
\]

Capreomycin IB (mol wt 542)  An antibacterial agent.

\[
\begin{align*}
\text{NH}_2 \text{N} \text{H} \text{N} \text{H} \text{NH}_2 \text{H}_2 \text{N} \\
\text{O} \text{OH} \\
\text{O} \text{H}_2 \text{O} \\
\text{O} \text{CH}_3 \\
\text{O} \text{base} \\
\text{O} \text{CH}_3 \\
\end{align*}
\]

Caprin  A trade name for heparin calcium, used as an anticoagulant that prevents the conversion of angiotension I to angiotensin II.

Caproic Acid (mol wt 116)  A fatty acid.

\[
\text{CH}_3\text{(CH}_2\text{)}_4\text{COOH}
\]

CAPS (mol wt 221)  3-(Cyclohexylamino)-propanesulfonic acid, a biological buffer substance.

\[
\begin{align*}
\text{NH} \text{H} \text{H} \text{H} \text{NH}_2 \\
\text{O} \text{SO}_2 \text{H} \\
\end{align*}
\]

Capsaicin (mol wt 305)  Pungent agent in fruit of various species of *Capsicum*. It possesses topical analgesic activity.

\[
\begin{align*}
\text{CH}_3 \text{O} \text{N} \text{H} \\
\text{O} \text{H}_2 \text{O} \\
\text{O} \text{CH}_3 \\
\end{align*}
\]

capsid

The protein coat that surrounds the nucleic acid of a virus.

Capsomers  Structural units of the capsid of a virus.

Capsular Antigen  Any antigen, usually polysaccharide in nature, that is located on the surface of the bacterial capsules.

Capsular Polysaccharide  A polysaccharide component of a bacterial capsule.

Captan (mol wt 124)  An antifungal agent and a bacteriostat in soap.
Captodiamine (mol wt 360) An anxiolytic agent.

Captopril (mol wt 217) An antihypertensive agent and an inhibitor of angiotensin converting enzyme that prevents conversion of angiotensin I to angiotensin II.

Capurate A trade name for allopurinol, used as an antigout agent; reduces uric acid production.

Capuride (mol wt 186) A hypnotic agent.

CaR Abbreviation for calreticulin.

C5aR Abbreviation for C5a (complement sub-component 5a) receptor.

Carafate A trade name for sucralfate, used as an antiulcer agent.

Caramiphen Ethanesulfonate (mol wt 769) An antitussive agent.

Carbamazepine (mol wt 236) An analgesic and anticonvulsant that increases efflux or decreases influx of sodium ions across the cell membrane.

Carbamino Compound A compound formed by the reaction of carbon dioxide with a primary aliphatic amine.

Carbamino Group Referring to \(-\text{NH-COO-}\) group.

Carbaminohemoglobin The carbamino compound that is formed by the reaction of hemoglobin with carbon dioxide.

Carbamoyl Referring to \(-\text{CO-NH}_2\) group.

Carbamoylaspartotranskinase See aspartate carbamoyl transferase.

Carbamoyl-Methyl Group Referring to \(-\text{CH}_2\text{-CO-NH}_2\).

Carbamoyl-Phosphate (mol wt 141) A substrate for synthesis of pyrimidine nucleotides.

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Carbamoyl-Phosphate L-Aspartate Carbamoyl Transferase The systematic name for aspartate carbamoyltransferase.

Carbamoyl-Phosphate L-Ornithine Carbamoyl Transferase The systematic name for ornithine carbamoyltransferase.

Carbamoylphosphate Synthetase (ammonia) The enzyme that catalyzes the following reaction:

\[
2 \text{ADP} + \text{NH}_3 + \text{CO}_2 + \text{H}_2\text{O} \rightarrow 2 \text{ATP} + \text{NH}_3 + \text{CO}_2 + \text{H}_2\text{O}
\]

Carbamoylphosphate Synthetase (glutamine hydrolyzing) The enzyme that catalyzes the following reaction:

\[
2 \text{ATP} + \text{l-glutamine} + \text{CO}_2 + \text{H}_2\text{O} \rightarrow 2 \text{ADP} + \text{PPi} + \text{carbamoyl phosphate}
\]

Carbamoylputrescine Amidase The enzyme that catalyzes the following reaction:

\[
\text{N-Carbamoylputrescine} + 2 \text{H}_2\text{O} \rightarrow \text{putrescine} + \text{H}_2\text{O} + \text{CO}_2
\]

Carbamoylputrescine Amidohydrolase See carbamoylputrescine amidase.

Carbamoylsarcosine Amidase The enzyme that catalyzes the following reaction:

\[
\text{N-Carbamoylsarcosine} + \text{H}_2\text{O} \rightarrow \text{Sarcosine} + \text{CO}_2 + \text{NH}_3
\]

Carbamoylsarcosine Amidohydrolase See carbamoylsarcosine amidase.

Carbamoylserine Ammonia-Lyase The enzyme that catalyzes the following reaction:

\[
\text{Carbamoylserine} + \text{H}_2\text{O} \rightarrow \text{Pyrurate} + 2\text{NH}_3 + \text{CO}_2
\]

Carbamoylserine Deaminase See Carbamoylserine ammonia-lyase.

Carbamyl Aspartotranskinase Synonym of aspartate carbamoyltransferase.

Carbanion A negatively charged carbon.

Carbapenem Antibiotics Any of the broad spectrum b-lactam antibiotics that inhibit peptidoglycan synthesis.

Carbarsone (mol wt 260) An antiamoebic agent.

Carbaryl (mol wt 201) An insecticide.

Carbatrol A trade name for carbamazepine, an antiepileptic agent.

Carbendazim (mol wt 191) A fungicide.

Carbenicillin (mol wt 378) A semisynthetic antibiotic related to penicillin, an antibiotic that inhibits bacterial cell wall synthesis.

Carbenoxolone (mol wt 571) An antiulcerative agent.

Carbetapentane (mol wt 333) An antitussive agent.
Carbetidine (mol wt 321)  An analgesic agent.

Carbetocin (mol wt 988)  A synthetic analog of oxytocin possessing uterotonic and galactogogic activities.

Carbex  A trade name for selegiline hydrochloride, an irreversible inhibitor of monoamine oxidase and used for the treatment of Parkinson’s disease.

Carbidopa (mol wt 244)  An antiparkinsonian agent in combination with levodopa.

Carbimazole (mol wt 186)  A thyroid inhibitor.

Carbinoxamine (mol wt 291)  An antihistaminic agent.

Carbiphene (mol wt 430)  An analgesic agent.

Carbocaine  A trade name for mepivacaine hydrochloride, used as an anesthetic agent that interferes with sodium-potassium exchange across the nerve cell membrane.

Carbocation  A positively charged carbon atom.

Carbocyclic  Any cyclic chemical structure that contains only carbon atoms.

Carbocyclic  Pertaining to an organic compound that has a ring structure consisting of only carbon atoms.

Carbocysteine (mol wt 179)  A mucolytic agent and expectorant.

Carbodiimide  Any organic compound with the general structure of

\[ R-N=C=N-R \]

Carbohydrate  An aldehyde or a ketone derivative of a polyhydroxy alcohol that is synthesized by living cells, e.g., sugar and starch. It is usually presented with the general formula \( \text{C}_x\text{H}_{2x}\text{O}_x \).

Carboligase  The enzyme that catalyzes the formation of acetoin from acetaldehyde.

Carbolith  A trade name for lithium carbonate; it alters chemical transmitters in the CNS.

Carbometer  An instrument that measures the carbon dioxide content of breath.

Carbomycin  A 16-member ring macrolide antibiotic complex similar to leucomycin and erythromycin.
Carbon A chemical element with atomic weight 12 and valence 4.

Carbon-13 Nuclear Magnetic Resonance Spectroscopy A variant of nuclear magnetic resonance spectroscopy in which resonances in carbon-13 nuclei in natural carbon of organic molecules are examined instead of proton responses.

Carbon 14 Radioactive carbon with half-life of about 5700 years.

Carbon Assimilation See carbon dioxide fixation.

Carbon Clock The use of radiocarbon in carbon dating to establish the age of a biological sample.

Carbon Cycle The cyclic interconversion of carbon compounds, e.g., reactions where photosynthetic organisms reduce carbon dioxide to carbohydrates while the heterotrophic organisms oxidize the carbohydrates to carbon dioxide.

Carbon Dating See radiocarbon dating or carbon clock.

Carbon Dioxide Assimilation See Calvin cycle or C₃ pathway.

Carbon Dioxide Combining Power of Plasma The maximum amount of carbon dioxide that 100 mL of plasma can retain in the form of bicarbonate when the plasma is saturated with carbon dioxide.

Carbon Dioxide Effect See greenhouse effect.

Carbon Dioxide Fixation The photosynthetic conversion of carbon dioxide to carbohydrates via the Calvin cycle or C₃ pathway (see Calvin cycle or C₃ pathway).

Carbon Monoxide Dehydrogenase The enzyme that catalyzes the following reaction:

\[
\text{CO} + \text{H}_2\text{O} + \text{raccoptor} \xrightarrow{\text{CO}_2 + \text{reduced acceptor}}
\]

Carbon Monoxide Hemoglobin See carboxyhemoglobin.

Carbon Monoxide Oxidase The enzyme that catalyzes the following reaction:

\[
\text{CO} + \text{H}_2\text{O} + \text{O}_2 \xrightarrow{\text{CO}_2 + \text{H}_2\text{O}}
\]

Carbon Reduction Cycle See Calvin cycle or carbon fixation.

Carbonate Dehydratase The enzyme that catalyzes the following reaction:

\[
\text{H}_2\text{CO}_3 \xrightarrow{\text{CO}_2 + \text{H}_2\text{O}}
\]

Carbonate Hydro-Lyase The systematic name for carbonate dehydratase.

Carbonate Ionophore I (mol wt 316) A lipophilic, neutral ionophore for carboxylate and hydroxide.

Carbonate Ionophore II (mol wt 407) A lipophilic, neutral ionophore for carboxylate and hydroxide.

Carbonic Anhydrase A zinc-containing enzyme in erythrocytes that catalyzes the following reaction:

\[
\text{H}_2\text{CO}_3 \xleftrightarrow{\text{CO}_2 + \text{H}_2\text{O}}
\]

Carbonium Ion A positively charged carbon atom.

Carbonylcyanide 3-Chlorophenylhydrazone (mol wt 204) One of the potent uncouplers of oxidative phosphorylation.

Carbonyl Group A pair of atoms consisting of a carbon atom linked to an oxygen atom by a double bond (C = O).

Carbonyl Reductase (NADP) The enzyme that catalyzes the following reaction:

\[
\text{R-CHOH-R'} + \text{NADP}^{+} \xrightarrow{\text{R-CH}_{2}-	ext{R}'} + \text{NADPH}
\]

Carboplatin (mol wt 371) An antitumor agent that produces crosslinking of cellular DNA and interferes with transcription.
Carboprost (mol wt 369) Substance that produces strong, prompt contractions of uterine smooth muscle.

Carboquone (mol wt 321) An anticancer agent.

Carbowax A trade name for polyethylene glycol, a reagent used for cell fusion and protein purification.

Carboxamide Group Referring to a group of -CO-NH₂

Carboxin (mol wt 235) A systemic plant fungicide.

β-Carboxyaspartic Acid (mol wt 177) An amino acid found in ribosomal protein of E. coli.

Carboxybiotin A biotin molecule with a molecule of carbon dioxide attached.

Carboxycathepsin A protease that releases dipeptide from the C terminus of a polypeptide. It also catalyzes the conversion of angiotensin I to angiotensin II.

Carboxydismutase See ribulose 1,5-bis-phosphate carboxylase.

γ-Carboxyglutamic Acid (mol wt 191) An amino acid found in blood coagulation proteins and in the proteins of calcified tissues.

Carboxypeptidase A An exopeptidase that catalyzes the sequential hydrolysis of a peptide chain from the C terminus end but incapable of hydrolyzing peptide bonds involving aspartate, glutamate, arginine, lysine, and proline.
Carboxypeptidase B  An exopeptidase that catalyzes the release of lysine or arginine from the C terminus of a polypeptide.

Carboxypeptidase H  A carboxypeptidase from the storage granules of secretory cells with similar activity as carboxypeptidase M.

Carboxypeptidase M  A membrane-bound carboxypeptidase that catalyzes the release of lysine or arginine from the C terminus of a polypeptide.

Carboxypeptidase P  A membrane-bound carboxypeptidase that catalyzes the release of amino acids other than proline from the C terminus of a polypeptide at pH 4.

Carboxypolypeptidase  Synonym of carboxypeptidase.

Carboxysome  A polyhedral inclusion body observed in some blue-green algae containing the enzyme D-ribulose-1,5-bisphosphate carboxylase.

Carbromal (mol wt 237)  A sedative and hypnotic agent.

\((\text{C}_2\text{H}_5)_2\text{CBrCONHCONH}_2\)

Carbobarb (mol wt 271)  A sedative and hypnotic agent.

\(\text{O} \quad \text{N} \quad \text{O} \quad \text{H}_2\text{NCOOCH}_2\text{CH}_2\)

Carbutamide (mol wt 271)  An antidiabetic agent.

\(\text{H}_2\text{NSO}_2\text{NHHCONH(CH}_2)\text{CH}_2\)

Carbuterol (mol wt 267)  A bronchodilator with selectivity for airway smooth muscle receptors.

\(\text{OH} \quad \text{CH}_2\text{NHCH}_2\text{(CH}_2)\text{NHCONH}_2\)

Carcino-Embryonic Antigen (CEA)  An oncofetal glycoprotein antigen associated with certain tumors. It occurs in very small quantities in normal adults but its concentration increases significantly in patients with cancers of colon, breast, pancreas, and liver.

Carcinogen  A cancer-inducing agent.

Carcinogenesis  The development of cancer.

Carcinogenic  Capable of inducing cancer.

Carcinogenicity  The capacity to produce cancer.

Carcinogenophore  The atoms or chemical groups in a chemical carcinogen responsible for the carcinogenic activity of the molecule.

Carcinoma  A malignant tumor derived from epithelial cells, e.g., skin cancer or breast cancer.

Carcinomatosis  Spread of carcinoma to multiple sites in the body.

Carcinostasis  Inhibition of cancerous growth.

Cardene  A trade name for nicardipine, used as an antianginal agent that inhibits calcium ion influx across cardiac and smooth muscle cells.

Cardia  The esophageal opening of the stomach.

Cardiac  Pertaining to the heart or esophageal opening.

Cardiac Glycoside  A steroid glycoside such as ouabain and digitalis capable of acting directly on the heart muscle and improving cardiac output. Cardiac glycosides are derived from plant tissue and contain steroid aglycone (either a C23 or C24 compound) complexed with sugar.

Cardiac Muscle  The striated muscle of the heart consisting of individual heart muscle cells cross-linked by cell junction.

Cardiac Output  The volume of blood pumped out of the heart in one minute.

Cardiac Puncture  A method for withdrawing blood from an animal by inserting a syringe directly into the heart.

Cardialgia  Pain in the heart.

Cardiataelia  Incomplete development of the heart.

Cardioactive  Having an influence on the heart or any agent that has an influence on the heart.

Cardiobacterium  A genus of anaerobic, facultative aerobic, chemoorganotrophic, oxidase-positive, catalase-negative, Gram-negative bacteria.

Cardiography  A technique for determination of the graphical movement of the heart using cardiographic instruments.
Cardiolipin  The phospholipid (diphosphatidyl glycerol) used as an antigen in the Wasserman test for syphilis (see also diphosphatidyl glycerol).

Cardiomyoliposis  The degeneration of fatty substances in the muscle of the heart.

Cardiomyoplasty  A surgical technique to replace or reinforce the damaged cardiac muscle with skeletal muscle.

Cardiomyopathy  Any disease of the heart.

Cardiopulmonary  Pertaining to the heart and lung.

Cardiopulmonary Bypass  A method by which the circulation is maintained while heart is deliberately stopped during heart surgery.

Cardiopulmonary Resuscitation  An emergency procedure consisting of artificial respiration and manual external cardiac massage.

Cardioquin  A trade name for quinidine polygalacturonate, used as an antiarrhythmic agent that prolongs the action potential.

Cardiorenal  Pertaining to the heart and kidney.

Cardiorrhesis  Rupture of the heart wall.

Cardioscope  An instrument used for visual examination of the interior of the heart.

Cardiospasm  The failure of the cardiac sphincter to relax during swallowing; results in esophageal obstruction.

Cardiotonic  Substance with a favorable or tonic effect on the heart.

Cardiotoxic  Substance with a toxic effect on the heart.

Cardiotoxin  A toxic peptide from cobra venom capable of causing irreversible depolarization of cell membrane and contraction of skeletal muscle.

Cardiovascular  Pertaining to the heart and blood vessels.

Carditis  Inflammation of the heart.

Cardizem  A trade name for diltiazem hydrochloride, used as an antianginal agent that inhibits calcium influx across the membrane of the cardiac and smooth muscle cells leading to the decrease of myocardial contractility and oxygen demand.

Carnifolin  A toxic peptide from cobra venom capable of causing irreversible depolarization of cell membrane and contraction of skeletal muscle.

Carfibrate (mol wt 175)  A sedative and hypnotic agent.

Carfinate (mol wt 476)  A semisynthetic antibiotic related to penicillin.

Carfurate (mol wt 916)  An oxytocic agent.

Caricain  A protease with activity similar to that of papain.

Caries  Muscular death or breakdown of bone.

Cardiacillin (mol wt 495)  A semisynthetic antibiotic related to penicillin that inhibits bacterial cell wall synthesis.
Cariogenic  Any substance that promotes dental caries.

Cariostatic  Any agent capable of inhibiting the progress of dental caries.

Carisoprodol (mol wt 260)  A skeletal muscle relaxant capable of reducing transmission of impulses from the spinal cord to skeletal muscle.

\[
\begin{align*}
CH_2CH_2CH_3 & \quad \text{CH}_3 \\
\text{H}_2\text{NCOOCH}_2\text{CH}_2\text{OOCNHCH}_3 & \quad \text{CH}_3 \\
\end{align*}
\]

Carlsbad Salt  A purgative solution consisting of sodium chloride, sodium bicarbonate, and anhydrosodium sulfate.

Carminitive Agent  An agent that relieves flatulence used to treat gastric discomfort.

Carmofur (mol wt 257)  An orally active derivative of fluorouracil possessing antineoplastic activity.

\[
\begin{align*}
\text{CONHC}_6\text{H}_13 & \quad \text{O} \\
\text{N} & \quad \text{O} \\
\end{align*}
\]

Carmol HC  A trade name for hydrocortisone.

Carmustine (mol wt 214)  An agent that cross-links strands of cellular DNA and disrupts the process of transcription leading to the cell death.

\[
\begin{align*}
\text{Cl} & \quad \text{O} \\
\text{N} & \quad \text{H} \\
\end{align*}
\]

Carnidazole (mol wt 244)  An antiprotozoal agent (trichomonomacide).

\[
\begin{align*}
\text{O}_2\text{N} & \quad \text{CH}_3 \\
\text{N} & \quad \text{CH}_3 \\
\end{align*}
\]

Carnitamidase  The enzyme that catalyzes the following reaction:

\[
\text{l-Carnitamide} + \text{H}_2\text{O} \quad \text{l-Carnitine} + \text{NH}_3
\]

Carnitine  An essential cofactor in fatty acid metabolism. It transports fatty acid from the cytoplasm to the mitochondria.

\[
\begin{align*}
\text{CH}_3 & \quad \text{CH}_2\text{NCH}_2\text{-CH}_2\text{-COOH} \\
\text{CH}_3 & \quad \text{OH} \\
\end{align*}
\]

Carnitine Acetyltransferase  The enzyme that catalyzes the following reaction:

\[
\begin{align*}
\text{Acetyl-CoA} + \text{carnitine} & \rightarrow \text{CoA-SH} + \text{acylcaritnine}
\end{align*}
\]

Carnitine Decarboxylase  The enzyme that catalyzes the following reaction:

\[
\begin{align*}
\text{Carnitine} \rightarrow \text{2-Methylcholine} + \text{CO}_2
\end{align*}
\]

Carnitine Dehydrogenase  The enzyme that catalyzes the following reaction:

\[
\begin{align*}
\text{Carnitine} + \text{NAD}^+ & \rightarrow \text{3-Dehydrocarnitine} + \text{NADH}
\end{align*}
\]

Carnitine Palmitoyltransferase  The enzyme that catalyzes the following reaction:

\[
\begin{align*}
\text{Palmitoyl-CoA} + \text{carnitine} & \rightarrow \text{CoA-SH} + \text{palmitoylcarnitine}
\end{align*}
\]

Carnitor  A trade name for l-carnitine, used to facilitate the transport of fatty acid into the mitochondria.

Carnivore  An organism that feeds on other animals.

Carnosine (mol wt 226)  A dipeptide of N-β-alanylhistidine found in the muscle of animals.

\[
\begin{align*}
\text{H}_2\text{NCH}_2\text{-CH}_2\text{CONHCH}_2\text{COOH} & \quad \text{N} \\
\text{N} & \quad \text{N} \\
\end{align*}
\]

Carnosine Synthetase  The enzyme that catalyzes the following reaction:

\[
\begin{align*}
\text{ATP} + \text{l-histidine} + \text{β-alanine} & \rightarrow \text{AMP} + \text{PPi} + \text{carnosine}
\end{align*}
\]

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alpha-Carotene (mol wt 537) An isomer of beta-carotene found mainly in carrots.

beta-Carotene (mol wt 537) A widely distributed provitamin A found in various species of plants and animals, e.g., carrots.

delta-Carotene (mol wt 537) A type of carotene that occurs in carrots and certain varieties of tomatoes.

gamma-Carotene A rare carotenoid found in Penicillium sclerotiorum.

Carotenemia The increase of carotene in the blood causing the yellowish pigmentation of the skin (also known as carotinemia or xanthemia).

Carotenes A group of structurally related plant pigments consisting of a tetraterpene structure but lacking oxygen functionality such as hydroxyl groups.

Carotenoid A class of plant pigments based on a tetraterpene structure including carotenes and oxygen-containing derivatives of carotenes (e.g., xanthophylls). Carotenoids function as accessory pigments in photosynthesis and are widely distributed in microorganisms, plants, and animals.

Caroverine (mol wt 365) An antispasmodic agent.

Caroxazone (mol wt 206) An antidepressant.

Carpetimycins An antibiotic related to thienamycin and olivanic acids and produced by Streptomyces griseus.

Carprofen (mol wt 274) An anti-inflammatory agent used for treatment of rheumatoid arthritis.

Carrageenan A mixture of sulfated galactans associated with cell walls of many rhodophycean algae, e.g., red seaweed (Rhodophyceae).

Carrier 1. An antigenic macromolecule capable of carrying a hapten. 2. A transport protein capable of transporting substances across the membrane. 3. An individual who harbors a disease-causing organism. 4. An individual heterozygous for a single recessive gene. 5. A stable isotope of an element used to mix with a radioisotope of an element to give a sufficient quantity for chemical experimentation.

Carrier Ampholyte The ampholyte that forms the pH gradient in isoelectric focusing.

Carrier Free Radioisotope Undiluted radioisotope.

Carrier Gas The inert gas that functions as the mobile phase in gas chromatography.
**Carrier Protein**  A membrane protein that binds and transports a solute molecule across the membrane by undergoing conformational changes.

**Carr-Price Reaction**  A colorimetric reaction for the determination of vitamin A.

**Carsalamin (mol wt 163)**  An analgesic agent.

**Carteolol (mol wt 292)**  An antihypertensive, antianginal, antiarrhythmic, and antiglaucoma agent that blocks beta-1 (myocardial) and beta-2 (pulmonary, vascular) receptor sites.

**Carticaine (mol wt 284)**  A local anesthetic agent.

**Cartrol**  A trade name for carteolol, a beta adrenergic blocking agent used as an antihypertensive drug.

**Carubicin (mol wt 514)**  An antitumor antibiotic related to daunorubicin and doxorubicin.

**Carvacrol (mol wt 150)**  An insecticide (nematicide).

**Carvedilol (mol wt 406)**  An antihypertensive and antianginal agent.

**Caryo-**  A prefix meaning nucleus.

**Cascade Reaction**  An interlinked series of enzymatic reactions in which the products of one reaction accelerate or catalyze a second reaction and so forth.

**Cascara Sagrada**  Dried bark of *Rhamnus prunifolia* used as a cathartic agent.

**Casein**  A mixture of related phosphoproteins occurring in milk and cheese.

**Casein Kinase**  Synonym of protein kinase.

**Casodex**  A trade name for bicalutamide, an antiandrogen.

**Cassaidine (mol wt 408)**  A cardiotonic agent from the bark of *Erythrophleum guineense* (Leguminosae).

**Cassaine Mol wt 406**  A cardiotonic agent from the bark of *Erythrophleum guineense* (Leguminosae).

**Cassette**  Loci containing functionally related nucleotide sequences that lie in tandem and can be substituted for one another, e.g., the mating type reversals observed in yeast (removing one cassette and replacing it by another containing a different nucleotide sequence).

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Cassette Model A model to explain mating-type interconversion in yeast (see cassette).

Castanospermine (mol wt 189) A polyhydroxyl alkaloid isolated from the seeds of Australian leguminous tree (Castanospermum australe) and an inhibitor of glycosidase.

\[
\text{HO} \quad \text{N} \quad \text{HO}
\]

Castle's Intrinsic Factor A thermolabile mucoprotein capable of promoting vitamin B₁₂ absorption. It occurs in normal gastric juice, but is deficient in patients with pernicious anemia.

Castor Oil A common organic solvent used as a water-repellent coating.

Castration Removal of testes or ovaries.

CAT Abbreviation for 1. chloramphenicol acetyltransferase; 2. computerized axial tomography or computer-assisted tomography; 3. a combination drug containing cytosine-arabinoside, adriamycin, and 6-thioguanine.

CAT Assay Abbreviation for chloramphenicol acetyl transferase assay.

CAT Scan Abbreviation for computerized axial tomography or computer-assisted tomography.

Catabolic Pertaining to catabolism.

Catabolism Metabolic breakdown or degradation of a complex molecule into simple products.

Catabolite Any metabolic intermediate generated in catabolic reactions.

Catabolite Activator Protein (CAP) A cyclic AMP-binding protein. The complex of CAP and cyclic AMP stimulates transcription by binding to certain promoter sites on DNA.

Catabolite Repression The repression of an inducible enzyme system by the presence of a preferred carbon source, e.g., the repression of lac operon in E. coli by the presence of the preferred glucose.

Cataflam A trade name for diclofenac potassium, an analgesic, antipyretic, and anti-inflammatory agent.

Catalase The enzyme that catalyzes the conversion of H₂O₂ to H₂O and O₂.

Catalysis A catalyst-mediated catabolic reaction.

Catalyst A substance that accelerates a chemical reaction without itself being consumed or changed by the reaction.

Catalytic Antibody An antibody that catalyzes a specific chemical reaction by lowering the free energy of activation.

Catalytic Center See active site or catalytic site.

Catalytic Site The region of an enzyme that binds substrate, forms enzyme substrate complex, and catalyzes the reaction.

Catalytic Subunit The subunit of the regulatory enzyme that binds substrate and possesses enzymatic activity.

Cataplasia The degenerative reversion of a cell or tissue to an embryonic state.

Catapres A trade name for clonidine, an antihypertensive agent.

Cataract Loss of transparency of the lens of the eye (opacity of the eye).

Catarrh The excessive secretion of thick phlegm or mucus by the mucous membrane of the nose, nasal sinuses, or nasopharynx.

Catotoxic Steroid A steroid that stimulates the activity of drug-metabolizing enzymes.

Catechin (mol wt 290) An astringent (diarrheal) agent.

\[
\text{OH} \quad \text{OH} \quad \text{OH}
\]

Catechol (mol wt 110) An aromatic alcohol.

\[
\text{OH} \quad \text{OH} \quad \text{OH}
\]

Catechol 1,2-Dioxygenase The enzyme that catalyzes the following reaction:

\[
\text{Catechol} + \text{O}_2 \rightleftharpoons \text{cis-cis-Muconate}
\]

Catechol 2,3-Dioxygenase The enzyme that catalyzes the following reaction:

\[
\text{Catechol} + \text{O}_2 \rightarrow 2\text{-Hydroxymuconate semialdehyde}
\]

Catechol Methyltransferase The enzyme that catalyzes the following reaction:
S-Adenosylmethionine + catechol

\[ \text{S-Adenosylhomocysteine + guaiacol} \]

Catechol Oxidase The enzyme that catalyzes the following reaction:

\[ 2 \text{O-diphenol} + \text{O}_2 \rightleftharpoons 2 \text{O-quinone} + 2\text{H}_2\text{O}_2 \]

Catecholamine A neurotransmitter derived from tyrosine, such as dopa, dopamine, epinephrine, or norepinephrine.

Catenane Structure consisting of two or more interlocking rings.

Catenated DNA Dimer A DNA molecule consisting of two interlocking circular DNAs.

Catharsis Purging or cleansing out of the bowels by giving a laxative.

Cathartic Any agent or drug that promotes movement and evacuation of intestinal content.

Cathepsin A proteolytic enzyme.

Cathepsin A A serine-type carboxypeptidase with broad specificity.

Cathepsin B An endopeptidase that preferentially cleaves peptide bonds between arginines.

Cathepsin C A dipeptidyl aminopeptidase that releases N-terminal depeptides from a polypeptide.

Cathepsin D A protease with activity similar to pepsin A.

Cathepsin G A protease that preferentially cleaves peptide bonds involving leucine, tyrosine, phenylalanine, methionine, tryptophan, glutamine, and asparagine.

Cathepsin H A protease with both aminopeptidase and carboxypeptidase activities.

Cathepsin L A protease that cleaves proteins with a preference for residues bearing a large hydrophobic side chain at the P2 position.

Cathepsin Protein hydrolysis by cathepsin.

Catheter A flexible slender tube used to introduce or remove fluid from a body cavity or body passageway.

Catheterization The introduction of a catheter into a body passage for medical or diagnostic purposes.

Cathode The negative electrode.

Catholyte The electrolyte that is in immediate contact with the cathode in the isoelectric focusing.

Cation A positively charged ion.

Cation Exchanger A negatively charged ion-exchange resin that is capable of binding and exchanging cationic molecules.

Cationic Detergent A positively charged surface-active agent.

Cationic Protein A positively charged antimicrobial protein present in the granules of phagocytic cells.

Ca++-Transporting ATPase The enzyme that catalyzes the reaction in which hydrolysis of ATP is coupled with transport of calcium ions.

CAU A genetic code for the amino acid histidine.

CauI (AvaII) A restriction endonuclease from "Chloroflexus aurantiacus" with the following specificity:

\[ 5'\text{GG(A/T)CC...3'} 3'\text{CC(T/A)GG...5'} \]

CauII A restriction endonuclease from "Chloroflexus aurantiacus" with the following specificity:

\[ 5'\text{CC(CG)GG...3'} 3'\text{GG(GC)CC...5'} \]

CauIII (Pstl) A restriction endonuclease from "Chloroflexus aurantiacus" with the same specificity as Pstl.

Caulobacter A genus of chemoorganotrophic, strictly anaerobic, prosthecate bacteria.

CAV Abbreviation for a combination drug containing CCNU, adriamycin, and vinblastine.

CAVe Abbreviation for a combination drug containing cyclophosphamide, adriamycin, and velban.

Caveola A closed plasmalemal vesicle.

Caveolin A protein that lines the cytoplasmic surface of the caveola.

Caverject A trade name for alprostadil, a prostaglandin used for the relaxation of vascular smooth muscle.

Cavity 1. Hollow space in the body. 2. Loss of tooth structure due to decay.

Cavity Slide A microscope slide with a circular depression on one side.
CAVP  Abbreviation for a combination drug containing cytoxan, adriamycin, vincristine, and prednisone.

CB  Abbreviation for cytochalasin B.

C2b  Abbreviation for a subcomponent of C2 complement.

C3b  Abbreviation for a subcomponent of C3 complement.

C4b  Abbreviation for a subcomponent of C4 complement.

C5b  Abbreviation for a subcomponent of C5 complement.

CB Agar  Abbreviation for chocolate blood agar.

CBA Mouse  Abbreviation for a strain of inbred mouse.

CBA/N Mouse  Abbreviation for a CBA mutant mouse.

CBB  Abbreviation for Coomassie brilliant blue.

CBC  Abbreviation for complete blood count.

CBD  Abbreviation for 1. cellulose-binding domain; 2. cyclosporin A-binding domain.

CBE  Abbreviation for a combination drug containing cytoxan, BCNU, and etoposide.

CBF  Abbreviation for centromere-binding factor.

CBG  Abbreviation for 1. corticosteroid-binding globulin; 2. cortisol-binding globulin.

CBH  Abbreviation for celllobiohydrolase.

CbI  A restriction endonuclease from Clostridium bifermentans B4 with the following specificity:

\[
\begin{align*}
5' & \ldots \ldots TGAGA \ldots \ldots 3' \\
3' & \ldots \ldots AAGCC \ldots \ldots 5'
\end{align*}
\]

Cbl  Abbreviation for cobalamin.

CBPPPA  Abbreviation for a combination drug containing cytoxan, bleomycin, procarbazine, prednisone, and adriamycin.

CBV  Abbreviation for 1. a combination drug containing CCNU, bleomycin, and velban; 2. circulating blood volume.

CBVD  Abbreviation for a combination drug containing CCNU, bleomycin, velban, and dexamethasone.

Cbz  Abbreviation for carbobenzoxy.

CBZ  Abbreviation for carbamazepine.

CBZ-Amino Acid  An amino acid in which the amino group has been protected by attachment of a carbobenzoxy group.

cc  Abbreviation for cubic centimeter (milliliter).

CC  Abbreviation for chondrocalcin.

C3c  Abbreviation for the subcomponent of C3 (third component of complement).

CCA  A genetic code for the amino acid proline.

CCAT  Abbreviation for 1. CCA-terminal in rRNA; 2. conglutinating complement adsorption test.

CCA-Terminal  The 3'-end of the rRNA where the amino acid attaches during the process of protein synthesis.

CCAVV  Abbreviation for a combination drug containing CCNU, cyclophosphamide, adriamycin, vincristine, and VP16.

CCB  Abbreviation for calcium channel blockers.

CCC  A genetic code for the amino acid proline.

CCCC  Abbreviation for centrifugal counter-current chromatography.

cccDNA  Abbreviation for covalently closed circular DNA.

CCCP  Abbreviation for carbonyl cyanide 3-chlorophenylhydrazone.

C2-Cer  Abbreviation for N-acetyl sphingosine.

C2-Ceramide  Abbreviation for N-acetyl sphingosine.

C6-Cer  Abbreviation for N-hexanosyl-acetyl sphingosine.

C6-Ceramide  Abbreviation for N-hexanosyl-acetyl sphingosine.

CCD  Abbreviation for charged couple device.

CCE  Abbreviation for carboline-carboxylic acid ester.

CCF  Abbreviation for 1. cardiolipin complement fixation; 2. cephalin-cholesterol flocculation.

CCF Agar  Abbreviation for cefoxitin-cyclosterine fructose agar.

CCFE  Abbreviation for a combination drug containing cyclophosphamide, cisplatin, fluorouracil, and estramustine.
CCG  The genetic code for the amino acid proline.

CeNI  A restriction endonuclease from Curtobacterium citreum N with the following specificity:

\[ 5'\text{GCGGCCGC} \ldots \text{3'}\]

\[ 3'\text{CGCCGGCG} \ldots \text{5'}\]

CCK  Abbreviation for hormone cholecystokinin.

CCK-A  Abbreviation for cholecystokinin-A.

CCK-OP  Abbreviation for cholecystokinin octapeptide.

CCK-PZ  Abbreviation for cholecystokinin pancreozymin.

CCL  Abbreviation for carcinoma cell line.

CCM  Abbreviation for a combination drug containing cyclophosphamide, CCNU, and methotrexate.

CCMA  Abbreviation for a combination drug containing cyclophosphamide, CCNU, methotrexate, and Adriamycin.

cCMP  Abbreviation for cyclic cytidine monophosphate.

CCMT  Abbreviation for catechol-O-methyl transferase.

CCNU  Abbreviation for lomustine.

CCOB  Abbreviation for a combination drug containing CCNU, cyclophosphamide, oncovin, and bleomycin.

CeP  Abbreviation for cytochrome c peroxidase.

CeR  Abbreviation for cytochrome c reductase.

CeRase  Abbreviation for cytochrome c reductase.

CCSP  Clara cell secretory protein.

CCU  The genetic code for the amino acid proline.

CCV  Abbreviation for a combination drug containing CCNU, cytoxan, and vincristine.

CCVB  Abbreviation for a combination drug containing CCNU, cyclophosphamide, vincristine, and bleomycin.

CCVPP  Abbreviation for a combination drug containing CCNU, cyclophosphamide, vincristine, procarbazine, and prednisone.

\(^{115}\text{Cd}\)  Abbreviation for radioactive cadmium.

\(^{14}\text{N}\)  Abbreviation for ammonium.

CD  Abbreviation for cluster of differentiation, a type of cell surface marker designated as CD1, 2, 3,……CD130 for identification of different groups of leukocytes. They are glycoproteins expressed on various cell types and act as cell markers, receptors, oncogenic markers, and cell to cell adhesion function-associated antigens. For example, CD4 (marker for helper T cells and delayed hypersensitivity T cells); CD8 (marker for suppressor T cells and cytotoxic T cells).

Cd  Abbreviation for 1. chemical element cadmium with atomic weight 112, valence 2 and 2. candel, a unit of luminous intensity.

CD3  Cell surface marker on T cells associated with T cell receptors.

CD4  Cell surface marker of helper T cells and delayed hypersensitivity T cells.

CD8  Cell surface marker of suppressor and cytotoxic T cells.

CD44  A glycoprotein that plays a general role in cell adhesion and lymphocyte homing.

CD59  A glycoprotein that is a potent inhibitor of complement membrane attack complex.

\(^{137}\text{Cd}\)  Abbreviation for radioactive cadmium.

\(^{14}\text{C}\)  Abbreviation for carbon-14.

\(^{14}\text{C}\)  Abbreviation for radiocarbon dating.

\(^{115}\text{Cd}\)  A trade name for cladribine, an antineoplastic agent.

C\(^{14}\)-Dating  A technique for estimating the age of carbon in biological remains using \(^{12}\text{C}\) and \(^{14}\text{C}\) (see also radiocarbon dating).

\(^{137}\text{Cd}\)  Abbreviation for radioactive cadmium.

CDA  A trade name for cladribine, an antineoplastic agent.

CCG • cDDP
CDGS • CDP-Glycerol Pyrophosphatase

CDGS  Abbreviation for carbohydrate deficient glycoprotein syndrome.

CDH  Abbreviation for ceramide dihexoside.

CDI  Abbreviation for collision-induced dissociation.

Cdi27I (EcoRII)  A restriction endonuclease from *Citrobacter diversus* RFL27 with the same specificity as EcoRII.

C2-Dihydroceramide  Abbreviation for N-acetyldihydroceramide.

CDK  Abbreviation for 1. cell division protein kinase; 2. cyclin-dependent kinase.

CdmCl  Abbreviation for guanidinium chloride.

cDNA  Abbreviation for complementary DNA. The DNA synthesized by reverse transcriptase with an RNA template.

C-DNA  Abbreviation for C form of DNA. It consists of a right-handed double helix with 9.3 nucleotide residues per turn.

cDNA Library  A DNA library that contains DNA genes made from a population of mRNAs using reverse transcriptase. It is different from the normal gene library because it contains only transcribed DNA linked to a vector and cloned in a suitable host.

cDNA Probe  Radioactively labeled or enzyme-linked cDNA (single stranded) used to determine the presence or absence of specific sequence in RNA or DNA.

CDNB  Abbreviation for 1-chloro-2,4-dinitrobenzene.

CDP  Abbreviation for cytidine diphosphate.

CDP-Abequose Epimerase  The enzyme that catalyzes the following reaction:

\[
\text{CDP-3,6-dideoxy-D-glucose} \\
\text{CDP-3,6-dideoxy-D-mannose}
\]

CDP-Acylglycerol Arachidonyltransferase  The enzyme that catalyzes the following reaction:

\[
\text{Arachidonyl-CoA + CDP-acylglycerol} \\
\text{CoA + CDP-diacylglycerol}
\]

CDPC  Abbreviation for cytosine diphosphate choline.

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CDP-Choline  A cytidine diphosphate derivative of choline that serves as a donor of choline.

CDP-Diaclyglycerol  An intermediate in biosynthesis of some phosphoglycerides.

CDP-Diacylglycerol-Inositol 3-Phosphatidylinositol Transferase  The enzyme that catalyzes the following reaction:

\[
\text{CDP-diacylglycerol + inositol} \\
\text{CMP + phosphatidylinositol}
\]

CDP-Diapylglycerol  Abbreviation for CDP-ethanolamine.

CDP-Glucose 4,6-Dehydratase  The enzyme that catalyzes the following reaction:

\[
\text{CDP-glucose} \\
\text{CDP-4-dehydro-6-deoxy-D-glucose} + H_2O
\]

CDP-Glycerol Glycerophosphotransferase  The enzyme that catalyzes the following reaction:

\[
\text{CDP-glycerol + (glycerophosphate)_n} \\
\text{CMP + (glycerophosphate)_{n+1}}
\]

CDP-Glycerol Pyrophosphatase  The enzyme that catalyzes the following reaction:

\[
\text{CDP-glycerol + H}_2\text{O} \\
\text{CMP + glycerol 3-phosphate}
\]
CDPK • Abbreviation for calmodulin-like domain protein kinase.

**CDP-Ribitol Ribitolphosphotransferase** The enzyme that catalyzes the following reaction:

\[
\text{CDP-ribitol} + (\text{ribitol phosphate})_n \rightarrow \text{CMP} + (\text{ribitol phosphate})_{n+1}
\]

**CDR** Abbreviation for 1. calcium-dependent regulator protein; 2. complimentarily determining region.

**CD2R** Abbreviation for a marker molecule of 50 kDa, restricted to activated T cells and some NK cells.

**CD-ROM** Abbreviation for compact disc-read only memory.

**Ce** Symbol for the chemical element cerium with atomic weight 140, valence 2.

**CE** Abbreviation for 1. calexcitin; 2. chlorimuron ethyl; 3. capillary electrophoresis; 4. chick embryo; 5. cholesteryl ester; 6. cation exchanger; 7. cholera exotoxin; 8. cytopathic effect; 9. chloroform/ether mixture.

**C_{3e}** Abbreviation for a subcomponent of C3 (third component of a complement).

**CEA** Abbreviation for carcino-embryonic-antigen, the antigen present in certain cancers. It occurs in very small quantities in normal adults but its concentration increases significantly in patients with cancers of colon, breast, pancreas, and liver.

**CEB** Abbreviation for a combination drug containing carboplatin, etoposide, and bleomycin.

**C/EBP** Abbreviation for CCAAT/enhancer-binding protein.

**CeeNU** A trade name for lomustine, used as an antineoplastic agent that cross-links strands of cellular DNA and interferes with transcription.

**Ceetamol** A trade name for acetaminophen, an anti-inflammatory, antipyretic, and analgesic agent that inhibits prostaglandin synthesis.

**CEF** Abbreviation for chicken embryo fibroblast.

**Cefadroxil (mol wt 381)** A semisynthetic cephalosporin antibiotic that inhibits bacterial cell wall synthesis.

\[
\begin{align*}
\text{HO} & \quad \text{CHCONH} \\
& \quad \text{N} \\
& \quad \text{S} \\
& \quad \text{O} \\
& \quad \text{H} \quad \text{H} \\
\end{align*}
\]

**Cefadyl** A trade name for cephapirin sodium, an antibiotic that inhibits bacterial cell wall synthesis.

**Cefamandole (mol wt 463)** A semisynthetic cephalosporin antibiotic that inhibits bacterial cell wall synthesis.

\[
\begin{align*}
\text{N} & \quad \text{N} \\
\text{H} & \quad \text{N} \quad \text{CHCONH} \\
& \quad \text{OH} \\
& \quad \text{O} \\
& \quad \text{N} \\
& \quad \text{S} \\
& \quad \text{COOH} \\
& \quad \text{CH}_2\text{S} \quad \text{HO} \\
\end{align*}
\]

**Cefazolin (mol wt 463)** A semisynthetic cephalosporin antibiotic that inhibits bacterial cell wall synthesis.

\[
\begin{align*}
\text{N} & \quad \text{N} \\
\text{H} & \quad \text{N} \quad \text{CHCONH} \\
& \quad \text{OH} \\
& \quad \text{O} \\
& \quad \text{N} \\
& \quad \text{S} \\
& \quad \text{COOH} \\
& \quad \text{CH}_2\text{S} \\
\end{align*}
\]

**Cefazone (mol wt 548)** A semisynthetic cephalosporin antibiotic that inhibits bacterial cell wall synthesis.
Cefazolin (mol wt 455) A semisynthetic antibiotic derived from 7-aminocephalosporanic acid that inhibits bacterial cell wall synthesis.

Cefbuperazone (mol wt 628) A broad spectrum antibiotic.

Cefepime (mol wt 481) An antibacterial agent.

Cefixime (mol wt 453) A third-generation cephalosporin antibiotic that inhibits bacterial cell wall synthesis.

Cefizox A trade name for cefitoxime sodium, an antibiotic that inhibits bacterial cell wall synthesis.

Cefmenoxime (mol wt 512) A third-generation cephalosporin antibiotic that inhibits bacterial cell wall synthesis.

Cefmetazole (mol wt 472) A semisynthetic antibiotic derived from cephamycin, it inhibits bacterial cell wall synthesis.

Cefminox (mol wt 520) A semisynthetic, broad spectrum cephamycin antibiotic that inhibits bacterial cell wall synthesis.

Cefobid A trade name for cefoperazone sodium, an antibiotic that inhibits bacterial cell wall synthesis.

Cefodizime (mol wt 585) A third-generation cephalosporin antibiotic derived from cefotaxime that inhibits bacterial cell wall synthesis.

Cefonicid (mol wt 543) A semisynthetic cephalosporin antibiotic that inhibits bacterial cell wall synthesis.

Cefoperazone (mol wt 646) A third-generation, broad spectrum cephalosporin antibiotic that inhibits bacterial cell wall synthesis.
Ceforanide (mol wt 520) A semisynthetic cephalosporin that inhibits bacterial cell wall synthesis.

Cefotan A trade name for cefotan, an antibiotic that inhibits bacterial cell wall synthesis.

Cefotaxime (mol wt 455) A broad spectrum third-generation cephalosporin antibiotic that inhibits bacterial cell wall synthesis.

Cefotetan (mol wt 576) A semisynthetic antibiotic derived from cephalexin that inhibits bacterial cell wall synthesis.

Cefotiam (mol wt 526) A semisynthetic cephalosporin antibiotic that inhibits bacterial cell wall synthesis.

Cefoxitin (mol wt 427) A semisynthetic antibiotic derived from cephalexin that inhibits bacterial cell wall synthesis.

Cefpimizole (mol wt 671) A third-generation cephalosporin antibiotic that inhibits bacterial cell wall synthesis.

Cepiramide (mol wt 613) A semisynthetic cephalosporin antibiotic that inhibits bacterial cell wall synthesis.

Cefpodoxime Proxetil (mol wt 558) A broad spectrum third-generation cephalosporin antibiotic that inhibits bacterial cell wall synthesis.

Cefprozil (mol wt 407) A cephalosporin-type antibiotic.
Cefracycline  A trade name for tetracycline, an antibiotic.

Cefroxadine (mol wt 365)  An orally active cephalosporin derivative that inhibits bacterial cell wall synthesis.

Cefsulodin (mol wt 533)  A third-generation cephalosporin antibiotic that inhibits bacterial cell wall synthesis.

Ceftazidime (mol wt 547)  A third-generation cephalosporin antibiotic that inhibits bacterial cell wall synthesis.

Cefteram (mol wt 479)  An orally active cephalosporin antibiotic that inhibits bacterial cell wall synthesis.

Ceftibuten (mol wt 410)  A third-generation cephalosporin antibiotic that inhibits bacterial cell wall synthesis.

Ceftin  A trade name for cefuroxime, a cephalosporin-type antibiotic.

Ceftiofur (mol wt 524)  A third-generation cephalosporin antibiotic that inhibits bacterial cell wall synthesis.

Ceftizoxime (mol wt 383)  A third-generation cephalosporin antibiotic that inhibits bacterial cell wall synthesis.

Ceftriaxone (mol wt 555)  A third-generation cephalosporin antibiotic that inhibits bacterial cell wall synthesis.

Cefuroxime (mol wt 424)  An antibacterial agent.

Cefuzonam (mol wt 514)  A third-generation cephalosporin antibiotic that inhibits bacterial cell wall synthesis.
Cefzil  A trade name for cefprozil monohydrate, a cephalosporin-type antibiotic.

CEI  Abbreviation for converting enzyme inhibitors.

CellII (EspI)  A restriction endonuclease from Coccocloris ellabens with the following specificity:

\[
5'\ldots GCTNAGC\ldots 3' \\
3'\ldots CGANTCG\ldots 5'
\]

Celebrex  A trade name for celecoxib, a nonsteroidal anti-inflammatory and analgesic agent.

Celecoxib (mol wt 381)  A nonsteroidal anti-inflammatory and analgesic agent.

Celestoderm  A trade name for betamethasone valerate, a corticosteroid.

Celestone  A trade name for betamethasone, a glucocorticoid used as an anti-inflammatory agent.

Celexa  A trade name for citalopram used as an antidepressant.

Celiac Disease  A violent intestinal upset resulting from eating gluten.

Celioma  A tumor of the belly.

Celiprolol (mol wt 380)  An antihypertensive and antianginal agent.

Cell (BamHI)  A restriction endonuclease from Coccocloris ellabens with the same specificity as BamHI.

Cell  The basic structure and functional unit of life.

Cell Adhesion Molecules  Molecules on the cell surface that mediate the cell-to-cell binding or cohesive interaction between cells.

Cell Affinity Chromatography  A method for obtaining a functionally homogenous population of cells from a mixed culture using affinity chromatographic techniques in which affinity adsorbents are prepared by linking cell-surface-specific protein (e.g., antibody and lectin) for adsorption of specific cell-types. The adsorbed cell type is then eluted from the affinity absorbent.

Cell Biology  Science that deals with the structures and functions of cell.

Cell Blotting  A technique to blot cells onto nitrocellulose paper for subsequent detection, identification, and characterization.

Cell Body  The portion of a nerve cell that contains the nucleus.

Cell Coat  The outer layer of eukaryotic cells that is rich in glycoprotein and mucopolysaccharide.

Cell Cortex  Specialized layer of cytoplasm on the inner face of plasma membrane. It is an actin-rich layer in animal cells responsible for cell surface movement.

Cell Counting  The method used to enumerate cells in a culture or in a sample employing a hemocytometer or other appropriate device.

Cell Culture  The in vitro growth of cells.

Cell Cycle  The reproductive cycle of the cell; the sequence of events by which the genetic information in the nucleus is duplicated and parcelled out into two daughter cells. The cell cycle is divided into four phases: M (mitosis), S (DNA synthesis), and G1 and G2 (gap phases).

Cell Determination  An event in embryogenesis that specifies the developmental pathway that a cell will follow.

Cell Differentiation  A process of cell specialization through the selective expression of genes.

Cell Disruption  Any procedure that breaks the cell and releases its cellular content, e.g., homogenization and enzymatic, or ultrasonic treatment.

Cell Division  The process by which a cell divides into two cells (see mitosis and meiosis).

Cell Entrapment  The entrapment of free, mobile cells into a gel matrix (e.g., polyacrylamide gel). The entrapped cells can be used for production of specific bioactive compounds or to perform a specific biochemical reaction.

Cell Extract  A preparation that contains a large number of broken cells and their released cellular content.
Cell Fractionation  A technique (e.g., centrifugation, chromatography, electrophoresis) for separation of cell content into functional subcellular and noncellular components following cell disruption.

Cell Free Extract  The fluid resulting from centrifugation or filtration of disrupted cell suspension; it contains subcellular components (e.g., ribosomes) and soluble biomolecules (e.g., DNA, RNA, proteins, and carbohydrates).

Cell Free Protein Synthesis  Protein synthesis carried out in the laboratory with cell-free extracts without the presence of living cells.

Cell Free System  A biosynthetic system without the presence of cells, e.g., a system for cell-free protein synthesis.

Cell Free Translation System  A cell-free extract that contains all components required for protein synthesis (e.g., ribosomes, tRNAs, amino acids, enzymes and cofactors) and is able to translate the added mRNA into protein.

Cell Fusion  Fusion of two different cells to form a hybrid with the aid of polyethylene glycol, electroporation, or viruses.

Cell Homogenate  A preparation that contains broken cells and their released contents.

Cell Hybrid  A somatic cell containing chromosomes derived from parental cells of different species (e.g., man-mouse somatic cell hybrid).

Cell Hybridization  Production of viable somatic cell hybrids with cell fusion techniques.

Cell Immobilization  Conversion of cells from a free, mobile state to a fixed state either by binding onto an insoluble substrate or by entrapment into a gel matrix (e.g., polyacrylamide gel). The immobilized cells can be used for production of a specific bioactive compound or to perform a specific reaction or activity.

Cell Junction  Specialized region of connection on the plasma membrane where contact between two adjacent animal cells occurs.

Cell Line  Population of cells of plant or animal origin capable of dividing indefinitely in culture.

Cell Locomotion  Active movement of a cell from one location to another, e.g., migration of a cell over the surface.

Cell Lysate  A mixture of cellular components obtained from cell lysis.

Cell Mediated Immunity  Immunity that is mediated by the effector T cells, e.g., destruction of foreign cells by cytotoxic T cells in an allograft rejection reaction or delayed hypersensitivity reaction mediated by T<sub>n</sub> lymphocytes.

Cell Membrane  The structure surrounding a cell that consists of a lipid bilayer and proteins, it regulates the flow of material into and out of the cell (also called plasma membrane).

Cell Plate  Flattened membrane-bound structure that forms fusing vesicles in the cytoplasm of a dividing plant cell. It is the precursor of a new cell wall.

Cell Proliferation  The process of increasing the number of cells through mitotic division.

Cell Respiration  The cellular chemical reactions that release energy from fuel molecules, e.g., glycolysis, citric acid cycle, and electron transport system.

Cell Sap  1. Fluid in the vacuole of a plant cell. 2. Cytoplasm without cell organelles, e.g., cytosol.

Cell Sorter  A device to separate different cell types in tissues that have been treated with trypsin or collagenase to destroy the intercellular matrix.

Cell Surface Receptor  A protein in, on, or transversing the membrane that recognizes and binds specific bioactive molecules.

Cell Theory  The theory that the cell is the basic structural and functional unit for all organisms.

Cell Wall  Extracellular matrix deposited by a cell outside its plasma membrane. It is a prominent structure in cells of bacteria, plants, algae, and fungi, but not in animal cells.

Cellcept  A trade name for mycophenolate mofetil used as an immunosuppressive agent.

Cellifugal  In a direction away from the cell body.

Cellipetal  In a direction toward the cell body.

Cellobiase (β-glucosidase)  The enzyme that catalyzes the hydrolysis of glucoside to glucose and alcohol.

Cellobiose (mol wt 343)  A β-1,4-linked disaccharide of glucose.

Cellobiose Dehydrogenase  The enzyme that catalyzes the following reaction:

\[
\text{Cellobiose + acceptor} \rightarrow \text{Cellobiono-1,5-lactone + reduced acceptor}
\]
Celllobiose Epimerase  The enzyme that catalyzes the following reaction:

\[
\text{Celllobiose} \xrightarrow{\text{d-glucosyl-d-mannose}}
\]

Celllobiose Oxidase  The enzyme that catalyzes the following reaction:

\[
\begin{align*}
\text{Celllobiose} + O_2 & \rightarrow \text{Cellobiono-1,5-lactone} + H_2O_2 \\
\end{align*}
\]

Celllobiose Phosphorylase  The enzyme that catalyzes the following reaction:

\[
\begin{align*}
\text{Celllobiose} + \text{Pi} & \rightarrow \text{Glucose 1-phosphate} + \text{glucose} \\
\end{align*}
\]

Cellocidin (mol wt 112)  An antibiotic produced by *Streptomyces chibaensis*.

\[
\text{H}_2\text{NCO-C} = \text{CCONH}_2
\]

Cellodextrin Phosphorylase  The enzyme that catalyzes the following reaction:

\[
\begin{align*}
(1,4-\beta-D-\text{Glucosyl})_n + \text{Pi} & \rightarrow 1,4-\beta-D-\text{glucosyl})_n-1 + \alpha-\text{D-glucose 1-phosphate} \\
\end{align*}
\]

Cellogel  The gelatinized cellulose acetate used as electrophoretic medium.

Cellulase  The enzyme that catalyzes the endohydrolysis of 1,4-β-glucosidic linkage in cellulose.

Cellulitis  An infection of skin, e.g., infection of subcutaneous skin tissue by *Streptococci* or *Staphylococci*.

Cellulomonas  A genus of aerobic or facultative anaerobic, asporogenous bacteria.

Cellulose  A polymer of glucose consisting of 1,4-β-glucosidic linkages of glucose with a molecular weight ranging from 20,000 to 40,000; the major constituent of the plant cell wall.

Cellulose 1,4-β-Cellobiosidase  The enzyme that catalyzes the hydrolysis of 1,4-β-d-glucosidic linkages in cellulose and cellotetraose, releasing cellbiose from the nonreducing ends of the chain.

Cellulose Polysulfatase  The enzyme that catalyzes the hydrolysis of the 2- and 3-sulfate groups of polysulfate of cellulose.

Cellulose Synthetase (GDP-forming)  The enzyme that catalyzes the following reaction:

\[
\begin{align*}
\text{GDP-glucose} + (1,4-\beta-D-\text{glucosyl})_n & \rightarrow \text{GDP} + (1,4-\beta-D-\text{glucosyl})_{n+1} \\
\end{align*}
\]

Cellulose Synthetase (UDP-forming)  The enzyme that catalyzes the following reaction:

\[
\begin{align*}
\text{UDP-glucose} + (1,4-\beta-D-\text{glucosyl})_n & \rightarrow \text{UDP} + (1,4-\beta-D-\text{glucosyl})_{n+1} \\
\end{align*}
\]

Cellulosic  Substance made from cellulose or a derivative of cellulose.

Cellulosome  A cellulose-binding structure that consists of cellulase.

Cellular Epimerase  •  Cellulosome

Cellular Respiration  See cell respiration.

Cellular Slime Mold  The slime mold in which the vegetative stage consists of uninucleate amoeboid cells that aggregate to form multicellular pseudoplasmodium.

Cellulose  Synonym of cellobiose.

Cellosolve  A trade name for ethylene glycol monoethyl ether.

Cellular Pertaining to or derived from a cell.

Cellular Immunity  See cell-mediated immunity.

Cellular Plasminogen Activator  A protease that catalyzes the conversion of plasminogen to plasmin by cleaving the peptide bond between arginine and valine in plasminogen.
Celontin  A trade name for methsuximide, an anticonvulsant.

Celsius Temperature Scale  The temperature scale in which the freezing and boiling point of water at one atm pressure are zero degrees and 100 degrees, respectively (also known as centigrade temperature scale).

CEM  Abbreviation for 1. a combination drug containing CCNU, etoposide, and methotrexate; 2. conventional electron microscope.

Cementification  The process of cementum formation.

Cementoblast  Cells that are active in the formation of cementum.

Cementum  The external calcified bony layer of the tooth within the gum.

Cenaed  A trade name for pseudoephedrine hydrochloride, a nasal decongestant.

Cena-K  A trade name for potassium, an electrolyte.

Cenogenesis  The development of new genetic characters as a result of adaptation to the environment.

Centesis  Surgical puncture.

Centi-  A prefix meaning 1/100.

Centibar  A unit of atmospheric pressure; 1/100 of a bar.

Centigrade Temperature Scale  See Celsius temperature scale.

Centigram  1/100 gram.

Centiliter  1/100 liter.

Centimeter  1/100 meter.

Centimeter-Gram-Second System (CGS System)  A metric unit system that expresses length, mass, and time in units of centimeter, gram, and second, respectively.

Centimorgan  A unit of physical distance on a chromosome equivalent to a 1% frequency of recombination between closely linked genes.

Centipeda  A genus of Gram-negative, anaerobic, rod-shaped bacteria.

Central Dogma  The principle of flow of genetic information from DNA to RNA to protein or from RNA to DNA to protein (in retroviruses).

Central Lympoid Organs  See primary lymphoid organs.

Central Nervous System  The part of the nervous system in vertebrates that contains the brain and spinal cord.

Central Vacuole  A membrane-bound structure in plant cells that is responsible for maintaining turgor pressure and intracellular digestion.

Centrax  A trade name for prazepam, an anti-anxiety agent.

Centrifugal  1. Away from the center or axis. 2. Efferent.

Centrifugal Force  The force exerted on a rotating particle outward from the center of rotation.

Centrifugation  The process of sedimentation or separation of cellular components or cellular organelles through the use of a centrifuge. The force generated during centrifugation can be calculated by the equation:

\[ F = \omega^2 x \]

where

- \( F \) = force generated by centrifugation.
- \( \omega \) = angular velocity.
- \( x \) = distance from the center of rotation.

Centrifuge  An instrument used for generating centrifugal force for sedimentation and separation of cell organelles or bioactive molecules.

Centrifuge Rotor  A device that holds centrifuge tubes during centrifugation.

Centriole  Short cylindrical array of microtubules that functions as a mitotic spindle organizer. A pair of centrioles is usually found in the center of a centrosome in an animal cell.

Centripetal  1. Moving toward the center. 2. Efferent.

Centromere  The constricted region of a mitotic chromosome that holds the two sister chromatides together during mitosis and meiosis.

Centromeric Index  The percentage of the total length of a chromosome encompassed by its short arm.

Centrosome  The microtubule-organizing center that acts as the spindle pole during mitosis. It contains a pair of centrioles in most animal cells.

CEOH  Abbreviation for cholesteryl ester hydroxide.

CEOOH  Abbreviation for cholesteryl ester hydroperoxide.

CEP  Abbreviation for a combination drug containing CCNU, etoposide, and prednimustine.
CEPA  Abbreviation for chloroethane phosphoric acid.

Cephacetrile Sodium (mol wt 361)  A semisynthetic cephalosporin antibiotic that inhibits bacterial cell wall synthesis.

Cephalalgia  Headache.

Cephalexin (mol wt 347)  A semisynthetic cephalosporin antibiotic that inhibits bacterial cell wall synthesis.

Cephalic  Pertaining to the head.

Cephalin  A phospholipid (phosphatidyl ethanolamine) found in animal tissues (see phosphatidylethanolamine for structure).

Cephalin-Cholesterol Flocculation Test  A flocculation test for hepatitis in which serum from individuals with hepatitis forms a flocculant upon treatment with a cephalin-cholesterol suspension. It is a liver function test.

Cephaloglycin (mol wt 405)  A semisynthetic cephalosporin antibiotic that inhibits bacterial cell wall synthesis.

Cephaloridine (mol wt 416)  A semisynthetic cephalosporin antibiotic that inhibits bacterial cell wall synthesis.

Cephalosporin  A heterogeneous group of natural and semisynthetic antibiotics that inhibit bacterial cell wall synthesis in a range of Gram-positive and Gram-negative bacteria by inhibiting the formation of cross-links in peptidoglycan. Cephalosporins consist of a dihydrothiazine rings instead of thiazolidine and β-lactam rings and are less sensitive than penicillins to β-lactamase.

Cephalosporin C (mol wt 415)  A type of cephalosporin antibiotic produced by *Cephalosporium* species that inhibits bacterial cell wall synthesis.

Cephalosporin C Deacetylase  The enzyme that catalyzes the following reaction:

\[
\text{Cephalosporin C} + \text{H}_2\text{O} \rightarrow \text{deacetylccephalosporin c} + \text{acetate}
\]

Cephalosporin C Transaminase  The enzyme that catalyzes the following reaction:

\[
\text{Cephalosporin C} + \text{pyruvate} \rightarrow 7-(\text{5-Carboxyl-5-oxopentanyl})\text{-aminocephalosporinate} + \text{L-alanine}
\]

Cephalosporin P1 (mol wt 575)  A steroid antibiotic produced by *Cephalosporium* species.

Cephalosporinase  Synonym of β-lactamase.

*Cephalosporium*  A genus of fungi that produce cephalosporins.

Cephalothin (mol wt 396)  A semisynthetic cephalosporin antibiotic that inhibits bacterial cell wall synthesis.

Cephamycin  A family of β-lactam antibiotics produced by various species of *Streptomyces* that inhibits bacterial cell wall synthesis.
Cephapirin Sodium • Cerberoside

Cephalosporin antibiotic that inhibits bacterial cell wall synthesis.

Cephalosporin C: R = NH₂

Cephalosporin A: R = C=CH

Cephalosporin B: R = C=CH

Cerberoside (mol wt 859) A cardiotonic agent.

Cer  Abbreviation for ceramide.

Ceramidase The enzyme that catalyzes the following reaction:

N-Acylphosphoglycerol + H₂O

A carboxylate + sphingosine

Ceramide A sphingolipid and a major membrane component.

Ceramide Cholinephosphotransferase The enzyme that catalyzes the following reaction:

CDP-choline + N-acetylphosphoglycerol

CMP + sphingomyelin

Ceramide Glucosyltransferase The enzyme that catalyzes the following reaction:

UDP-glucose + N-acetylphosphoglycerol

UDP + D-glucosyl-N-acetylphosphoglycerol

Ceramide Glycanase Synonym of glucosylceramide.

Ceramide Kinase The enzyme that catalyzes the following reaction:

ATP + ceramide

ADP + ceramide 1-phosphate

CERBC Abbreviation for chicken embryo red blood cell.

Cerberoside (mol wt 859) A cardiotonic agent.
Cercaria • The final free-swimming stage of a trematode.

Cerebellar • Pertaining to cerebellum.

Cerebellar Angioblastoma • A tumor of the brain.

Cerebellitis • Inflammation of the cerebellum.

Cerebellospinal Tract • A nerve tract carrying impulses from the cerebellum to the spinal cord.

Cerebellum • A part of the central nervous system located below and posterior to the cerebrum and above the pons and medulla.

Cerebral • Pertaining to the brain.

Cerebral Angiography • X-ray examination of the blood vessels of the brain using radiopaque contrast medium.

Cerebral Palsy • A motor nerve disorder resulting from the damage to the brain before or during birth.

Cerebral Thrombosis • Blood clot in blood vessels of the brain.

Cerebrocuprien • A copper-containing protein found in the brain.

Cerebroside • A sphingolipid associated with myelin sheath of the nerve; it contains sphingosine, fatty acid, and sugar (glucose or galactose).

\[ \text{CH}_3-(\text{CH}_2)_2-\text{CHOCH(OH)}\text{CHCH}_2\text{O} - \text{X} \]

\[ \text{NH} - \text{CO} - \text{R} \]

\[ \text{R} = \text{fatty acid} \]
\[ \text{X} = \text{glucose (glucocerebroside)} \]
\[ \text{X} = \text{galactose (galactocerebroside)} \]

Cerebroside Sulfatase • The enzyme that catalyzes the following reaction:

\[ \text{A cerebroside 3-sulfate} + \text{H}_2\text{O} \]

\[ \text{Cerebroside} + \text{sulfate} \]

Cerebrospinal • Pertaining to the brain and spinal cord.

Cerebrospinal Fluid • The lymphlike fluid in the central cavity of the brain and spinal cord.

Cerebrospinal Meningitis • The inflammation of the meninges of the brain and spinal cord.

Cerebrospinal Nerve • The nerves that begin in the brain and spinal cord.

Cerebrospinal Tract • A nerve tract that carries impulses from the cerebrum to the spinal cord.

Cerebrum • The large uppermost part of the brain excluding medulla, pons, and cerebellum.

Cerebyx • A trade name for fosphenytoin, an antiepileptic agent.

Ceredase • A trade name for enzyme alglucerase produced by DNA recombinant technology.

Cerespan • A trade name for papaverine, a vasodilator that relaxes smooth muscle by inhibiting phosphodiesterase leading to the increase of cAMP concentration.

Cerevisin • A proteolytic enzyme from baker’s yeast.

Cerezyme • A trade name for human glucosylceramidase produced by recombination DNA technology.

Cer(\text{Hex}) • Abbreviation for ceramide monohexoside.

Cer(\text{Hex})_2 • Abbreviation for ceramide dihexoside.

Cer(\text{Hex})_3 • Abbreviation for ceramide trihexoside.

Cerium • A chemical element with atomic weight 140, valence 2.

Cerivastatin Sodium (\text{mol wt 482}) • An HMG CoA inhibitor used as an antihypertensive agent.

\[ \text{N} \]
\[ \text{H}_3\text{COH}_2\text{C COONa} \]

\[ \text{F} \]
\[ \text{HHO H OH} \]

\[ \text{CH}_3 \]
\[ \text{H}_3\text{C} \]
\[ \text{H}_3\text{C} \]
\[ \text{CH}_3 \]

Ceroid • A lipid granule found in cirrhosis of the liver.

Ceroid Pigment • Referring to yellowish aging pigment.

Ceronapril (\text{mol wt 440}) • An antihypertensive agent.

\[ \text{P} \]
\[ \text{O} \]
\[ \text{NH}_2 \]
\[ \text{O} \]
\[ \text{OH} \]

Cerotic Acid (\text{mol wt 397}) • A 26-carbon saturated fatty acid.

\[ \text{CH}_3\text{(CH}_3)_2\text{COOH} \]

Cerotoyl • Referring to the group of:

\[ \text{CH}_3\text{-[CH}_3\text{]}_2\text{-CO}- \]
Cerubidin  A trade name for daunorubicin hydrochloride, an antibiotic that interferes with the activity of DNA-dependent RNA polymerase.

Cerulenin (mol wt 223)  An antifungal antibiotic and an inhibitor of fatty acid biosynthesis.

\[
\text{Ceruletide} \quad \text{A decapeptide capable of stimulating gastric, pancreatic, and biliary secretion.}
\]

\[
\text{Ceruloplasmin} \quad \text{A copper-containing } \alpha_2\text{-globulin in mammalian blood responsible for copper transport in the blood.}
\]

Cerumen  Earwax.

\[
\text{Cerumenex} \quad \text{A trade name for triethanolamine polypeptide oleate condensate, a ceruminolytic agent used to emulsify and disperse accumulated cerumen.}
\]

Ceruminolytic  Any agent capable of dissolving earwax.

\[
\text{Cervicarcin (mol wt 392)} \quad \text{An antibiotic.}
\]

\[
\text{Cervicitis} \quad \text{The inflammation of the cervix of the uterus.}
\]

\[
\text{Cervidil} \quad \text{A trade name for prostaglandin E2.}
\]

\[
\text{Cervix} \quad 1. \text{Any necklike portion of an organ.} \quad 2. \text{The narrowed portion of the uterus.}
\]

\[
\text{Ceryl} \quad \text{Referring to the group of: } \text{CH}_3\text{[CH}_2\text{]n}\text{-CH}_3.
\]

\[
\text{CESD} \quad \text{Abbreviation for cholesteryl ester storage disease.}
\]

\[
\text{Cesium} \quad \text{A chemical element with atomic weight 133, valence 1.}
\]

\[
\text{Cesium 137} \quad \text{A radioisotope of cesium with half-life of about 30 years.}
\]

\[
\text{Cesium Chloride (CsCl, mol wt 168)} \quad \text{A standard density-gradient centrifugation medium used for fractionation of macromolecules, e.g., nucleic acids.}
\]

\[
\text{Cesium Chloride Gradient Centrifugation} \quad \text{A type of ultracentrifugation for fractionation of macromolecules in which the concentrated cesium chloride containing the macromolecules to be separated is centrifuged until the cesium chloride reaches equilibrium distribution and produces a linear density gradient in the centrifuge tube. Macromolecules with different densities sediment or float to the positions where their densities equal those of CsCl in the gradient.}
\]

C-Esterase  See acetyesterase.

\[
\text{Cestodes} \quad \text{Parasitic flatworms, e.g., tapeworms.}
\]

\[
\text{Cetacort} \quad \text{A trade name for hydrocortisone, used as an anti-inflammatory agent.}
\]

\[
\text{Cetalkonium Chloride (mol wt 396)} \quad \text{A topical anti-infective agent.}
\]

\[
\text{Cetamolol (mol wt 310)} \quad \text{An antihypertensive agent.}
\]

\[
\text{Cetane} \quad \text{A trade name for vitamin C (ascorbic acid).}
\]

\[
\text{Cetapred Ointment} \quad \text{A trade name for a combination drug containing sulfacetamide sodium and prednisolone acetate, used as an anti-infective agent.}
\]

\[
\text{Cetavlon} \quad \text{A trade name for cetyltrimethyl ammonium bromide, an antiseptic agent.}
\]

\[
\text{Cethexonium Bromide (mol wt 449)} \quad \text{An antiseptic agent.}
\]

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Cetiedil (mol wt 350)  A vasodilator.

Cetirizine (mol wt 389)  An antihistaminic agent.

Cetixime (mol wt 255)  An antihistaminic agent.

Cetotiamine (mol wt 427)  A vitamin B<sub>1</sub> source.

Cetomim (mol wt 305)  An antiulcerative agent.

Cetyl Alcohol (mol wt 242)  An alcohol obtained from spermaceti by saponification and used as an emulsifying and softening agent.

Cetyldimethylammonium Chloride (mol wt 340)  An antiseptic agent.

Cetylpyridinium Chloride (mol wt 340)  An antiseptic agent.

CEV  Abbreviation for a combination drug containing cyclophosphamide, etoposide, and vincristine.

CEVD  Abbreviation for a combination drug containing CCNU, etoposide, vincristine, and dexamethasone.

CEX  Abbreviation for cation exchanger.

CF  Abbreviation for confer (compare).

CF  Abbreviation for 1. carbol fuchsin; 2. chemotactic factor; 3. chick fibroblast; 4. Christmas factor; 5. citrovorum factor; 6. colicin factor; 7. complement fixation; 8. cystic fibrosis.

CF Test  Abbreviation for complement fixation test. A serological test used for clinical diagnosis and identification of specific antigen. It is a two antigen-antibody system involving the use of hemolysin, erythrocytes, complement, testing antigen, and antibody.

C3f  Abbreviation for a subcomponent resulting from cleavage of C3 (third component of complement).

CF<sub>1</sub>  A component of ATP synthetase (ATPase) complex of the chloroplast.

CF<sub>2</sub>-CF<sub>1</sub> Complex  Referring to chloroplast ATPase complex that has properties similar to mitochondrial F<sub>1</sub>F<sub>0</sub>-ATPase.

CF<sub>1</sub>  A component of ATP synthetase (ATPase) complex with chloroplast (also called chloroplast coupling factor).

CFA  Abbreviation for 1. complement fixing antibody; 2. complete Freund’s adjuvant.
CFC  Abbreviation for chlorofluorocarbons.

CFDA  Abbreviation for 5,6-carboxyfluorescein diacetate.

CFI  Abbreviation for chemotactic factor inhibition.

CFI Test  Abbreviation for chemotactic factor inhibition test.

CflI (PstI)  A *Cellulomonas flavigena* restriction endonuclease with the following specificity:

\[
\begin{align*}
5' & \ldots \ldots CTGCAG \ldots \ldots 3' \\
3' & \ldots \ldots GACGTC \ldots \ldots 5'
\end{align*}
\]

CFM  Abbreviation for chlorofluoromethane.

c-fos  Abbreviation for cellular oncogen *fos*.

CfoI (HhaI)  A restriction endonuclease from *Clostridium formicoaceticum* with the same specificity as HhaI.

CFP  Abbreviation for 1. a combination drug containing cytoxan, fluorouracil, and prednisone; 2. cerebrospinal fluid protein.

CfrI  A restriction endonuclease from *Citrobacter freundii* RFL 2 with the following specificity:

\[
\begin{align*}
5' & \ldots \ldots PyGGCCPu \ldots \ldots 3' \\
3' & \ldots \ldots PuCCGGPy \ldots \ldots 5'
\end{align*}
\]

Cfr4I (AsuI)  A restriction endonuclease from *Citrobacter freundii* RFL 4 with the same specificity as AsuI.

Cfr5I (EcoRII)  A restriction endonuclease from *Citrobacter freundii* RFL 5 with the same specificity as EcoRII.

Cfr6I (PvuII)  A restriction endonuclease from *Citrobacter freundii* RFL 6 with the following specificity:

\[
\begin{align*}
5' & \ldots \ldots \ldots PyGGCCPu \ldots \ldots 3' \\
3' & \ldots \ldots \ldots PuCCGGPy \ldots \ldots 5'
\end{align*}
\]

Cfr7I (BstEII)  A restriction endonuclease from *Citrobacter freundii* RFL 7 with the following specificity:

\[
\begin{align*}
5' & \ldots \ldots \ldots \ldots CTGCAG \ldots \ldots 3' \\
3' & \ldots \ldots \ldots \ldots GTCGAC \ldots \ldots 5'
\end{align*}
\]

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Cfr27I (EcoRII) A restriction endonuclease from *Citrobacter freundii* RFL 27 with the same specificity as EcoRII.

Cfr28I (EcoRII) A restriction endonuclease from *Citrobacter freundii* RFL 28 with the same specificity as EcoRII.

Cfr29I (EcoRII) A restriction endonuclease from *Citrobacter freundii* RFL 29 with the same specificity as EcoRII.

Cfr30I (EcoRII) A restriction endonuclease from *Citrobacter freundii* RFL 30 with the same specificity as EcoRII.

Cfr31I (EcoRII) A restriction endonuclease from *Citrobacter freundii* RFL 31 with the same specificity as EcoRII.

Cfr32I (HindIII) A restriction endonuclease from *Citrobacter freundii* RFL 32 with the same specificity as HindIII.

Cfr33I (AsuI) A restriction endonuclease from *Citrobacter freundii* RFL 23 with the same specificity as AsuI.

Cfr35I (EcoRII) A restriction endonuclease from *Citrobacter freundii* RFL 35 with the same specificity as EcoRII.

Cfr37I (SacII) A restriction endonuclease from *Citrobacter freundii* RFL 37 with the same specificity as SacII.

Cfr38I (CfrI) A restriction endonuclease from *Citrobacter freundii* RFL 38 with the same specificity as CfrI.

Cfr39I (CfrI) A restriction endonuclease from *Citrobacter freundii* RFL 39 with the same specificity as CfrI.

Cfr40I (CfrI) A restriction endonuclease from *Citrobacter freundii* RFL 40 with the same specificity as CfrI.

Cfr41I (SacII) A restriction endonuclease from *Citrobacter freundii* RFL 41 with the same specificity as SacII.

Cfr42I (SacII) A restriction endonuclease from *Citrobacter freundii* RFL 42 with the same specificity as SacII.

Cfr43I (SacII) A restriction endonuclease from *Citrobacter freundii* RFL 43 with the same specificity as SacII.

Cfr45I (AsuI) A restriction endonuclease from *Citrobacter freundii* RFL 45 with the same specificity as AsuI.

Cfr45II (SacII) A restriction endonuclease from *Citrobacter freundii* RFL 45 with the same specificity as SacII.

Cfr46I (AsuI) A restriction endonuclease from *Citrobacter freundii* RFL 46 with the same specificity as AsuI.

Cfr47I (AsuI) A restriction endonuclease from *Citrobacter freundii* RFL 47 with the same specificity as AsuI.

Cfr48I (AsuI) A restriction endonuclease from *Citrobacter freundii* RFL 48 with the same specificity as HgiJII.

Cfr51I (PvuI) A restriction endonuclease from *Citrobacter freundii* RFL 51 with the same specificity as PvuI.

Cfr52I (AsuI) A restriction endonuclease from *Citrobacter freundii* RFL 52 with the same specificity as AsuI.

Cfr54I (AsuI) A restriction endonuclease from *Citrobacter freundii* RFL 54 with the same specificity as AsuI.

CfrA4I (PstI) A restriction endonuclease from *Citrobacter freundii* RFL A4 with the same specificity as PstI.

CfrN1 (AsuI) A restriction endonuclease from *Citrobacter freundii* with the same specificity as AsuI.

CfrS37I (EcoRII) A restriction endonuclease from *Citrobacter freundii* S 39 with the same specificity as EcoRII.

CFS Abbreviation for chronic fatigue syndrome.

CFT Abbreviation for complement fixation test.

CFTR Abbreviation for cystic fibrosis transmembrane regulator. The product of the gene associated with cystic fibrosis.

CFU Abbreviation for colony-forming unit.

CfuI (DpnI) A *Caulobacter fusiformis* restriction endonuclease with the following specificity:

\[ 5' \ldots \ldots \ldots \ldots \ldots \ldots GATC \ldots \ldots \ldots \ldots \ldots \ldots 3' \]

\[ 3' \ldots \ldots \ldots \ldots \ldots \ldots CTAG \ldots \ldots \ldots \ldots \ldots \ldots 5' \]

CFU-C Abbreviation for colony-forming unit in culture.
CFU-E  Abbreviation for colony-forming unit in erythroid.

CFU-EOS  Abbreviation for colony-forming unit in eosinophil.

CFU-F  Abbreviation for colony-forming unit in fibroblast.

CFU-GEMM  Abbreviation for colony-forming unit in granulocyte, erythrocyte, monocyte, and megakaryocyte.

CFU-GM  Abbreviation for colony-forming unit in granulocyte and macrophage.

CFU-L  Abbreviation for colony-forming unit in lymphoid.

CFU-M  Abbreviation for colony-forming unit in megakaryocyte.

CFU-NM  Abbreviation for colony-forming unit in neutrophil and monocyte.

CFU-S  Abbreviation for colony-forming unit in spleen.

CG  Abbreviation for 1. chorionic gonadotropin, a hormone produced by placenta and 2. cytosine-guanine content in DNA.

Cγ  Abbreviation for constant region of immunoglobulin chain.

CGA  1. A genetic code or codon for the amino acid arginine. 2. Abbreviation for catabolite gene activator protein.

CGB Agar  Abbreviation for canavanine-glycine-bromthymol blue agar used to distinguish strains of Cryptococcus.

CGC  A genetic code or codon for the amino acid arginine.

CGD  Abbreviation for chronic granulomatous disease.

CGG  A genetic code or codon for the amino acid arginine.

cGI-PDE  Abbreviation cGMP-inhibited PDE (phosphodiesterase).

cGK  Abbreviation for cyclic GMP-dependent protein kinase.

cGMP (mol wt 345)  Abbreviation for cyclic guanosine monophosphate, a metabolic regulator.

CGP  Abbreviation for 1. N-carbobenzoyl-glycyl-phenylalanine; 2. choline glycerophosphatide.

cGPDH  Abbreviation for cytosolic GPDH (glycerate 3-phosphate dehydrogenase).

cGPx (cGPX)  Abbreviation for cytosolic glutathione peroxidase.

CGR  Abbreviation for crystal growth rate.

CGRP  Abbreviation for calcitonin-gene-related peptide.

cgs  Abbreviation for centimeter-gram-second system.

cGSH  Abbreviation for cytosolic glutathione.

cGSH-Px  Abbreviation for cytosolic glutathione peroxidase.

CGT  Abbreviation for N-carbobenzoxy-γ-glutamyl-L-tyrosine.

CGTT  Abbreviation for cortisol glucose tolerance test.

CGU  A genetic code or codon for the amino acid arginine.

CH  Abbreviation for 1. collagen homology; 2. calponin homology.

G3H  Abbreviation for the constant region of the heavy chains of an immunoglobulin.

Ch  Abbreviation for choline.

CHα2  Abbreviation for cholesteryl linolate.

CHAD  Abbreviation for cold hemagglutinin disease.

Chagas Disease  A disease caused by the protozoan parasite (Trypanosoma cruzi), transmitted by blood-sucking bugs, and characterized by prolonged high fever, edema, and enlargement of spleen, liver, and lymph nodes.

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Chain Terminator  
1. Substance that terminates the extension of a DNA chain during replication (e.g., dideoxynucleotides). 2. Substance that stops the growth of a chain polymerization.

Chair Conformation  The arrangement of atoms in a molecule that resembles the outline of a chair.

Chalcomycin (mol wt 701)  An antibiotic produced by Streptomyces bikiniensis.

Chalconase  The enzyme that catalyzes the following reaction:

\[
\text{A chalcone} \rightarrow \text{a flavanone}
\]

Chalcone  A group of bioflavonoids (pigments).

p-Chalcoose (mol wt 162)  A sugar component in chalcomycin.

Chalicosis  A lung disease caused by inhalation of calcium dust or stone dust.

Chalone  Substances produced by the mature cell for inhibition of cell division.

Chambon’s Rule  The rule states that the nucleotide sequences of all introns start with GT and end with AG except introns for tRNA.

CHAMOA  Abbreviation for a combination drug containing cytoxan, hydroxyurea, actinomycin D, methotrexate, oncovin, and adriamycin.

Chancere  The primary sore of syphilis.

Channel Former  Ionophore that functions by forming a hydrophobic channel within the plasma membrane for transport of ions across the membrane.

Channel-Forming Integral Membrane Protein  
28 An integral membrane protein that forms a water-specific channel that provides the plasma membranes of red cells and kidney proximal tubules with high permeability to water.

Channel Protein  Proteins that form water-filled pores or channels across the membrane and are responsible for transporting solutes across the membrane, e.g., porin protein in bacterial cell membrane.

Chaoptin  An extracellular membrane glycoprotein required for Drosophila melanogaster photoreceptor cell morphogenesis, it contains a leucine-rich repeat.

Chaotropic Agents  Ions or substances that denature proteins, e.g., thiocyanate (SCN⁻) and perchlorate (CLO⁻), used for solubilization of membrane proteins.

Chaperone  Proteins that help other proteins to avoid misfolding pathways that may lead to the production of an inactive protein or protein aggregate.

CHAPS (mol wt 615)  Abbreviation for 3-[(cholamidopropyl)-dimethylammonio]-1-propane sulfonate, a nondenaturing biological detergent used in the study of membrane biochemistry.

Charcoaide  Referring to activated charcoal used to inhibit absorption of drugs or chemicals from the GI tract.

Charcocaps  Referring to activated charcoal.

Chargaff’s Rule  The rule for the description of base composition of the double-stranded DNA. It states that the relationship of the molar percent concentrations of adenine, guanine, thymine, and cytosine are 1. A = T; G = C; 2. A/T = G/C; and 3. sum of purines = sum of pyrimidines.

Charge Density  The charge per unit of area.

Charge Relay System  A phenomenon observed in the serine proteinase in which the partial negative charge on the oxygen atom of the CH₂-OH group increases the nucleophilicity of the serine side chain at the active site.

Charge Repulsion  The separating force due to the presence of the same electric charges on two ions, two ionic molecules, or two ionic regions of a molecule.
**Charge Shielding** The effect of metal ions on enzymatic function in which metal ion and substrate form a complex and electrostatically shield the negative charge of the substrate.

**Charge Shift Immunoelectrophoresis** A type of immunoelectrophoresis used to distinguish amphiphilic proteins from hydrophobic proteins in the presence of nonionic detergents. The amphiphilic proteins bind nonionic detergents and change their electrophoretic mobilities while the hydrophobic proteins are unaffected.

**Charge Transfer Complex** A noncovalent interaction in which an electron pair is partially transferred from a donor to an acceptor so that the two are held together by an electrostatic attraction.

**Charged Polar Amino Acid** Polar amino acid that carries either negative or positive charges, e.g., aspartic acid.

**Charged tRNA** The tRNA that carries a covalently linked amino acid at its 3′ end (also called aminocyl-tRNA).

**Charles’s Law** The law states that at constant volume the pressure of a confined gas is proportional to its absolute temperature.

**Charon Bacteriophage** A bacteriophage derived from λ phage and used as a cloning tool.

**Chartreusin (mol wt 641)** An antibiotic produced by *Streptomyces chartreusis*.

**Charybdotoxin** A 37-residue peptide inhibitor for calcium-activated potassium channel and voltage-dependent potassium channel, isolated from venom of the scorpion *Leiurus quinquestriatus herbraeus*.

**Chase** To follow the metabolic fate of a radioactively labeled compound in a pulse-chase experiment after terminating the brief exposure of a radioactively labeled compound (see pulse-chase experiment).

**Chaulmoogric Acid (mol wt 280)** A cyclic fatty acid.

**CH₃-Cbl** Abbreviation for methyl-cobalamin.

**CHD** Abbreviation for coronary heart disease.

**ChDNA** Abbreviation for chloroplast DNA.

**ChE** Abbreviation for cholinesterase.

**Checkmate** A trade name for sodium fluoride, used for bone remineralization.

**Chediak-Higashi Syndrome** A genetic disorder involving leukocytes and melanocytes; characterized by partial albinism and susceptibility to pyogenic infection.

**CHEF** Abbreviation for Chinese hamster embryo fibroblast.

**Chelate** A ring structure formed by the reaction of a metal ion with one or more groups on an organic ligand molecule.

**Chelating Agent** A compound capable of forming a chelate with metal ion, e.g., EDTA.

**Chelation** The binding of a metal ion by two or more atoms on a chelating agent.

**Chelex 100** A trade name for a synthetic ion-exchange resin used for binding metal ions.

**Chemet** A trade name for succimer, a chelating agent and antidote for heavy metal poisoning. It forms water-soluble complexes with heavy metals (e.g., lead).

**Chemical** Referring to 1. A compound produced by a chemical reaction. 2. Pertaining to chemistry.

**Chemical Antidote** Any compound capable of reacting with a poison to form a harmless or less harmful complex.

**Chemical Bond** The linkage between two atoms in a molecule or linkage between two groups of ions or molecules.

**Chemical Coupling Hypothesis** The hypothesis states that electron transport yields reactive intermediates whose subsequent breakdown drives oxidative phosphorylation (ATP formation).

**Chemical Energy** The energy resulting from a chemical reaction.

**Chemical Equation** The representation of a chemical reaction using symbols to show the stoichiometric relationship between reactants and products.

**Chemical Equilibrium** The condition in a chemical reaction in which the rate of reaction in one direction equals the rate in the reverse direction.
Chemical Equivalent  1. Atomic weight of an element divided by its valence. 2. The number of parts of weight of an element or radical that will combine with or displace eight parts by weight of oxygen or one part by weight of hydrogen. 3. The molecular weight of a salt divided by the valence of the particular element considered.

Chemical Fusogen  Any substance capable of fusing two cells together, e.g., polyethylene glycol.

Chemical Kinetics  The science that deals with the rate and mechanism of reaction.

Chemical Mutagens  Substances that cause mutation.

Chemical Potential  The partial molar free energy of a substance.

Chemical Quenching  Absorption of radiation energy either by the sample or by the other substance present in the solution as observed in scintillation counting.

Chemical Reaction  The reaction between two or more chemicals whereby new bonds are formed and energy is subsequently exchanged.

Chemical Synapse  The junction between two neurons at which a specific substance (neurotransmitter) transmits a nerve impulse across the junction.

Chemical Taxonomy  Classification of organisms based upon the chemical characteristics of the organisms, e.g., DNA sequence and amino acid composition of the proteins (also called chemotaxonomy).

Chemical Transmitter  A substance capable of transmitting nerve impulses, e.g., acetylcholine.

Chemiluminescence  Emission of the absorbed energy as light resulting from a chemical reaction, e.g., bioluminescence.

Chemiluminescence Labeling  A method for labeling DNA probes in which two labeled DNA probes for the adjacent sequences of a gene hybridize with the complementary segments and emit light that can be detected by a photomultiplier.

Chemiosmotic Hypothesis  The hypothesis states that the free energy of electron transport is conserved by creation of an electrochemical H⁺ gradient (pH gradient) across the inner mitochondrial membrane. The electrochemical potential of the pH gradient is the driving force for oxidative phosphorylation.

Chemisorption  The formation of bonds between surface molecules and other substances in contact with the surface.

Chemistry  The science that deals with the composition, structure, properties, and transformation of substances.

Chemoautotroph  An organism that uses carbon dioxide as a carbon source and obtains energy for growth by oxidizing inorganic substances (e.g., sulfur, hydrogen, and nitrite).

Chemoorganotroph  An organism that obtains energy from oxidation of organic compounds and carbon from preformed organic compounds.

Chemokinesis  Chemically stimulated random movement or cellular activity.

Chemolithotroph  See chemoautotroph.

Chemometrics  Application of computer data analysis for classification, assimilation, and interpretation of chemical information.

Chemoorganotroph  See heterotroph.

Chemophrophylaxis  The use of chemicals, e.g., antibodies, to prevent microbial infection.

Chemoreceptor  The receptor on the cell that senses and interacts with specific substances or stimulants.

Chemosis  Swelling of the conjunctival tissue around the cornea.

Chemosmosis  A chemical reaction, activity, or process that takes place through a semipermeable membrane.

Chemosorption  Adsorption in which chemical energy causes an accumulation of the dispersed substances.

Chemostat  An apparatus used to maintain bacterial cultures in the log phase of growth by the continuous supply of fresh medium.

Chemosterilant  Substance or process that sterilizes insects.

Chemotactic  Pertaining to chemotaxis.

Chemotactic Hormone  A hormone capable of exerting a chemotactic effect.

Chemotaxis  A substance capable of tropism.

Chemotaxis  The movement of cells or organisms toward or away from a chemical stimulus.

Chemotaxonomy  See chemical taxonomy.

Chemotherapeutic Agent  Any agent that is used for treatment of disease.
**Chemotherapeutic Index**  The ratio of the maximum tolerated dose of a chemical agent or drug used in chemotherapy to its minimum effective dose.

**Chemotherapy**  The treatment or prevention of disease with chemicals or antibiotics.

**Chemotropism**  The response of an organism to a chemical stimulant.

**Chemovar**  The difference in chemical composition of plants grown in different geographic locations.

**Chenix**  A trade name for chenodiol, used as an inhibitor for synthesis of cholesterol and cholic acid. It is capable of dissolution of gallstones.

**Chenodeoxycholic Acid (mol wt 393)**  A major bile acid.

![Chenodeoxycholic Acid Structure](image)

**Chenodiol (mol wt 393)**  An agent that suppresses hepatic synthesis of cholesterol and cholic acid.

![Chenodiol Structure](image)

**Che-W**  A cytoplasmic protein involved in the intracellular signaling process of chemotaxis.

**Che-Y**  A cytoplasmic protein involved in the intracellular signaling process of chemotaxis.

**Che-Z**  A cytoplasmic protein involved in the intracellular signaling process of chemotaxis.

**CHF**  Abbreviation for 1. chick heart fibroblast; 2. congestive heart failure.

**CHFP**  Abbreviation for a combination drug containing cytoxan, hexamethylmelamine, fluorouracil, and platinol.

**chi Sequence**  The sequence of GCTGGTGG on the DNA in *E. coli* that provides a hot spot for RecA-mediated genetic recombination.

**chi Square Method**  A statistical method that enables one to determine how closely an experimentally obtained set of data fits a given theoretical expectation.

**chi Structure**  1. The structure formed at the point of cross-over between two double-stranded DNA genomes. 2. A structure formed by cleavage of a dimeric circular DNA at a single site on each of the circular DNAs by the restriction endonuclease.

**Chiasma**  1. Site of DNA exchange between two chromatids. 2. Chromosomal sites where crossing over produces an exchange of homologous parts between nonsister chromatides. 3. The crossing of the optic nerves.

**Chiasmata**  Plural of chiasma.

**Chicken Pox**  An infectious disease caused by varicella zoster, a virus in the family Herpesviridae.

**Chilomastix**  A genus of protozoa parasitic in the intestine. It may cause diarrhea.

**Chimera**  An organism composed of a mixture of genetically dissimilar cells.

**Chimerin**  Referring to the GTPase-activating proteins.

**Chimeric DNA**  A recombinant DNA molecule carrying unrelated foreign DNA.

**Chimeric Vector**  A cloning vector or a plasmid that carries foreign DNA fragment.

**Chinine**  A trade name for quinine bisulfate, used as an antimicrobial agent.

**CHIP 28**  Abbreviation for channel-forming integral membrane protein 28.

**Chiral**  Asymmetrical molecules that are mirror images of each other.

**Chiral Atom**  The asymmetric atom of a chiral compound.

**Chiral Center**  Synonym for chiral atom.

**Chiral Compound**  A compound that contains an asymmetric center (chiral atom or chiral center) and thus can occur in two nonsuperimposable mirror-image forms.

**Chirocaine**  A trade name for levobupivacaine, an anesthetic agent.

**Chitan**  Chitin in which all the glucosamine residues are N-acetylated.
Chitin • Chlorambucil

Chitin A mucopolysaccharide occurring in anthropod exoskeletons. It consists of β-(1,4)-N-acetylglucosamine residues.

\[
\begin{align*}
\text{O} & \quad \text{O} \\
\text{CH}_2\text{OH} & \quad \text{OH} \\
\text{OH} & \quad \text{CH}_2\text{CONH} \\
\end{align*}
\]

Chitin Deacetylase The enzyme that catalyzes the following reaction:

\[
\text{Chitin} + \text{H}_2\text{O} \rightarrow \text{Chitosan} + \text{acetate}
\]

Chitin-UDP N-Acetylglucosaminyltransferase See chitinase.

Chitinase The enzyme that hydrolyzes chitin and chitodextrin.

Chitin Synthetase The enzyme that catalyzes the synthesis of chitin.

Chitoamidohydrolase See chitin deacetylase.

Chitodextrinase See chitinase.

Chitosan The deacetylated derivative of chitin.

Chitosan N-Acetylglucosaminohydrolase The systematic name for chitosanase.

Chitosanase The enzyme that catalyzes the hydrolysis of β-1,4-linkages between N-acetyl-D-glucosamine and D-glucosamine residues in partially acetylated chitosan.

Chitosome A membrane-bound structure or cell organelle found in fungi containing enzyme chitin synthetase.

Chl Abbreviation for chlorophyll.

Chl a Abbreviation for chlorophyll a.

Chl b Abbreviation for chlorophyll b.

CHLA Abbreviation for cyclohexyl linoleic acid.

Chlamydia A genus of Gram-negative bacteria (family Chlamydiaceae).

Chlamydomonas A genus of green algae.

Chlamydospores The thick-walled resting spores produced asexually by certain types of fungi from somatic hyphae.

Chlophedianol (mol wt 290) An antitussive agent.

Chlor-3 A solution containing 50% sodium chloride, 30% potassium chloride, and 20% magnesium chloride.

Chloracizine (mol wt 361) A coronary vasodilator.

Chloral Formamide (mol wt 192) A sedative and hypnotic agent.

Chloral Hydrate (mol wt 165) A sedative and hypnotic agent and a reagent used for manufacturing DDT.

Chloralantipyrine (mol wt 354) A hypnotic and analgesic agent.

\[
\text{CH₃CH(OH)₂C}_1\text{H}_1\text{N}_2\text{O}
\]

α-Chloralose (mol wt 310) A sedative and hypnotic agent.

Chloramben (mol wt 206) An herbicide.

Chlorambucil (mol wt 304) An alkylating and antineoplastic agent that cross-links strands of cellular DNA interfering with transcription and translation.

\[ \text{C}_6\text{H}_5\text{ClNNaO}_2\text{S} \]

Chloramine-T (mol wt 228)  An antibacterial agent.

\[ \text{C}_7\text{H}_7\text{ClNNaO}_2\text{S} \]

Chloraminophenamide (mol wt 286)  A diuretic agent.

\[ \text{SO}_2\text{NH}_2 \]

Chloramphenicol (mol wt 323)  A broad spectrum antibiotic produced by \textit{Streptomyces venezuelae} that inhibits bacterial protein synthesis by binding to 50S ribosomes to prevent peptide formation.

\[ \text{NO}_2 \]

\[ \text{CHOH} \]

Chloramphenicol O-Acetyltransferase  The enzyme that catalyzes the following reaction:

\[ \text{Acetyl-CoA} + \text{chloramphenicol} \rightarrow \text{CoA} + \text{chloramphenicol 3-acetate} \]

Chlorangiopancreatography  An X-ray examination of the bile ducts and pancreas.

Chloranil (mol wt 246)  A fungicide and a reagent used for dehydrogenation of hydroaromatic compounds.

\[ \text{Cl} \]

\[ \text{Cl} \]

\[ \text{Cl} \]

\[ \text{Cl} \]

Chloranilic Acid (mol wt 209)  A reagent used for paper-chromatographic detection of metals.

\[ \text{Cl} \text{CH}_2\text{NCOCHCl}_2 \]

\[ \text{Cl} \text{CH}_2\text{CH}_2\text{OH} \]

Chlorate  A salt that contains radical ClO$_3$.

\[ \text{ClCH}_3 \]

\[ \text{Cl} \]

Chlorate Reductase  The enzyme that catalyzes the following reaction:

\[ \text{AH} + \text{chlorate} \rightarrow \text{A} + \text{H}_2\text{O} + \text{chlorite} \]

Chlorazanil (mol wt 222)  A diuretic agent.

\[ \text{Cl} \]

\[ \text{C}_6\text{H}_5\text{NH}_2 \]

\[ \text{NH}_2 \]

Chlorbenzoxamine (mol wt 435)  An anticholinergic agent.

\[ \text{Cl} \]

\[ \text{CHOH} \]

\[ \text{CHNHCOCHCl}_2 \]

\[ \text{C}_2\text{H}_5 \]

Chlorcyclizine (mol wt 301)  An antihistaminic agent.

\[ \text{Cl} \]

\[ \text{CH}_3 \]

\[ \text{Cl} \]

\[ \text{CH}_3\text{COHCl}_2 \]

\[ \text{Cl} \]

Chlorcyclizine  An antihistaminic agent.

\[ \text{C}_2\text{H}_5 \]

\[ \text{H}_2\text{C} \]

\[ \text{C}_2\text{H}_5\text{CH}_3 \]

Chlordantoin (mol wt 348)  A fungicide.

\[ \text{CH}_3 \]

\[ \text{C}_2\text{H}_5 \]

\[ \text{C}_3\text{H}_5 \]

\[ \text{Cl} \]

\[ \text{Cl} \]

Chlordiazepoxide (mol wt 300)  An anxiolytic agent and a tranquilizer. It is an inhibitory neurotransmitter.

\[ \text{Cl} \]

\[ \text{C}_2\text{H}_5 \]

\[ \text{NHCH}_3 \]

\[ \text{Cl} \]

\[ \text{C}_2\text{H}_5 \]

\[ \text{Cl} \]

\[ \text{Cl} \]

\[ \text{Cl} \]

\[ \text{Cl} \]

\[ \text{Cl} \]

\[ \text{Cl} \]

Chlorella  A genus of nonmotile, unicellular green algae.
**Chloremia**  The presence of a large quantity of chlorine in the blood.

**Chlorenchyma**  Plant tissue that contains chloroplasts.

**Chlorfenac (mol wt 240)**  An herbicide.

**Chlorhexidine (mol wt 505)**  An antibacterial agent.

**Chlorhydria**  A high concentration of hydrochloric acid in the stomach.

**Chloride**  Compound of chlorine.

**Chloride Channel**  A channel responsible for transport of chloride ions across a membrane. γ-Aminobutyrate (GABA) and glycine open chloride channels and increase the chloride conductance and lead to membrane hyperpolarization that triggers an action potential.

**Chloride Hydrogen Peroxide Oxidoreductase**  Systematic name for chloride peroxidase.

**Chloride Ionophore I**  An ionophore for chloride.

**Chloride Peroxidase**  The enzyme that catalyzes the following reaction:

\[
2RH + 2Cl^- + H_2O_2 \rightarrow 2RCl + 2H_2O
\]

**Chloridometer**  An instrument used for analysis of chloride.

**Chlorine**  A chemical element with atomic weight 35, valence 1.

**Chlorine-36**  Radioactive chlorine with half-life of 440,000 years.

**Chlorine Dioxide (mol wt 67)**  A bleaching and antimicrobial agent.

**Chlorine Number**  The number of chlorines of bleaching powder absorbed by 100 grams of oven-dried cellulose pulp.

**Chlorine Water**  A decoloring agent and disinfectant consisting of approximately 0.4% chlorine.

**Chlorinolysis**  The chlorination of organic compounds that ruptures the carbon-to-carbon bond yielding chlorocompounds with fewer carbons than in the original.

**Chloriodized Oil**  Referring to chlorinated and iodinated vegetable oil.

**Chlorisondamine Chloride (mol wt 429)**  An antihypertensive agent.

**Chlorite**  The salt of \( \text{H}_2\text{ClO}_2 \).

**Chlormadinone Acetate (mol wt 405)**  An orally active progestogen with antiandrogenic activity used as an oral contraceptive.
Chlormequat Chloride (mol wt 158) A plant growth regulator.

\[
\text{ClCH}_2\text{CH}_2\text{N+(CH}_3\text{)}_3\text{Cl}
\]

Chlormerodrin (mol wt 367) A mercurial diuretic agent.

\[
\text{CH}_3\text{CH}_2\text{CH}_2\text{NHCNH}_2\text{COOCH}_3
\]

Chlormezanone (mol wt 274) An anxiolytic agent and muscle relaxant.

Chlormycetin Otic A trade name for chloramphenicol, an antibiotic.

Chlormycetin Ophthalmic A trade name for chloramphenicol, an antibiotic.

Chlornaphazine (mol wt 268) An antineoplastic agent.

\[
\text{N(CH}_2\text{CH}_2\text{Cl)}_2\text{CNH}_2\text{NCl}
\]

Chlor-Niramine A trade name for chlorpheniramine maleate, an antihistaminic agent that competes for H-1 receptor sites on the effector cells.

Chloroacetaldehyde (mol wt 79) A fungicide.

\[
\text{CH}_3\text{CH}_2\text{CHO}
\]

Chloroacetic Acid (mol wt 95) A monochloracetic acid and an herbicide.

\[
\text{CH}_2\text{ClCOOH}
\]

2-Chloro-Adenosine (mol wt 302) An adenosine receptor agonist.

\[
\text{NH}_2
\]

b-Chloraalanine (mol wt 160) A synthetic antibiotic that functions as an inhibitor of alanine racemase.

\[
\text{CH}_2\text{Cl}
\]

Chlorazodin (mol wt 183) A topical anesthetic agent.

\[
\text{H}_2\text{N}
\]

Chlorobenzilate (mol wt 325) A pesticide for control of spider mites.

\[
\text{Cl}\text{C}^\text{OOC-C}_7\text{H}_5
\]

Chlorobium A genus of phototrophic green sulfur bacteria (family Chlorobiaceae).

Chlorobutanol (mol wt 177) A dental analgesic agent.

\[
\text{H}_2\text{C}^\text{OC}_1\text{Cl}
\]

Chlorocystis A genus of unicellular green algae.

2-Chlorodeoxyadenosine (mol wt 286) An antineoplastic agent.
Chloroethane  A trade name for ethyl chloride.

Chlorofair  A trade name for chloramphenicol, an antibiotic that inhibits bacterial protein synthesis.

Chloroform (mol wt 120)  An anesthetic agent.

Chlorogenic Acid (mol wt 354)  An antifungal metabolite found in plants.

Chlorogloeopsis  A genus of filamentous cyanobacteria.

Chlorogonium  A genus of unicellular biflagellate green algae closely related to Chlamydomonas species.

Chloroma  A tumor arising from myeloid tissue containing a pale green pigment.

Chlorometry  An instrument used for quantitation and measurement of chlorine.

Chloronycin  A trade name for chloramphenicol, an antibiotic that inhibits bacterial protein synthesis.

Chloronema  A genus of filamentous mesophilic bacteria (family Chlorflexaceae).

Chloropeptide  A hepatotoxic mycotoxin produced by Penicillium islandicum. It binds to actin and modifies cytoskeleton.

Chloroperoxidase  Synonym of chloride peroxidase.

Chlorophenol Red (mol wt 423)  A pH indicator.

Chlorophyll  Major photosynthetic pigment in photosynthetic organisms.

Chlorophyllide  Chlorophyll without phytol side chain.

Chlorophyllin Copper Complex Sodium  A drug used to promote healing and relieve itching, discomfort, and skin irritation.

Chloroplast  Membrane-bound cell organelle of photosynthetic eukaryotes (e.g., green algae and plants) that contains chlorophyll and is responsible for the biochemical conversion of light energy to ATP and synthesis of carbohydrate. Chloroplast that contains its own DNA and ribosomes.

Chloroplast ATPase  A membrane-bound, multisubunit complex of ATPase in chloroplast that has the property similar to the ATPase in mitochondria. It catalyzes the reaction in which the synthesis of ATP is coupled to the discharge of proton gradients.

Chloroplast Genome  Referring to the DNA in chloroplasts.

Chloroplast Ribosome  The 70S ribosome found in the chloroplast. The protein synthesis on the 70S ribosome can be inhibited by chloramphenicol but not cycloheximide.

Chloroplast rRNA  Referring to 23S, 16S, 5S, and 4.5S rRNA found in the chloroplast.

Chloroplast tRNA  Referring to tRNAs found in the chloroplast. They are encoded by chloroplast DNA and differ in structure from the cytoplasmic tRNAs.
Chloroprocaine Hydrochloride (mol wt 307) A local anesthetic agent that blocks depolarization by interfering with sodium-potassium exchange across the nerve cell membrane and prevents generation and conduction of nerve impulses.

\[
\text{H}_2\text{N} \quad \text{COOCH}_2\text{CH}_2\text{N(C}_2\text{H}_5\text{)}_2 \cdot \text{HCl}
\]

Chloroptic A trade name for chloramphenicol, an antibiotic that inhibits bacterial protein synthesis.

Chloropyramine (mol wt 290) An antihistaminic agent.

\[
\text{Cl} \quad \text{CH}_2 \quad \text{NCH}_2\text{CH}_2\text{N(CH}_3\text{)}_2
\]

Chloropyruvate (mol wt 320) An antimalarial, antiamebic, and antirheumatic agent.

\[
\text{NCl} \quad \text{HNCH(CH}_2\text{)}_3\text{CH}_3
\]

Chlorosis 1. The yellowing of leaves due to loss of chlorophyll in plants. 2. A form of anemia due to a diminution of red blood cells and hemoglobin.

Chlorosome A cylindrically shaped, intracellular photosynthetic structure in green bacteria (Chlorobiaceae).

Chlorotab A trade name for chlorpheniramine, used as an antihistaminic agent that competes with histamine for H-1 receptors.

Chlorothiazide (mol wt 296) A diuretic agent that increases urine excretion of sodium and water by inhibiting sodium reabsorption in the cortical diluting site of the nephron.

\[
\text{OCH}_3 \quad \text{CH}_3\text{O}
\]

Chlorothricin (mol wt 956) A macrolide antibiotic produced by *Streptomyces antibioticus* that is active against Gram-positive bacteria.
Chlorpazine  A trade name for prochlorperazine maleate, an antiemetic agent.

Chlorphed  A trade name for brompheniramine maleate, an antihistaminic agent that competes with histamine for the H-1 receptors.

Chlorphenesin (mol wt 203)  A tropical antifungal agent.

Chlorpheniramine (mol wt 275)  An anti-histaminic agent that competes with histamine for H-1 receptors.

Chlorphenoxamide (mol wt 399)  An antiamebic agent.

Chlorphenoxamine (mol wt 304)  An anticholinergic agent.

Chlor-Pro  A trade name for chlorpheniramine maleate, an antihistaminic agent that competes with histamine for H-1 receptors.

Chlorproethazine (mol wt 347)  A skeletal muscle relaxant.

Chlorpromanyl  A trade name for chlorpromazine, an antiemetic and antipsychotic agent that blocks the postsynaptic dopamine receptors in the brain.

Chlorpromazine (mol wt 319)  A sedative and antiemetic agent that blocks the postsynaptic dopamine receptor in the brain.

Chlorpromamide (mol wt 277)  An antidiabetic agent that stimulates insulin release from the pancreatic beta cell and reduces glucose output by the liver.

Chlorproam (mol wt 214)  A plant growth regulator and herbicide.

Chlorprothixene (mol wt 316)  An antipsychotic agent that blocks postsynaptic dopamine receptors in the brain.

Chlorquin  A trade name for chloroquine hydrochloride, an antimalarial agent.

Chlorsig  A trade name for chloramphenicol, an antibiotic that inhibits bacterial protein synthesis.

Chlorspan-12  A trade name for chlorpheniramine maleate, an antihistaminic agent that competes with histamine for H-1 receptors.

Chlortab  A trade name for chlorpheniramine maleate, an antihistaminic agent that competes with histamine for H-1 receptors.

Chlortetracycline (mol wt 479)  An broad spectrum antibiotic produced by Streptomyces aureofaciens that inhibits bacterial protein synthesis.
Chlorthalidone (mol wt 339) A diuretic agent that increases urine excretion of sodium and water by inhibiting sodium reabsorption in the cortical diluting site of the nephron.

\[
\begin{align*}
\text{Cl} & \quad \text{OH} \\
\text{N} & \quad \text{SO}_2\text{NH}_2
\end{align*}
\]

Chlor-trimeton A trade name for chlorpheniramine maleate, an antihistaminic agent that competes with histamine for H-1 receptors.

Chlorzoxazone (mol wt 170) A skeletal muscle relaxant that reduces the transmission of impulses from spinal cord to skeletal muscle.

\[
\begin{align*}
\text{O} & \quad \text{OH} \\
\text{N} & \quad \text{Cl}
\end{align*}
\]

Chlortride A trade name for chlorothiazide, a diuretic agent that increases urine excretion of sodium and water by inhibiting sodium reabsorption in the cortical diluting site of the nephron.

CHM Abbreviation for chicken heart mesenchymal cells.

CHO Abbreviation for 1. a combination drug containing cytoxan, hydroxydaunomycin and oncovin; 2. carbohydrate; 3. chinese hamster ovary.

Chol Abbreviation for cholesterol oxidase.

CHO Cell Line A somatic cell line derived from Chinese hamsters. The cell contains many chromosomes with deletions, translocations, and aberrations.

CHOB Abbreviation for a combination drug containing cytoxan, hydroxydaunomycin, oncovin, and bleomycin.

\[
\begin{align*}
\text{CH}_{18:2} & \quad \text{OH}
\end{align*}
\]

Cholangiolitis Inflammation of the fine tubules (capillaries) of the bile duct system.

Cholangitis Inflammation of bile duct.

Cholate-CoA Ligase The enzyme that catalyzes the following reaction:

\[
\begin{align*}
\text{ATP} + \text{cholate} + \text{CoA} & \quad \leftrightarrow \\
\text{AMP} + \text{PPi} + \text{Choloyl-CoA}
\end{align*}
\]

Cholaxin A trade name for dextrothyroxine sodium, an antihyperlipidemic agent.

Cholecalciferol Synonym for vitamin D₃.

Cholecalciferol 25-Hydroxylase The enzyme that hydroxylates vitamin D₃ to 25-hydroxycholecalciferol.

Cholecalcin An intracellular calcium-binding protein.

Cholecyst The gallbladder.

Cholecystagogue An agent that causes discharge of the bile from the gallbladder.

Cholecystitis Inflammation of the gallbladder.

Cholecystography X-ray examination of the gallbladder after ingestion of radiopaque medium.

Cholecystokinin Variant spelling of cholecystokinin.

Cholecystokinin A polypeptide hormone secreted by the duodenum that stimulates the secretion of digestive enzymes by the pancreas. Also stimulates contraction of the gallbladder.

Choledocholithiasis A disorder characterized by the presence of calculi in the gallbladder and bile duct.

Choledyl A trade name for choline theophyllinate, a bronchodilator that inhibits phosphodiesterase and increases cAMP concentration.

Choleglobin A green pigment present in the bile.

Cholelith Referring to gallstones.

Cholelithiasis The production of gallstones.

Cholelithiasis The production of gallstones.

Cholemic The presence of excessive quantities of bile in the blood (an indication of liver disease).

Cholera An acute infectious disease caused by Vibrio cholerae and characterized by diarrhea, vomiting, and dehydration.

Choleragen Synonym of cholera toxin.
Cholera Toxin  A protein toxin produced by Vibrio cholerae. It catalyzes the transfer of ADP-ribose from NAD\(^+\) to Arg side chains of the G protein causing stimulation of cyclic adenylate cyclase activity and increasing cAMP concentration.

Choleretic  Promoting bile secretion; an agent capable of promoting bile secretion.

Cholesteryl (mol wt 389)  A minor sterol occurs in human feces, gallstones, and eggs.

Cholestasis  Interruption of the flow of bile through the biliary system.

Cholestatic Hepatitis  Inflammation of the liver caused by an infection.

Cholesterolase  See cholesterol esterase.

Cholesterol (mol wt 387)  The principal sterol of vertebrates present in all body tissues and in animal fat and oil.

Cholesterol Acyltransferase  The enzyme that catalyzes the following reaction:

\[
\text{Cholesterol + fatty acid} \rightarrow \text{Cholesterol ester} + \text{water}
\]

Cholesterol Binding Proteinase  Synonym of pancreatic endopeptidase E.

Cholesterol Desmolase  See cholesterol mono-oxygenase.

Cholesterol Ester  An ester formed from the combination of cholesterol and fatty acid.

Cholesterol Ester Synthetase  Synonym of sterol esterase.

Cholesterol Esterase  The enzyme that catalyzes the following reaction:

\[
\text{Acetyl-CoA} + \text{choline} \rightarrow \text{Acetylcholine} + \text{CoA}
\]

Cholesterol Monoxygenase  The enzyme that catalyzes the following reaction:

\[
\text{Cholesterol + reduced adrenal ferredoxin + O}_2 \rightarrow \text{pregnenolone} + 4\text{-methylpentanal} + \text{oxidized adrenal ferredoxin} + \text{H}_2\text{O}
\]

Cholesterol Oxidase  The enzyme that catalyzes the following reaction:

\[
\text{Cholesterol} + \text{O}_2 \rightarrow \text{Cholest-4-en-3-one} + \text{H}_2\text{O}_2
\]

Cholesterol Oxygen Oxidoreductase  The systematic name for cholesterol oxidase.

Cholesterolemia  The presence of excessive quantities of cholesterol in the blood.

Cholesterosis  The excessive cholesterol deposits in tissues and organs.

Cholestyramine Resin  A synthetic, basic cation-exchange resin.

Cholic Acid (mol wt 409)  A bile acid and reagent for solubilization of membrane-bound proteins.

Choline (mol wt 104)  A component of phospholipid (lecithin).

Choline Acetyltransferase  The enzyme that catalyzes the following reaction:

\[
\text{Acetyl-CoA} + \text{choline} \rightarrow \text{Acetylcholine} + \text{CoA}
\]

Choline Dehydrogenase  The enzyme that catalyzes the following reaction:
Choline Esterase • Chondrogenesis

Choline + acceptor

\[ \text{Betaine aldehyde} + \text{reduced acceptor} \]

**Choline Esterase**  The enzyme that catalyzes the following reaction:

\[ \text{An acetylcholine} + \text{H}_2\text{O} \]

\[ \text{Choline} + \text{carboxylate} \]

**Choline Kinase**  The enzyme that catalyzes the following reaction:

\[ \text{Choline} + \text{ATP} \]

\[ \text{Phosphocholine} + \text{ADP} \]

**Choline Oxidase**  The enzyme that catalyzes the following reaction:

\[ \text{Choline} + \text{O}_2 \]

\[ \text{Betaine aldehyde} + \text{H}_2\text{O} \]

**Choline Phosphatase**  The enzyme that catalyzes the following reaction:

\[ \text{A phosphatidylcholine} + \text{H}_2\text{O} \]

\[ \text{Choline} + \text{phosphatidate} \]

**Choline Phosphotransferase**  The enzyme that catalyzes the following reaction:

\[ \text{CDP-choline} + \text{1,2-diacylglycerol} \]

\[ \text{CMP} + \text{phosphatidylcholine} \]

**Choline Salicylate**  (mol wt 241)  An analgesic and antipyretic agent.

\[ \text{CH}_2\text{CH}_2\text{OH} \]

**Cholinergic**  Referring to the nerve fibers that release nerve-signal carrier acetylcholine at the nerve endings.

**Cholinergic Blocking Agent**  Substance capable of blocking the action of acetylcholine.

**Cholinergic Nerve**  A nerve capable of releasing nerve-signal carrier acetylcholine so that the signal is carried to another nerve.

**Cholinergic Receptor**  See acetylcholine receptor.

**Cholinergic Synapses**  The synapses that use acetylcholine as neurotransmitter.

**Cholinesterase**  See choline esterase.

**Cholinolytic**  Agent or action capable of blocking the action of acetylcholine.

**Cholinomimetic**  Substance capable of initiating the action of acetylcholine.

**Choloxin**  A trade name for dextrothyroxine sodium, used as an antilipemic agent that accelerates hepatic metabolism of cholesterol and lowers cholesterol level.

**Cholyl-CoA Synthetase**  See cholate-CoA ligase.

**Choloylglycerine Hydrolase**  The enzyme that catalyzes the following reaction:

\[ 3\alpha, 7\alpha, 12\alpha-\text{trihydroxy-5β-cholanoylglycerine} + \text{H}_2\text{O} \]

\[ 3\alpha, 7\alpha, 12\alpha-\text{trihydroxy-5β-cholanate} + \text{glycine} \]

**Choloyltaurine Hydrolase**  Synonym of choloylglycerine hydrolase.

**Choluria**  Bile in the urine.

**Cholybar**  A trade name for cholestyramine, an antilipemic agent that forms insoluble complexes with bile acid for excretion.

**Chondral**  Pertaining to cartilage.

**Condrin**  Materials that resemble gelatin produced when cartilage is boiled.

**Chondriosome**  Referring to mitochondria.

**Chondrocalcin**  The C-terminal peptide found in human procollagen.

**Chondroblast**  A cell that develops from the connective tissue of the embryo and forms cartilage (also called chondroblast).

**Chondroclast**  Cells capable of absorbing cartilage.

**Chondrocytes**  Cell of cartilage that secretes special collagens and glucosaminoglycan.

**Chondrofibroma**  A fiberlike tumor containing cartilage elements.

**Chondrogenesis**  The formation of cartilage.
Chondroid • Chorioallantoic Membrane

Chondroid Resembling cartilage.

Chondroitin ABC Eliminase Synonym of chondroitin ABC lyase.

Chondroitin ABC Lyase The enzyme that catalyzes the eliminative degradation of polysaccharides containing 1,4-β-D-hexaminyl and 1,3-β-D-glucuronosyl or 1,3-α-L-iduronosyl linkages to disaccharides containing 4-deoxy-β-D-glucose-4-enuronosyl groups.

Chondroitin AC Eliminase Synonym of chondroitin AC lyase.

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Chondroitin Sulfate A mucopolysaccharide consisting of N-acetylchondrosine repeating units that occurs in animal tissue.

Chondroitin Sulfate Lyase Synonym of chondroitin AC lyase.

Chondroitin 4-Sulfotransferase The enzyme that catalyzes the following reaction:

\[
\text{3'-Phosphoadenylylsulfate} + \text{chondroitin} \\
\text{Adenosine 3',5'-bisphosphate} + \text{chondroitin 4-phosphate}
\]

Chondroitin 6-Sulfotransferase The enzyme that catalyzes the following reaction:

\[
\text{3'-Phosphoadenylylsulfate} + \text{chondroitin} \\
\text{Adenosine 3',5'-bisphosphate} + \text{chondroitin 6'-sulfate}
\]

Chondronectin A factor that mediates the attachment of chondrocytes to collagen.

Chondrosamine Synonym for galactosamine.

Chondrosarcoma A malignant bone tumor derived from the cartilage cell that erodes the bone and invades the adjacent soft tissue.

Chondrosine (mol wt 355) A disaccharide.

\[
\begin{align*}
\text{D-glucuronic acid} & \quad \text{chondrosamine} \\
\text{CH_2OH} & \quad \text{OH} \\
\text{OH} & \quad \text{NH}_2 \\
\text{OH} & \quad \text{O} \\
\text{R} & \quad \text{SO}_3\text{H}
\end{align*}
\]

Chondro-4-Sulfatase The enzyme that catalyzes the following reaction:

\[
\text{4-Deoxy-β-D-gluc-4-enuronosyl-(1,3)-N-acetyl-D-galactosamine 4-sulfate} + \text{H}_2\text{O} \\
\text{4-Deoxy-β-D-gluc-4-enuronosyl-(1,3)-N-acetyl-D-galactosamine} + \text{sulfate}
\]

Chondro-6-Sulfatase The enzyme that catalyzes the following reaction:

\[
\text{4-Deoxy-β-D-gluc-4-enuronosyl-(1,3)-N-acetyl-D-galactosamine 6-sulfate} + \text{H}_2\text{O} \\
\text{4-Deoxy-β-D-gluc-4-enuronosyl-(1,3)-N-acetyl-D-galactosamine} + \text{sulfate}
\]

\[\text{Ch}_{18:2}-\text{OOH}\] Abbreviation for cholesteryl linoleate hydroperoxide.

CHOP Abbreviation for a combination drug containing cycloheximide, hydroxydaunorubicin, oncovin, and prednisone.

CHOPB Abbreviation for a combination drug containing cytoxan, hydroxydaunomycin, oncovin, prednisone, and bleomycin.

Chorditis Inflammation of spermatic cord or vocal cord.

CHORE Abbreviation for carbohydrate-response element.

Chorex A trade name for gonadotropin, a hormone capable of stimulating ovulation and promoting secretion of gonadal steroid hormones.

Chorio- A prefix meaning the membrane that protects the fetus.

Chorioallantoic Membrane The membrane surrounding the embryo of the chicken used for cultivation of viruses, e.g., vaccinia and influenza.
Chorioamnionitis • Chromium-51 Assay

Chorioamnionitis  Inflammation of fetal membranes.

Chorioangioma  A benign vascular tumor of the chorion.

Choriocarcinoma  A malignant tumor found in testicles in males and the uterus or ovaries in females.

Choriogenesis  Growth of the membrane surrounding the fetus.

Choriomeningitis  Inflammation of the cerebral membranes (meninges).

Chorion  The membrane surrounding the embryo or fetus, it forms the placenta connecting the mother and the fetus.

Chorionic  Pertaining to the chorion.

Chorionic Gonadotropin  A polypeptide hormone from the placenta that stimulates the release of progesterone and estrogen.

Chorioretinitis  Inflammation of the choroid and retina of the eye.

Chorismate Mutase  The enzyme that catalyzes the following reaction:

\[
\text{Chorismate} \quad \text{Prephenate}
\]

Chorismate Pyruvate Lyase  The enzyme that catalyzes the following reaction:

\[
\text{Chorismate} + \text{L-glutamine} \\
\text{Anthranilate} + \text{pyruvate} + \text{L-glutamate}
\]

Chorismate Pyruvate Mutase  See chorismate mutase.

Chorismate Synthetase  The enzyme that catalyzes the following reaction:

\[
\text{3-Phospho-5-enolpyruvoylshikimate} \\
\text{Chorismate} + \text{Pi}
\]

Chorismic Acid (mol wt 226)  An intermediate for the biosynthesis of aromatic amino acids.

\[
\begin{array}{c}
\text{CH}_2 \\
\text{O} - \text{C} - \text{COOH}
\end{array}
\]

Choroid  The middle vascular layer of the eye.

Choroideremia  A genetic disorder characterized by the progressive degeneration of the vascular layer of the eye (choroid).

Choroiditis  Inflammation of the vascular coat of the eye.

Choron  A trade name for chorionic gonadotropin, a hormone.

Chou-Fasman Scheme  An empirical scheme to predict the native three-dimensional structure from the known amino acid sequence of the protein.

CHPX  Abbreviation for chicken pox.

Christmas Disease  Referring to hemophilia B, a hereditary sex-linked hemorrhagic disease due to the absence of a coagulation factor.

Christmas Factor  A blood clotting factor (factor IX) that activates clotting factor X.

Chromaffin Cell  Cell that stores adrenaline in the secretory vesicle and secretes it at time of stress when stimulated by the nervous system.

Chromagen  A trade name for a nutritional gelatin capsule containing multi-vitamins and minerals.

Chromatids  The two daughter strands of a duplicated chromosome that are joined together by a centromere. The chromatids become separate chromosomes after division of the centromere.

Chromatin  A complex of DNA and histone proteins or nonhistone proteins found in the eukaryotic nuclei.

Chromatin-Negative  A male (usually) whose nuclei lack sex chromatin.

Chromatin-Positive  A female (usually) whose nuclei contain sex chromatin.

Chromatogram  The profile of a chromatographic separation.

Chromatography  A technique used for the separation of a mixture of substances based upon the differences in their electric charges, particle sizes, and chemical properties.

Chromatophore  The photosynthetic, microscopic structure from the photosynthetic prokaryotic cells containing photosynthetic pigment.

Chromatosome  A structure of DNA-protein complex consisting of linker DNA and H1 histone protein.

Chromium  A chemical element with atomic weight 52, valence 1–6.

Chromium-51  An artificial radioisotope of chromium used as chromate for labeling blood cells.

Chromium-51 Assay  See $^{51}\text{Cr Assay}$. 

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Chromium Picolinate (mol wt 418) A nutritional supplement.

Chromobacterium A genus of chemoorganotrophic Gram-negative bacteria.

Chromoblastomycosis A skin disorder caused by black molds, e.g., Caldosporium carrionii.

Chromocenter An aggregate of heterochromatins from different chromosomes.

Chromogen Substance capable of producing color.

Chromogenic Label Any chemical label that generates a color compound as a means of visualizing the location and quantity of bound probe.

Chromomere One of the darkly stained beads on an eukaryotic chromosome due to the local coiling of the chromosome thread.

Chromonar (mol wt 361) A coronary vasodilator.

Chromonema Referring to the chromosome thread of eukaryotic cells.

Chromoneme Referring to the DNA thread of bacteria and bacteriophages.

Chromophilic Cells or organisms that can be easily stained.

Chromophobic Cells or organisms that can not be easily stained.

Chromophore 1. The light-absorbing group of a substance. 2. The group within a dye molecule that is responsible for the color of the dye.

Chromoplast Carotenoid-containing plastid responsible for color appearance in ripe fruits and flowers.

Chromosomal Pertaining to chromosomes.

Chromosomal Aberration Alteration or rearrangement of genetic material in the chromosome.

Chromosomal Fiber A bundle of microtubules that extends outward from kinetochores of a chromosome toward one of the two poles of the mitotic spindle (also called kinetochore fiber).

Chromosomal Map See chromosome map.

Chromosomal Polymorphism The existence of two or more different structural rearrangements of the chromosomal material within a population.

Chromosomal Puff The local uncoiling of a polytene chromosome that is undergoing transcription.

Chromosomal Substitution Replacement of one or more chromosomes by a chromosome from another source.

Chromosomal Tubules Referring to the microtubules of the spindle apparatus originating at the kinetochores of the centromeres.

Chromosomal RNA The RNA molecules associated with chromosomes, e.g., primer RNA.

Chromosome 1. The thread-like structure in the nucleus of a eukaryotic cell consisting of DNA and histone proteins. 2. The circular DNA of a prokaryotic cell that carries genetic information.

Chromosomal Alteration See chromosomal aberration.

Chromosome Banding Technique Technique for staining human chromosomes, e.g., staining chromosomes with Giemsa (G-banding) or with flurochrome (Q-banding).

Chromosome Condensation The shortening and thickening of the eukaryotic chromosome during prophase.

Chromosome Congression The migration of chromosomes to the spindle equator during mitosis.

Chromosome Fiber See chromosomal fiber.

Chromosome Jumping See chromosome walking.

Chromosome Map The map showing the locations of genes on a chromosome.

Chromosome Mapping Determination of the order of the genes on a chromosome (also known as genetic map or cytogenetic map).

Chromosome Polymorphism See chromosomal polymorphism.

Chromosome Puff See chromosomal puff.

Chromosome Substitution See chromosomal substitution.
Chromosome Walking  The sequential isolation of clones carrying overlapping restriction sequences from large regions of the chromosome in order to reach a particular locus of interest. The technique is used to isolate a locus of interest that is known to be linked to a gene that has been identified and cloned.

Chromotrope  Substances capable of altering the color; a metachromatic dye.

Chronic  A disease or infection that persists for a relatively long period of time.

Chronic Exposure  Radiation exposure of long duration at a low dose.

Chronulac  A trade name for lactulose, a laxative.

Chroococcidiopsis  A genus of unicellular cyanobacteria.

Chrysanthemaxanthin (mol wt 585)  A carotenoid pigment.

CHX  Abbreviation for cycloheximide.

Chyl (StuI)  A restriction endonuclease from Corynebacterium hydrocarboclastum with the following specificity:

\[
\begin{align*}
5'&\quad AGGCCT \quad 3' \\
3'&\quad TCCGGA \quad 5'
\end{align*}
\]

Chyle  A milky lymphatic fluid containing lymph and the products of digestion.

Chylomicron  Lipoprotein fat globule that functions to deliver dietary triacylglycerols to the muscle and adipose tissue and cholesterol to the liver.

Chylomicronemia  The presence of a large number of microscopic particle of fat in the blood.

Chylomicron Remnant  The chylomicron without triacylglycerol.

Chyloperitoneum  The accumulation of milky liquid in the peritoneal cavity.

Chylopoiesis  The formation of chyle.

Chyluria  The presence of chyle in the urine giving a white turbid appearance.

Chymase  A mast cell protease that cleaves peptide bonds involving the carboxyl groups of phenylalanine, tryptophan, tyrosine, and leucine.

Chyme  The partially digested, semifluid mass passing from stomach into the intestine.

Chymodenin  A basic peptide that stimulates the pancreatic secretion of chymotrypsinogen.

Chymopapain  A protease from papaya having an activity similar to papain but differing in electrophoretic mobility, solubility, and stability.

Chymosin  A protease from the stomach of calves.

Chymotropic Pigment  Pigment present in the vacuole of the plant cell.

Chymotrypsin  A protease that preferentially hydrolyzes peptide bonds involving carboxyl groups of aromatic amino acid residues.

Chymotrypsinogen  The precursor of chymotrypsin.

Chymotryptic Peptides  The peptides obtained from chymotrypsin digestion.

CI  Abbreviation for crystalline insulin.

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cl Gene • Cilastatin

**cl Gene**  The gene in λ phage that encodes repressor for lysogeny.

**cl Protein**  A lambda phage repressor protein encoded by lambda phage DNA.

**CIA**  Abbreviation for 1. a combination drug containing CCNU, isophosphamide, and Adriamycin; 2. chymotrypsin inhibitor activity.

**CIB**  Abbreviation for cytomegalic inclusion body.

**Cibacalcin**  A trade name for calcitonin, a calcium regulator.

**Cibalith-S**  A trade name for lithium carbonate, a psychotic agent.

**CIC**  Abbreviation for circulating immune complex.

**Cicletanine (mol wt 262)**  An antihypertensive agent.

**Ciclotonc acid (mol wt 168)**  A choleretic agent.

**Ciclonicate (mol wt 247)**  A vasodilator.

**Ciclopirox (mol wt 207)**  An antifungal agent.

**Ciclosidomine (mol wt 280)**  An antihypertensive agent.

**CICR**  Abbreviation for calcium-induced calcium release.

**Ciprotoxic Acid (mol wt 168)**  A choleretic agent.

**CID**  Abbreviation for 1. cytomegalic inclusion disease; 2. collision-induced dissociation.

**CIDNP**  Abbreviation for chemically induced dynamic nuclear polarization.

**Cidofovir (mol wt 279)**  An antiviral agent that inhibits viral DNA replication.

**Cidomycin**  A trade name for gentamicin, an antibiotic that inhibits protein synthesis.

**CIDS**  Abbreviation for cellular immunity deficiency syndrome.

**CIE**  Abbreviation for 1. countercurrent immunoelectrophoresis; 2. crossed immunoelectrophoresis.

**CIEP**  Abbreviation for countercurrent immunoelectrophoresis.

**CIF**  Abbreviation for 1. calcium influx factor; 2. clone inhibiting factor.

**Cifenline (mol wt 262)**  An antiarrhythmic agent.

**CIG**  Abbreviation for 1. cold insoluble immunoglobulin; 2. cytoplasmic immunoglobulin.

**cIgM**  Abbreviation for cytoplasmic IgM.

**Cilamox**  A trade name for amoxicillin trihydrate, an antibiotic that inhibits bacterial cell wall synthesis.

**Cilastatin (mol wt 358)**  A dipeptidase inhibitor.
Cilazapril (mol wt 436) An antihypertensive agent.

Cilia Plural of cilium.

Ciliary Movement Cilium- or microtubule-mediated movement.

Cilicane VK A trade name for penicillin VK, an antibiotic that inhibits bacterial cell wall synthesis.

Cilium Membrane-bound appendage or hair-like extension on the surface of eukaryotic cells, it consists of a core bundle of microtubules and is responsible for cell motility.

Cilnidipine (mol wt 493) An antihypertensive agent.

Cilostazol (mol wt 370) An antithrombotic agent.

Ciloxin A trade name for ciprofloxacin hydrochloride, an antibacterial agent.

Cimetidine (mol wt 252) An antiulcerative agent that inhibits acid secretion in the stomach.

CIMP Abbreviation for cyclic inosine monophosphate.

CIM6PR Abbreviation for cation-independent mannose 6-phosphate receptor.

Cinalone A trade name for triamcinolone diacetate, a corticosteroid used as an anti-inflammatory agent.

Cinchona The dried bark of Cinchona trees used to treat malaria, to stimulate appetite, and to prevent hemorrhage and diarrhea.

Cinchonism Poisoning caused by overdose of cinchona.

Cineangiography A form of angiography in which X-ray pictures are recorded on the film. This allows the dynamic movements of the heart to be studied when the film is projected.

Cinepazet Maleate (mol wt 509) An antiangiinal agent.

Cinepazide (mol wt 418) A vasodilator.

Cinnamaldehyde (mol wt 132) Substance responsible for the flavor of cinnamon.

Cinnamate β-β-glucosyltransferase The enzyme that catalyzes the following reaction:

\[
\text{UDP-glucose} + \text{trans-cinnamate} \leftrightarrow \text{UDP} + \text{trans-cinnamoyl-β-β-glucoside}
\]

trans-Cinnamate 4-monooxygenase The enzyme that catalyzes the following reaction:

\[
\text{trans-Cinnamate} + \text{NADPH} + \text{O}_2 \leftrightarrow 4\text{-Hydroxycinnamate} + \text{NADP}^+ + \text{H}_2\text{O}
\]

Cinnamic Acid (mol wt 148) An unsaturated acid.

Cinnamic Acid 2-Hydroxylase The enzyme that catalyzes the following reaction:

\[
\text{trans-Cinnamate} + \text{NADPH} + \text{O}_2 \leftrightarrow 2\text{-Hydroxycinnamate} + \text{NADP}^+
\]
Cinnamic Acid 4-Hydroxylase • Circular DNA

Cinnamic Acid 4-Hydroxylase • Circular DNA

Cinnamic Acid 4-Hydroxylase • Circular DNA

**Cinnamic Acid 4-Hydroxylase**  The enzyme that catalyzes the following reaction:

\[ \text{trans-Cinnamate} + \text{NADPH} + \text{O}_2 \quad \leftrightarrow \quad \text{4-Hydroxycinnamate} + \text{NADP}^+ \]

**Cinnamoyl-CoA Reductase**  See cinnamoyl reductase.

**Cinnamyl Reductase**  The enzyme that catalyzes the following reaction:

\[ \text{Cinnamoyl-CoA} + \text{NADP}^+ \quad \leftrightarrow \quad \text{Cinnamaldehyde} + \text{CoA} + \text{NADPH} \]

**Cinnamyl-Alcohol Dehydrogenase**  The enzyme that catalyzes the following reaction:

\[ \text{Cinnamyl alcohol} + \text{NADP}^+ \quad \leftrightarrow \quad \text{Cinnamaldehyde} + \text{NADPH} \]

**Cinnarizine (mol wt 369)**  A vasodilator and antihistaminic agent.

![Image of Cinnarizine](image)

**Cinobac**  A trade name for cinoxacin, an antimicrobial agent that inhibits microbial DNA synthesis.

**Cinolazepam (mol wt 358)**  A sedative and hypnotic agent.

![Image of Cinolazepam](image)

**Cinonide**  A trade name for triamcinolone acetonide, used as an anti-inflammatory agent.

**Cinoxacin (mol wt 262)**  An antibacterial agent that inhibits bacterial DNA synthesis.

![Image of Cinoxacin](image)

**Cin-Quin**  A trade name for quinidine sulfate, an antiarrhythmic agent that prolongs action potential.

**CiNU**  Abbreviation for lomustine.

**Cloteronel (mol wt 252)**  An antiacne agent.

![Image of Cloteronel](image)

**CIP**  Abbreviation for 1. CDK-dependent interacting protein; 2. calf intestinal phosphatase; 3. cold insoluble protein.

**Cipro**  A trade name for ciprofloxacin, an antibiotic that inhibits bacterial DNA gyrase.

**Ciprofibrate (mol wt 289)**  An antihyperlipoproteinemic agent.

![Image of Ciprofibrate](image)

**Ciprofloxacin (mol wt 331)**  An antibacterial agent that inhibits bacterial DNA synthesis (an DNA gyrase inhibitor).

![Image of Ciprofloxacin](image)

**Ciramadol (mol wt 249)**  An analgesic agent.

![Image of Ciramadol](image)

**Circadian**  Describing biological activity that exhibits an endogenous periodicity of approximately 24 hours independently of any daily variation in the environment.

**Circular Birefringence**  The birefringence resulting from the effect of left and right circularly polarized light.

**Circular Dichroism**  The property of molecules that shows differences between extinction coefficients of the left and right circularly polarized light at a given wavelength, e.g., the phenomenon observed in helical proteins.

**Circular DNA**  DNA with a closed ring structure, it may be a double-stranded circular or single-stranded circular structure.
Circular Genetic Map  The genetic map of a circular DNA genome, e.g., genetic map of *E. coli*.

Circular Permutation  Physically linear DNA with a circular genetic map because of the occurrence of terminal redundancy in the linear DNA molecule.

Circulins  Polypeptide antibiotics produced by *Bacillus circulans* that increase the membrane permeability of bacterial cells.

Cirrhosis  A chronic disorder of the liver characterized by the loss of normal lobular architecture.

cis  Referring to 1. configuration of geometrical isomers, 2. two mutations that lie on the same chromosome, and 3. genes inherited together on the same chromosome.

cis-Acting Element  See cis-acting locus.

cis-Acting Locus  The genetic region that affects the activity of genes on the same DNA molecule. cis-Acting loci generally do not encode protein but serve as attachment sites for DNA-binding protein.

cis-Acting Mutation  A mutation that alters the nucleotide sequence of a DNA-binding site for a transcriptional regulatory protein that affect only the physically linked structural genes.

cis-Acting Protein  A protein capable of acting on gene expression at the starting point.

Cisapride (mol wt 466)  A peristaltic agent.

Cisapramide (mol wt 466)  A peristaltic agent.

Cis-Configuration  Configuration of geometrical isomers in which two chemical groups lie on the same side of the plane of the double bond.

cis-Dominance  Genetic element that affects the expression of one or more adjacent loci on the same chromosome.

cis-Effect  The effect of one gene on the expression of another gene on the same chromosome.

CISM Cells  Abbreviation for cat iris sphincter smooth-muscle cells.

CISP  Abbreviation for corticotropin-induced secreted protein.

Cisplatin (mol wt 300)  An antineoplastic agent that binds with DNA and forms two platinum-nitrogen bonds with N7 atoms of the adjacent guanine.

Cisterna  The membrane-bound flattened sac in the cell, e.g., endoplasmic reticulum, Golgi apparatus.

Cisternal Space  The interior of the cisternae, e.g., space in the endoplasmic reticulum or Golgi complex.

cis-trans Isomerase  The enzyme that catalyzes a cis-trans isomerization in the metabolism of unsaturated fatty acids.

cis-trans Test  A complementation test to determine whether two mutations affecting the same character lie within the same or different cistrons, it yields a mutant phenotype if the two mutants are in the *trans* position (on the same cistron), it yields a wild type phenotype if two mutants are in the *cis* position (on different cistrons).

Cistron  A unit of genetic function or a structural gene on a chromosome that encodes a single polypeptide.

CIT  Abbreviation for citrulline.

Citalopram (mol wt 324)  An antidepressant.

Citric acid (mol wt 120)  A naturally occurring nucleotide coenzyme.

Citramalate-CoA Transferase  The enzyme that catalyzes the following reaction:

\[
\text{Acetyl-CoA} + \text{citramalate} \rightarrow \text{acetate} + \text{citramalyl-CoA}
\]
Citrase  The enzyme catalyzes the following reaction:
\[
\text{Citrate} \rightarrow \text{Acetate} + \text{oxaloacetate}
\]

Citratase  Synonym for citrase.

Citrate  A salt of citric acid.

Citrate Aldolase  Synonym of citrate lyase.

Citrate CoA Transferase  The enzyme that catalyzes the following reaction:
\[
\text{Acetyl-CoA} + \text{citrate} \rightarrow \text{Acetate} + \text{citryl-CoA}
\]

Citrate CoA Ligase  The enzyme that catalyzes the following reaction:
\[
\text{ATP} + \text{citrate} + \text{CoA} \rightarrow \text{Acetyl-CoA} + \text{ADP} + \text{Pi} + \text{oxaloacetate}
\]

Citrate CoA-transferase  The enzyme that catalyzes the following reaction:
\[
\text{Acetyl-CoA} + \text{citrate} \rightarrow \text{Acetate} + \text{citryl-CoA}
\]

Citrate Condensing Enzyme  See citrate synthetase.

Citrate Cycle  See tricarboxylic acid cycle.

Citrate Dehydratase  The enzyme that catalyzes the following reaction:
\[
\text{Citrate} \rightarrow \text{cis-Aconitate} + \text{H}_2\text{O}
\]

Citrate Lyase  The enzyme that catalyzes the following reaction:
\[
\text{Citrate} + \text{ATP} + \text{CoA} \rightarrow \text{Acetyl-CoA} + \text{ADP} + \text{Pi} + \text{oxaloacetate}
\]

Citrate of Magnesia  A trade name for magnesium citrate, an antacid and laxative agent.

Citrate Oxaloacetate Lyase  The systematic name for citrate lyase.

Citrate Synthetase  The enzyme that catalyzes the following reaction:
\[
\text{Oxaloacetate} + \text{acetyl-CoA} + \text{H}_2\text{O} \rightarrow \text{Citrate} + \text{CoA}
\]

Citrate Test  A test to determine the ability of an organism to use citrate as sole source of carbon.

Citroviridin  A yellow pigment and neurotoxic mycotoxin produced by \textit{Penicillium citroviride}.

Citric Acid (mol wt 192)  A tricarboxylic acid and an intermediate in the Krebs cycle.

\[
\begin{align*}
\text{CH}_2\text{COOH} & \\
\text{HO} & \\
\text{CH}_3\text{COOH} & \\
\end{align*}
\]

Citric Acid Cycle  A central metabolic pathway in all aerobic organisms for the production of energy using acetyl-CoA as starting material (also called Krebs cycle, tricarboxylic acid cycle).

Citridesmolase  Synonym of citrate lyase.

Citrinol  (mol wt 250)  An antibiotic produced by species of \textit{Aspergillus} and \textit{Penicillium}.

\[
\begin{align*}
\text{O} & \\
\text{C} & \\
\text{O} & \\
\text{H} & \\
\text{O} & \\
\text{O} & \\
\end{align*}
\]

Citro-Nesia  A trade name for magnesium citrate, used as a laxative; it draws water into the lumen and causes peristalsis.

Citrovorum Factor  Referring to the reduced form of folic acid.

Citrucel  A trade name for methylcellulose, used as a laxative.
Citrullinase • Clarithromycin

Citrullinase  The enzyme that catalyzes the following reaction:

\[
\begin{align*}
\text{L-Citrulline} & \quad + \quad \text{H}_2\text{O} \\
\text{L-Ornithine} & \quad + \quad \text{CO}_2 \quad + \quad \text{NH}_3
\end{align*}
\]

Citrullinemia  A genetic disorder characterized by the presence of an excessive amount of citrulline in the blood, urine, and cerebrospinal fluid due to a defect in the metabolism of citrulline.

Citrulline (mol wt 175)  A nonprotein amino acid and an intermediate in the urea cycle and in the pathway for the synthesis of arginine.

\[
\text{NH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CHNH}_2\text{COOH}
\]

Citrulline Aspartate Ligase  The enzyme that catalyzes the following reaction:

\[
\begin{align*}
\text{ATP} & \quad + \quad \text{L-citrulline} \quad + \quad \text{aspartate} \\
\text{AMP} & \quad + \quad \text{PPi} \quad + \quad \text{argininosuccinate}
\end{align*}
\]

Citrulline Phosphorylase  See ornithine carbamoyltransferase.

Cladistics  The science that deals with a classification system based on the phylogenetic relationships of organisms.

Cladogenesis  The splitting of an evolutionary lineage into two or more lineages.

Cladogram  A phylogenetic tree displaying relationships between taxa.

Cladosporiosis  Any infection or disease caused by the species *Cladosporium*.

Cladosporium  A genus of fungi (*Hyphomycetes*).

Claforan  A trade name for cefotaxime sodium, an antibiotic that inhibits bacterial cell wall synthesis.

Clanobutin (mol wt 348)  A choleretic agent.

Claripex  A trade name for clofibrate, an antilipemic agent.

Clarithromycin (mol wt 747)  A semisynthetic antibiotic derived from erythromycin that inhibits bacterial protein synthesis.
Claritin  A trade name for loratadine, an antihistaminic agent.

Clark Electrode  A type of oxygen electrode.

CLAS  Abbreviation for circulating lupus anticoagulant syndrome.

Class  A taxonomic group of organisms with greater similarity than a phylum or subphylum but less than an order.

Class I MHC Antigens  Gene products encoded by HLA-A, HLA-B, and HLA-C loci in humans, or H2-K and H2-D loci in mice. Class I antigens are responsible for allograft rejection and cytotoxic T cell action.

Class II MHC Antigens  Gene products encoded by HLA-D loci in humans or the H2-I region in mice. Class II antigens act as peptide receptors on the surface of antigen-presenting cells.

Class III MHC Antigens  Products encoded by genes located on the MHC complex. Class III antigens are involved in the regulation and synthesis of complement.

Class Switching  Change in expression of the different constant regions of an immunoglobulin during lymphocyte differentiation.

Classical Complement Pathway  An antibody-dependent, complement-mediated cytolytic pathway that is initiated by antigen-antibody-mediated activation of complement and formation of membrane attack complexes leading to cell lysis.

Clastogen  Substance that causes chromosomal abnormalities.

Clathrate  Compound capable of trapping other compounds.

Clathrate Complex  A complex formed through molecular entrapment, e.g., trapping of nonpolar substances by water.

Clathrin  Protein that forms a polyhedral cage on the cytoplasmic side of a membrane so as to produce a clathrin-coated pit, which buds off to form a clathrin-coated vesicle.

Clavulanic Acid (mol wt 199)  An antibacterial agent.

Clavulin  A trade name for a combination drug containing amoxicillin and calvulanate, used as an antibacterial agent.

Clazuril (mol wt 373)  An anticoccidial agent.

ClcI (PstI)  A restriction endonuclease from *Cylindrospermum lichenforme* with the same specificity as PstI.

ClcII (Mst I)  A restriction endonuclease from *Cylindrospermum lichenforme* with the following specificity:

\[
\begin{array}{c}
5' \ldots \ldots \ldots TGCGCA \ldots \ldots 3' \\
3' \ldots \ldots \ldots ACGCGT \ldots \ldots 5'
\end{array}
\]

Clear Lysate  The clear supernatant resulting from centrifugation of suspensions of lysed cells.

Clear Plaque  A plaque in which all the cells within the plaque are lysed.

Clearance Test  A method to test the kidney function for removing a substance from the blood by measuring the amount of the substance excreted in the urine within a given period of time.

Cleavage  1. Physical splitting of a cell into two.  2. Specialized type of cell division seen in many early embryos whereby a large cell becomes subdivided into many smaller cells without growth.  3. Splitting a compound into two or more simpler small molecules.

Cleavage Furrow  The indentation of the plasma membrane of an animal cell leading to the separation of daughter nuclei.

Cleavage Map  A profile produced by electrophoresis of a DNA sample treated with restriction endonuclease (also known as restriction map).

Clebopride (mol wt 390)  An antiemetic agent.

Cleland’s Reagents  Referring to reducing agents, e.g., DTE (dithioerythritol) and DTT (dithiothreitol), used for the protection of sulfhydryl groups.

Clemastine (mol wt 344)  An antihistaminic agent that competes with histamine for H-1 receptors on target cells.
Clemizole (mol wt 326)  An antihistaminic agent.

Clenbuterol (mol wt 277)  An antiasthmatic agent.

Clentiazem (mol wt 449)  An antihypertensive agent.

Cleocin  A trade name for clindamycin, an antibiotic that inhibits bacterial protein synthesis by binding to 50S ribosomal subunit.

Clinistil  A trade name for a group of chemically treated paper strips, used for semiquantitive determinations of chemical components in urine and/or in the blood.

Clidinium Bromide (mol wt 432)  An anticholinergic agent that competitively blocks acetylcholine, decreases GI motility, and inhibits gastric acid secretion.

Clinaram Transdermal System  A trade name for a system of transdermal delivery of estradiol. There are different systems, each system has a contact surface area.

Clinafloxacin (mol wt 366)  An antibacterial agent.

Clindac-A  A trade name for clindamycin, an antibiotic.

Clindamycin (mol wt 425)  A semisynthetic antibiotic derived from linomycin that inhibits bacterial protein synthesis by binding to 50S ribosomal subunit.

Clindets  A trade name for clindamycin, an antibiotic.

Clindex  A trade name for the combination drug containing chlordiazepoxide and clidinium.
Clinofibrate (mol wt 469)  An antiatherosclerosis agent.

![Chemical structure of Clinofibrate](image)

Clinoril  A trade name for sulindac, a nonsteroidal anti-inflammatory agent.

Clinoscope  A device for the measurement of cyclophobia (tendency of one eye to deviate).

Clioquinol  A local anti-infective agent (see also iodochlorhydroxyquin).

Clioanide (mol wt 542)  An anthelmintic agent.

![Chemical structure of Clioanide](image)

Clinoxide  A trade name for a combination drug containing chlordiazepoxide and clidinium.

Clipoxide  A trade name for a combination drug containing chlordiazepoxide and clidinium.

CLIP-170  Abbreviation for cytoplasmic linker protein 170, a phosphorylation-regulated microtubule-binding protein.

CLL  Abbreviation for chronic lymphocytic leukemia.

CLM  Abbreviation for caveolin-rich light membrane.

ClmI (HaeIII)  A restriction endonuclease from Caryophanon latum with the same specificity as HaeIII.

ClmII (AvaII)  A restriction endonuclease from Caryophanon latum with the same specificity as AvaII.

CLN (Cln)  Abbreviation for 1. calnexin; 2. cyclin.

Cloacin DF13  A bacteriocin produced by strains of Enterobacter cloacae and E. coli that possess the CloDF13 plasmid.

Clobenfurrol (mol wt 259)  A coronary vasodilator.

![Chemical structure of Clobenfurrol](image)

Clobenzopine (mol wt 342)  An antihistaminic agent.

![Chemical structure of Clobenzopine](image)

Clobenzepam (mol wt 316)  An antihistaminic agent.

Clobetasol (mol wt 411)  A glucocorticoid and anti-inflammatory agent.

![Chemical structure of Clobetasol](image)

Clobetasone (mol wt 409)  A glucocorticoid with anti-inflammatory activity.

![Chemical structure of Clobetasone](image)

Clobetasone (mol wt 409)  A glucocorticoid with anti-inflammatory activity.

![Chemical structure of Clobetasone](image)

Clobutinol (mol wt 256)  An antitussive agent.

![Chemical structure of Clobutinol](image)

Clobivarit (mol wt 305)  An antirheumatic agent.

![Chemical structure of Clobivarit](image)

Clocinizine (mol wt 403)  An antihistaminic agent.

![Chemical structure of Clocinizine](image)
Clocortolone (mol wt 411) A glucocorticoid.

CloDF13 A plasmid capable of producing bacteriocin cloacin DF13 in *E. coli* and *Enterobacter cloacae*.

Clodronic Acid (mol wt 245) A calcium regulator.

Clofazimine (mol wt 473) An antituberculostatic and antileprostatic agent.

Clomestrone (mol wt 358) An analgesic agent.

Clofamicin (mol wt 310) A CNS stimulant.

Clofibrate (mol wt 243) An antihyperlipoproteinemic agent that inhibits cholesterol biosynthesis.

Clofibrac Acid (mol wt 215) An antihyperlipoproteinemic agent and an inhibitor of cholesterol biosynthesis.

Cloflucarban (mol wt 349) A disinfectant.

Clofocetol (mol wt 365) An antibacterial agent that is effective against both Gram-positive and Gram-negative bacteria.

Clometacin (mol wt 358) An analgesic agent.

Clometocillin (mol wt 433) A semisynthetic antibiotic related to penicillin that inhibits bacterial cell wall synthesis.

Clomiphene (mol wt 406) A gonad-stimulating agent that stimulates the release of pituitary gonadotropins, follicle-stimulating hormone, and luteinizing hormone.

Clomid A trade name for clomiphene, a drug that stimulates the release of pituitary gonadotropins, follicle-stimulating hormone, and luteinizing hormone.

Clomiphene (mol wt 406) A gonad-stimulating agent that stimulates the release of pituitary gonadotropins, follicle-stimulating hormone, and luteinizing hormone.
Clomipramine (mol wt 315)  An antidepressant.

Clomicycline (mol wt 509)  A semisynthetic broad-spectrum antibiotic related to tetracycline.

Clonal  Pertaining to a clone.

Clonal Deletion  Creation of tolerance by deletion of cells that possess specificity for a given antigen and, therefore are no longer available to respond upon subsequent exposure to that antigen.

Clonal Selection Theory  The theory states that antibodies are produced by clones of proliferated lymphocytes that are specifically selected by antigen epitopes among a large number of lymphoid clones. The cells in each clone can react with only one epitope. The clones responsive to selfepitopes are destroyed during fetal life.

Clonapam  A trade name for clonazepam, an antiepileptic agent.

Clonazepam (mol wt 316)  An anticonvulsant.

Clonidine (mol wt 230)  A blood pressure regulator and antihypertensive agent that inhibits the central vasomotor center thereby decreasing sympathetic outflow.

Cloning  A process of propagation of a clone in a host, e.g., propagation of a gene or a fragment of DNA with a cloning vector.

Cloning Vector  A self-replicating plasmid, bacteriophage, or virus that is used to transfer a segment of foreign DNA into a host cell for propagation.

Clonitazene (mol wt 387)  A narcotic analgesic agent.

Clonixin (mol wt 263)  An analgesic agent.

Clonorchiasis  A condition caused by the presence of the fluke Clonorchis sinensis in the bile duct.

Clonotype  1. The homogeneous cell type of a clone of cells. 2. The phenotype of a clone of cells.

Clopamide (mol wt 346)  An antihypertensive agent.

Cloperastine (mol wt 330)  An antitussive agent.

Clopidogrel (mol wt 322)  An ADP receptor antagonist used as an antiplatelet agent.
Clopirac (mol wt 264) An anti-inflammatory agent.

Clopra A trade name for metoclopramide, an antiemetic and GI stimulant.

Cloranolol (mol wt 292) An antiarrhythmic agent.

Clorazepate (mol wt 333) An anxiolytic agent.

Clorexolone (mol wt 239) A diuretic agent.

Cloricromen (mol wt 257) A vasodilator and antithrombotic agent.

Clorindione (mol wt 257) An anticoagulating agent.

Clorophene (mol wt 219) A disinfectant.

Clorprenaline (mol wt 214) A bronchodilator.

Clorpres A trade name for a combination drug containing clonidine hydrochloride and chlorthalidone.

Closed Reading Frame A sequence in mRNA that cannot be translated.

Closed System A thermodynamic system that neither exchanges energy nor matter with its surroundings.

Clostridial Myonecrosis The death of individual muscle cells caused by Clostridia.

Clostridiopeptidase A The microbial collagenase that cleaves peptide bonds involving the amino group of glycine in native collagen.

Clostridiopeptidase B See clostripain.

Clostridium A genus of endospore-forming, chemoorganotrophic, obligate anaerobic bacteria.

Clostripain A microbial protease that preferentially cleaves peptide bonds involving the carboxyl group of arginine (including the bond between arginine and proline).

Clot-Promoting Factor See Hageman factor.

Clotrimadern A trade name for clotrimazole, an antifungal agent.

Clotrimazole (mol wt 345) An antifungal agent that alters cell wall permeability of fungi.

Clotting Factor Proteins that promote blood clotting.

Cloverleaf Structure Referring to the characteristic secondary structure of tRNA; it consists of 4 loops and a CCA-terminus.
Cloxacillin (mol wt 436) A semisynthetic antibiotic related to penicillin that inhibits bacterial cell wall synthesis.

Cloxpen A trade name for cloxacillin sodium, an antibiotic that inhibits bacterial cell wall synthesis.

Cloxyquin (mol wt 180) An antifungal agent.

Clozapine (mol wt 327) An antipsychotic agent that binds to the dopamine receptor and interferes with adrenergic, cholinergic, and serotoninergic receptors.

Clozaril A trade name for clozapine, an antipsychotic agent.

C-LPL Abbreviation for cellular LPL.

CLSH Abbreviation for chronic lympho-sarcoma leukemia.

CLSM Abbreviation for confocal laser scanning electron microscope.

Ctl (HaeIII) A restriction endonuclease from Caryophanon latum with the following specificity:

\[ 5’........GGCC........3’ \]
\[ 3’........CCGG........5’ \]

Clupein A protamine isolated from herring, it consists of 30 amino acid residues.

Cluster Gene A gene that encodes multifunctional proteins.

Cluster of Differentiation Cell surface molecules, detectable by monoclonal antibodies that define a particular cell line or state of cellular differentiation (also known as cluster designation or CD marker).

Clysis Infusion of fluid into the body.

Clysm Referring to enema.

Clysdorast A trade name for a combination drug containing bisacodyl and tannic acid.

Clyster Referring to enema.

cm Abbreviation for centimeter.

cM Abbreviation for centimorgan.

CM Abbreviation for 1. carboxymethyl; 2. complete medium; 3. conditioned medium; 4. contrast medium.

Cμ Abbreviation for the constant region of μ chain of an IgM.

CM Cellulose Carboxymethyl cellulose, a cation exchanger used in ion exchange chromatography.

CM Dextran Abbreviation for carboxymethyl dextran, a cation exchanger used in ion exchange chromatography.

CM Sephadex Abbreviation for carboxymethyl-Sephadex, a cation exchanger used in ion exchange chromatography.

CM Sepharose Abbreviation for carboxymethyl-Sepharose, a cation exchanger used in ion exchange chromatography.

CMC Abbreviation for 1. carboxymethyl-cellulose; 2. critical micelle concentration; 3. cell-mediated cytotoxicity; 4. a combination drug containing cyclophosphamide, methotrexate, and CCNU.

C-Meiosis Colchicine-blocked meiosis.

C-Metaphase Colchicine-blocked metaphase.

CMF Abbreviation for a combination drug containing cyclophosphamide, methotrexate, and fluorouracil.

CMFDA Abbreviation for chloromethyl fluorescein diacetate.

CMFH Abbreviation for a combination drug containing cyclophosphamide, methotrexate, fluorouracil, and hydroxyurea.

CMFP Abbreviation for a combination drug containing cyclophosphamide, methotrexate, fluorouracil, and prednisone.

CMFT Abbreviation for a combination drug containing cyclophosphamide, methotrexate, fluorouracil, and tamoxifen.
CMFVP • Coagglutination

CMFVP  Abbreviation for a combination drug containing cytoxan, methotrexate, fluorouracil, vin- 
cristine, and prednisone.

CMH  Abbreviation for ceramide monohexoside.

CMI  Abbreviation for 1. cell-mediated immunity; 2. carbohydrate metabolism index.

C-Mitosis  Colchicine-blocked mitosis.

CML  Abbreviation for 1. cell-mediated lympho-

CMM  Abbreviation for complete minimal me-

CMO  Abbreviation for corticosterone methyl 

CMo  Abbreviation for centimorgan.

CMOAT  Abbreviation for canalicular multi-spe-

CMOPP  Abbreviation for a combination drug 

CMP  Abbreviation for 1. cytidine monophos-

CMPF  Abbreviation for a combination drug con-

CMP-N-Acylneuraminate Phosphodiesterase  The enzyme that catalyzes the following reaction:

\[
\text{CMP-N-acetylneuraminate} + \text{H}_2\text{O} \rightarrow \text{CMP}^- + \text{N-acetylneuraminate}
\]

CMP-Sialate Hydrolase  See CMP-N-acetylneuraminate phosphodiesterase.

CMP-Sialate Synthetase  The enzyme that catal-

CoA-Disulfide Reductase  The enzyme that cata-

}\]
Coagglutination  Agglutination of different strains of a microorganism by a given antiserum.

CoA-Glutathione Reductase  The enzyme that catalyzes the following reaction:

\[
\text{NADPH} + \text{CoA-glutathione} \rightarrow \text{CoA} + \text{glutathione} + \text{NADP}^+ 
\]

Coagula  Plural of coagulum.

Coagulant  Any agent capable of causing coagulation.

Coagulase  The enzyme that coagulates blood plasma, e.g., the enzyme produced by pathogenic Staphylococci causing blood coagulation.

Coagulase Test  A test to determine if a given bacterial strain produces a coagulase.

Coagulation  The formation of a clot, e.g., blood coagulation.

Coagulation Factor I  Referring to fibrinogen.

Coagulation Factor II  Referring to prothrombin.

Coagulation Factor III  Referring to thromboplastin (tissue factor).

Coagulation Factor IV  Referring to calcium ion required in coagulation.

Coagulation Factor V  Referring to proaccelerin.

Coagulation Factor VII  Referring to proconvertin.

Coagulation Factor VIIa  A protease that catalyzes the selective cleavage of the peptide bond between Arg-Ile in factor X to form factor Xa.

Coagulation Factor VIII  Referring to antihemophilic factor.

Coagulation Factor IX  Referring to Christmas Factor.

Coagulation Factor X  Referring to Stuart Factor.

Coagulation Factor Xa  A protease that catalyzes the selective cleavage of peptide bonds between Arg-Thr and then Arg-Ile in prothrombin to form thrombin.

Coagulation Factor XI  Referring to plasma thromboplastin antecedent.

Coagulation Factor XII  A protease that catalyzes the selective cleavage of the peptide bond between Arg-Ala and Arg-Val in factor IX to form factor IXa.

Coagulation Factor XIIa  Referring to Hageman Factor.

Coagulation Factor XIIia  A protease that catalyzes the selective cleavage of peptide bond between Arg-Ile in factor VII to factor VIIa.

Coagulation Factor XIII  Referring to fibrin-stabilizing factor.

Coagulation Factor XIIIa  Referring to protein-glutamine γ-glutamyltransferase.

Coagulator  Any agent that causes coagulation.

Coagulogen  A 16-kDa fibrinogen-like protein found in the hemocyte of horseshoe crab (Limulus polyphemus). It participates in hemostasis.

Coagulometer  A device used for measuring the time required for a sample to coagulate.

Coagulum  A clot or curd.

Coal Tar  A by-product in the destructive distillation of coal, it consists of benzene, toluene, naphthalene, anthracene, xylene, phenol, and cresol and is used as an antieczematic agent.

COAP  Abbreviation for a combination drug containing cytoxan, oncovin, ara-C, and prednisone.

COAPB  Abbreviation for a combination drug containing cytoxan, oncovin, ara-C, prednisone, and bleomycin.

CoA-S-Ac  Abbreviation for Acetyl coenzyme A or acetyl-CoA.

CoASH  Abbreviation for coenzyme A.

Coat Protein  1. Proteins that make up the outer layer of a structure. 2. Viral capsid protein.

Coated Pit  A specialized region of plasma membranes with clustered receptors and clathrin backing; it mediates endocytosis through invagination to form coated vesicles.

Coated Vesicle  See coated pit.

COB  Abbreviation for a combination drug containing cisplatin, oncovin, and bleomycin.
Abbreviation for 60Co-labeled cyanocobalamin.

Cobalamin A cobalt-containing coenzyme derived from vitamin B\textsubscript{12} and involved in a variety of enzymatic reactions.

Cob(I)alamin Adenosyltransferase The enzyme that catalyzes the following reaction:

\[
\text{ATP} + \text{cob(I)alamin} + \text{H}_2\text{O} \rightarrow \text{Pi} + \text{PPi} + \text{adenosylcobalamin}
\]

Cob(II)alamin Reductase The enzyme that catalyzes the following reaction:

\[
\text{NADH} + 2 \text{cob(II)alamin} \rightarrow \text{NAD}^+ + 2 \text{cob(I)alamin}
\]

Cobalt A chemical element with atomic weight of 39 and valences of 2 or 3.

Cobalt-60 A radioactive cobalt.

Cobamamide (mol wt 1580) A cobalt-containing coenzyme derived from vitamin B\textsubscript{12}, and hematopoietic vitamin.

Cobamide A cobalt-containing coenzyme derived from vitamin B\textsubscript{12} and involved in a variety of enzymatic reactions.

COBMAM Abbreviation for a combination drug containing cytoxan, oncovin, bleomycin, methotrexate, adriamycin, and MeCCNU.

Coboglobulin A hemoglobin-like molecule in which iron is replaced by cobalt.

Cobra Venom Factor Either of two protein factors from cobra venom that affects the alternative pathway of complement activation. It catalyzes the formation of C3 convertase.

Cobrotoxin A protein toxin from cobra venom consisting of 62 amino acid residues.

Cocaethylene (mol wt 317) An anesthetic agent.
Cocaine (mol wt 303)  1. A topical anesthetic agent, 2. plus its other characteristics.

\[
\begin{align*}
\text{N} & \text{CH}_3 \\
\text{COOCH}_3 & \text{OOCC}_6\text{H}_5 \\
\text{H} & \text{CH}_3
\end{align*}
\]

Cocaine Esterase  The enzyme that catalyzes the following reaction:

\[
\text{A carboxylic ester} + \text{H}_2\text{O} \quad \text{H}_2\text{O} \quad \text{An alcohol} + \text{carboxylate}
\]

Cocarboxylase  Referring to thiamin pyrophosphate.

Cocarcinogen  Any substance that increases the activity of a carcinogen.

Cocci  Plural of coccus.

Coccidioides  A genus of fungi and the causal agent of coccidioidomycosis.

Coccidioidin  Any antigenic preparation derived from \textit{Coccidioides immitis} used in a diagnostic skin test for coccidioidomycosis.

Coccidioidomycosis  Infection or disease caused by \textit{Coccidioides immitis}.

Coccidiosis  Any infection or disease caused by protozoa of the order Coccidia.

Coccobacillus  A bacterial cell intermediate in the morphology between coccus and bacillus.

Coccolysin  A protease that catalyzes the preferential cleavage of peptide bonds involving amino groups of leucine, phenylalanine, tyrosine, and alanine.

Coccomyxa  A genus of unicellular, nonmotile green algae.

Coccus  A spherical or near spherical bacterium. Cocci may occur singly, in pairs, or in groups of four or more.

Cocktail  The solution of fluorophores used for liquid scintillation counting.

Coconut Cadang Cadang Viroid  An RNA viroid that infects coconut plants.

Cocoonase  A protease capable of digesting silk protein.

Codalan  A trade name for a combination drug containing acetaminophen, codeine phosphate, and caffeine, used as an analgesic agent.

Codaminaphen  A trade for a combination drug containing acetaminophen, codeine phosphate, and caffeine, used as an analgesic agent.

Codecarboxylase  Referring to pyridoxal phosphate.

Codeine (mol wt 299)  A narcotic, analgesic, and antitussive agent that binds with opiate receptors at many sites in the CNS.

\[
\begin{align*}
\text{CH}_3 & \text{O} \\
\text{HO} & \text{NCH}_3
\end{align*}
\]

Codesol  A trade name for prednisolone sodium phosphate, used as an anti-inflammatory agent.

Codinlear DH Syrup  A trade name for a combination drug containing hydrocodone bitartrate and guaifenesin used as an expectorant and antitussive agent.

Codimal DH  A trade name for a combination drug containing hydrocodone bitartrate, phenylephrine hydrochloride, pyrilamine maleate, potassium guaiacolsulfonate, sodium citrate, and citric acid.

Coding Triplet  Referring to codon or genetic code on mRNA.

Codon  Sequence of three adjacent nucleotides (triplet) on mRNA that specifies a given amino acid.

Codon Dictionary  See genetic dictionary.

Codroxocobalamin  Referring to vitamin B\(_{12}\) (hydroxocobalamin).

Coefficient  A numerical parameter for determining the effect or change produced by variations of specified conditions or of the ratio between two quantities.

Coelomocyte  A phagocytic cell found in the coelomic cavity of invertebrates.

Coenobium  A colony of unicellular eukaryotes surrounded by a common membrane.

Coenocyte  A multinucleate cell or organism.
Coenzyme • Cognate

Coenzyme  A nonprotein factor required for an enzymatic reaction.

Coenzyme I  Referring to the coenzyme NAD.

Coenzyme II  Referring to the coenzyme NADP.

Coenzyme A (mol wt 768)  A coenzyme involved in a variety of biochemical reactions.

Coenzyme F₄₃₀ Hydrogenase  The enzyme that catalyzes the following reaction:

\[
\begin{align*}
\text{H₂} & \quad \text{coenzyme F₄₃₀} \\
\downarrow & \\
\text{Reduced coenzyme F₄₃₀}
\end{align*}
\]

Coenzyme M  Referring to the coenzyme, 2-mercaptoethanesulfonic acid, involved in methane formation.

Coenzyme Q (ubiquinone)  A coenzyme that functions as an electron carrier in the electron transport system.

Coenzyme Q₄  See coenzyme Q.

Coenzyme Q₉  See coenzyme Q.

Coenzyme Q₁₀  See coenzyme Q

Coenzyme R  Referring to biotin.

CoF  Abbreviation for cobra factor.

Cofactor  Ion or molecule that serves as a factor in an enzymatic reaction.

Cogentin  A trade name for benztropine mesylate, an antiparkinsonian agent that blocks central cholinergic receptors.

Co-Gesic  A trade name for a combination drug containing acetaminophen and hydrocodone bitartrate, used as an analgesic agent.

Cognate  Referring to two biomolecules that normally interact with each other, e.g., enzyme with substrate and ligand with receptor.
Cognate tRNA • Referring to tRNA that can be recognized by aminoacyl-tRNA synthetase.

Cognex • A trade name for tacrine hydrochloride, a cholinesterase inhibitor used as an Alzheimer’s drug.

COHb • Abbreviation for carboxyhemoglobin or carbon monooxyhemoglobin.

Coherin • A peptide cofactor involved in regulation of intestinal motility in mammals.

Cohesive End • The ends of a double-stranded DNA molecule having a single-stranded terminus at each end.

Cohesive End Ligation • Joining of two DNA fragments that have cohesive ends with the enzyme DNA ligase.

Cointegrate • The circular product resulting from fusion of two circular replicons (e.g., two plasmids or a plasmid and a bacterial chromosome) mediated by a transposable element.

Coisogenic • Individuals that are genetically identical at all loci except one.

Colace • A trade name for docusate sodium, a laxative that reduces surface tension of interfacing liquid contents of the bowel.

Colaspase • A trade name for asparaginase, an antineoplastic agent.

Colbenemid • A trade name for a combination drug containing probenecid and colchicine, used as a uricosuric and renal tubular blocking agent that inhibits the tubular re-absorption of urate and increases urinary excretion of uric acid.

Colemide (mol wt 371) • A tubulin-binding substance that interferes with microtubule-dependent function.

Cold Agglutinins • Antibodies or substances that agglutinate bacteria or erythrocytes more efficiently at temperatures below 37°C.

Cold Hemagglutinin • The hemagglutinin that causes hemagglutination at low temperature but disperses cells at higher temperature.

Cold Insoluble Globulin • Globulins (e.g., fibronectin) that are insoluble at low temperature because the low temperature weakens the hydrophobic interactions.

Cold Sensitive Enzyme • The enzyme that has an unusual sensitivity to low temperature owing to the weakening of hydrophobic interactions and formation of inactive subunits at low temperature.

Cold Sensitive Mutant • A mutant that is defective at low temperature but functional at normal temperature.

Cold Sore • A clustered sore of the lips caused by herpes simplex virus (also called fever blister).

Colectomy • Surgical removal of part or all of the large intestine (colon).

Colestid • A trade name for colestipol hydrochloride, an antihyperlipidemic agent.

Colestipol • A basic anion exchange resin and a copolymer of diethylenetriamine and 1-chloro-2,3-epoxypropane. It is an antilipemic agent that combines with bile acid to form insoluble molecules for excretion; it triggers the synthesis of new bile acid from cholesterol and leads to the reduction of low-density lipoprotein and cholesterol level.

Col-Factor • The genetic element that controls the production of colicin.

Colfosceril Palmitate (mol wt 734) • A lung surfactant.

Cold Sore • A clustered sore of the lips caused by herpes simplex virus (also called fever blister).

Colgout • A trade name for colchicine, an antigout agent.
Colibacillosis • Colloid

Colibacillosis  Any infection or disease caused by *E. coli*.

Colicin  A class of proteins (bacteriocins) produced by strains of enterobacteria containing colicin plasmids. Colicins are proteins produced by some bacteria that inhibit closely related bacteria.

Colicin A  A colicin produced by strains of enterobacteria containing Col-A plasmids. It binds to the outer membrane protein F (OmpF) leading to the formation of pores in the cytoplasmic membrane.

Colicin B  A colicin produced by strains of enterobacteria containing Col-B plasmids. It binds to the outer membrane protein leading to the formation of pores in the cytoplasmic membrane.

Colicin D  A colicin produced by strains of enterobacteria containing Col-D plasmids. It binds to outer membrane protein leading to the formation of pores in the cytoplasmic membrane.

Colicinogen  See Col factor.

Colicinogenic  Capable of producing colicin.

Colicinogenic Factor  See Col factor.

Colicinogenic Plasmids  The plasmids that encode colicins.

Coliforms  Any Gram-negative, rod-shaped, asporogenous, facultative anaerobic bacteria capable of fermenting lactose.

Coliform Test  A test used to detect the presence of coliform bacteria in a sample (e.g., water sample).

Colinear  Having the corresponding part arranged in the same linear order, e.g., DNA and RNA and mRNA and amino acids in protein.

Colipase  A pancreatic protein that forms complexes with lipase; it inhibits the surface denaturation of lipase.

Coliphage  A virus that infects *Eschericia coli*.

Colistimethate Sodium  A polypeptide antibiotic.

Colistin  A cyclopeptide antibiotic produced by *Bacillus colistinus*.

Colitis  Inflammation of the colon.

Colitose (mol wt 148)  A monosaccharide (3,6-dideoxygalactose) isolated from *E. coli*.

Collagen  The major fibrous protein of connective tissue such as bone, teeth, tendon, skin, and blood vessels and components of the extracellular matrix.

Collagen Disease  Diseases characterized by the swelling and breakdown of fibers in connective tissue.

Collagenase  Enzyme that catalyzes the hydrolysis of collagen.

Collagenase A  A microbial collagenase that cleaves the peptide bonds involving the amino group of glycine in the triple helical region of native collagen.

Collagenase Ointment  A drug used for treatment of bed sores, burns, and skin disorders.

Collectin  One of a family of plasma lectins that has a trimeric structure similar to complement C1q.

Colligation  The formation of covalent bond by means of two combining groups each donating one electron.

Colligative Property  A property of a solution that depends on the number of solute particles per unit volume of the solution, e.g., freezing point depression.

Collimate  To make light rays parallel.

Collimator  A device that converts incident radiation into a narrow beam of parallel rays.

Collinomycin (mol wt 536)  An antibiotic produced by *Streptomyces collinus*.

Collisional Quenching  The transfer of energy from an excited molecule to a colliding molecule or molecule within the contact distance.

Collodion  A solution that contains 4 g pyroxylin (mainly nitrocellulose) in a 100-ml mixture of 25 ml ethanol and 75 ml diethyl-ether. It forms a tough, colorless film on an inert surface when exposed to the atmosphere.

Colloid  A macromolecule or a particle with one dimension having a length at least 10⁻⁸ to 10⁻⁹ m and incapable of passing through a semipermeable membrane.
Colloid Solution A thermodynamically stable solution consisting of colloidal macromolecules and solvent; it can be readily reconstituted after separation from the solvent.

Collyrum A trade name for boric acid.

Colocynth (mol wt 719) A glucoside from fruit of *Citrullus colocynthis* used as a cathartic agent.

\[\text{COOCH}_3\]

\[\text{OOH} \quad \text{OH} \quad \text{OH} \quad \text{CH}_2\text{OH} \quad \text{O} \quad \text{H}_3\text{C} \quad \text{CH}_3 \quad \text{CH}_3 \quad \text{CH}_3 \quad \text{OH} \quad \text{H}_3\text{C} \quad \text{O} \quad \text{H}_3\text{C} \quad \text{OH} \quad \text{CH}_3 \quad \text{CH}_3 \quad \text{O} \quad \text{H}_3\text{C} \quad \text{OH} \quad \text{CH}_3 \quad \text{CH}_3 \quad \text{O} \quad \text{H}_3\text{C} \]

Cologel A trade name for methylcellulose, a laxative that absorbs water and increases bulk and moisture content of the stools.

Colominic Acid The capsular polysaccharide from strains of *E. coli* K12 consisting of a linear polymer of N-acetylneuraminic acid.

Colon The large intestine.

Colonoscope A device or fiberscope used for visual examination of the large intestine.

Colonoscopy The visual examination of the large intestine with a colonoscope.

Colony A population of cells growing on a solid medium that arose from a single cell.

Colony Counter A device for counting the number of bacterial colonies on a solid medium.

Colony Forming Unit An unit for quantifying cells capable of forming a colony from a single cell; it is expressed as number of colony forming units per volume of sample.

Colony Hybridization A procedure for the direct detection of a particular DNA sequence within an array of bacterial cells (clones) using a radiolabeled DNA or RNA probe that is complementary to the sequence being investigated. The cells from a colony are transferred to nitrocellulose paper and then lysed, the resultant DNA from the lysed cells are denatured, bound to the nitrocellulose paper, and identified with labeled probe.

Colony Stimulation Factor Any of the cytokines that controls the differentiation of hemopoietic stem cells.

Coloproctitis Inflammation of both the large intestine and the rectum.

Color Quenching The absorption of light emitted by the fluorophores in a scintillation is counted by the color component in the sample.

Color Vision The capacity to perceive color.

Colorado Tick Fever A tick-borne viral disease caused by orbivirus.

Colorimeter A photoelectric instrument used for the quantitative determination of colored compounds in a solution.

Colorimetry A method for quantitative determination of color compounds in a solution with a colorimeter.

Colosigmoidoscopy The visual examination of the large intestine with a sigmoidoscope (a flexible tube with lighted device).

Colostrum The fluid released from the mammary glands before milk production begins (also known as first milk).

Coloxyl A trade name for docusate sodium, a laxative that reduces the surface tension of the interfacial liquid contents of the bowel and promotes incorporation of additional liquid into the stool.

Colpectomy The surgical removal of the vagina.

Colpitis Inflammation of the vagina and bladder.

Colposcope A lighted device for direct visual examination of the vagina and cervix.

Colposcopy Visual examination of the vagina and cervix with a colposcope.

Colsalide A trade name for colchicine, an antigout agent.

Column Chromatography A type of chromatography in which the stationary phase is packed in a column and the mobile phase percolates through the column thereby separating the components, e.g., gel filtration, ion exchange, and absorption chromatography.

Coly-mycin M A trade name for colistimethate sodium, an antibacterial agent.

Colyte A trade name for polyethylene glycol electrolyte solution, used as a laxative agent.

Coma A state of profound unconsciousness.

COMA Abbreviation for a combination drug containing cyclophosphamide, oncovin, methotrexate, and adriamycin.

COMAA Abbreviation for a combination drug containing cytoxan, oncovin, methotrexate, adriamycin, and ara-C.
COMB • Complement Cascade

COMB Abbreviation for a combination drug containing cyclophosphamide, oncovin, methotrexate, and bleomycin.

Combantrin A trade name for pyrantel embonate, an anthelintic agent that blocks neuromuscular activity.

Combinatorial Any process that is governed by specific combination factors. The different combinations have different effects.

Combinatorial Association The association of immunoglobulin molecules from any one class of heavy chain with molecules from any one type of light chain.

Combinatorial Translocation The association of a gene of any variable region with a gene of any constant region of an immunoglobulin in the same multigene family. The two genes are brought together through deletion of intervening DNA sequences.

Combined Oxygen The oxygen that is attached to hemoglobin.

Combipres A trade name for a combination drug containing chlorthalidone and clonidine hydrochloride, used as an antihypertensive.

Combivent Inhalation Aerosol An inhalation aerosol containing a micro-crystalline suspension of ipratropium bromide and albuterol sulfate used as a bronchodilator.

Combivir A trade name for a combination drug containing lamivudine and zidovudine used as an antiviral agent for treatment of HIV infection.

COMF Abbreviation for a combination drug containing cyclophosphamide, oncovin, methotrexate, and 5-fluorouracil.

COMLA Abbreviation for a combination drug containing cytoxan, oncovin, methotrexate, leucogen, and ara-C.

COMLEC Abbreviation for a combination drug containing cytoxan, oncovin, methotrexate, leucogen, etoposide, and cytarabine.

Commaless Genetic Code Successive codons that are contiguous without noncoding bases (e.g., genes without introns).

Commensalsim The symbiosis in which one symbiont receives benefits from the association and the other symbiont receives neither benefit nor harm.

Common Cold An upper respiratory disease caused by a number of viruses, e.g., rhinovirus, coronavirus, influenza virus, parainfluenza virus, and reovirus.

Comoviruses A group of plant viruses that contain positive-stranded ssRNA.

COMP Abbreviation for 1. a combination drug containing cyclophosphamide, oncovin, methotrexate, and prednisone; 2. cartilage oligomeric matrix protein.

CompA Abbreviation for compound A (11-dehydrocorticosterone).

Compatibility Test Serological test used to detect if blood or tissue from a prospective donor can be transfused or transplanted without immunological rejection.

Compazine A trade name for prochlorperazine, an antiemetic agent that alters dopamine action in the CNS.

CompB Abbreviation for compound B (corticos- terone).

CompE Abbreviation for compound E (cortisone).

Competence Referring to 1. a bacterial cell capable of undergoing transformation, 2. a lymphocyte capable of recognizing an antigen and synthesizing antibody, and 3. the ability of a group of embryonic cells to react to a morphogenic stimulus and initiate differentiation.

Competitive Inhibition A type of inhibition in which the inhibitor competes with substrate or ligand for the binding site on the enzyme. The competitive inhibition can be reversed by increasing substrate concentration.

Competitive Inhibitor A substance capable of competing with substrate or ligand for the binding site on the enzyme.

CompF Abbreviation for compound F (cortisol or hydrocortisone).

Complement A group of proteins and proenzymes in the plasma of vertebrates that can be activated by an antigen-antibody reaction (classical pathway) leading to cell lysis.

Complement Activation Conversion of complement components to their active forms through the classical pathway of activation or through the alternative pathway of activation leading to cell lysis and the generation of pharmacologically active fragmentation products.

Complement Cascade Referring to the cascading action of the pathways of complement activation. This leads to the conversion of components of complement to active subcomponents and fragments leading to the lysis of cells.
Complement Factor B • Conalbumin

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Complement Factor B  A complement factor involved in the alternative pathway of complement activation.

Complement Factor D  A complement factor involved in the alternative pathway of complement activation. It catalyzes the cleavage of complement factor B.

Complement Factor I  A complement factor involved in the alternative pathway of complement activation. It catalyzes the cleavage of complement C3b.

Complement Fixation Test  A sensitive serological test for detection of the presence of specific antigen or the presence of complement-fixing antibody. It consists of two serological systems: a hemolytic indicator system and an antigen-antibody testing system.

Complement Fixing Antibody  The antibody capable of activation or fixation of complement, e.g., IgG and IgM.

Complement Subcomponents  The subcomponents of the complement, e.g., C1q, C1r and C1s are subcomponents of C1.

Complementary Base Pair  Referring to the A:T, A:U, and G:C pairs in DNA or RNA.

Complementary DNA  The DNA molecule synthesized from mRNA template using reverse transcriptase; it consists of no intron.

Complementary Genes  Two genes that produce similar phenotypes when they are present separately but produce different phenotypes when present together.

Complementary Strand  The DNA strand that has a complementary base sequence to another strand.

Complementation  The ability of a gene to compensate for a functional defect in a homologous gene when present in the same organism.

Complementation Test  A test used to determine if two mutants are located on the same cistron or on a different cistron.

Complete Blood Count  The quantitation of the number of white and red blood cells per cubic millimeter.

Complete Freund’s Adjuvant  The Freund’s adjuvant that contains dead cells of mycobacteria.

Complete Medium  A type of culture medium that contains nutrients necessary for the growth of auxotrophs.

Complete Transduction  Transduction in which the DNA from the donor bacterium is completely integrated into the chromosome of the recipient cell.

Complex I  Referring to NADH-dehydrogenase complexes in the electron transport system. It catalyzes the oxidation of NADH by coenzyme Q.

Complex II  Referring to succinate dehydrogenase complexes in the electron transport chain. It catalyzes the oxidation of succinate by coenzyme Q.

Complex III  Referring to Cytochrome b, c complexes in the electron transport chain. It catalyzes the oxidation of reduced coenzyme Q by cytochrome c.

Complex IV  Referring to cytochrome oxidase complexes in the electron transport chain. It catalyzes oxidation of reduced cytochrome c by molecular oxygen.

Complex-Mediated Hypersensitivity  A type of hypersensitivity that is mediated by soluble antigen-antibody complexes, e.g., conditions like serum sickness or glomerulonephritis.

Complex Virion  A complete virus particle with a complex symmetry (not a simple cubic nor a simple helical symmetry). It may be a combination of cubic and helical symmetry.

Complexone  Referring to ionophore.

Compound W  A trade name for salicylic acid.

Compz Diahist  A trade name for diphenhydramine hydrochloride, an antihistaminic agent that competes with histamine for H-1 receptors on the target cells.

CompS  Abbreviation for compound S (11-deoxycortisol).

Computed Tomography Scan  A specialized form of X-ray examination in which the X-ray source and detector rotate around the object to be scanned and the information obtained can be used to produce cross-section images by computer.

COMT  Abbreviation for catechol-O-methyltransferase.

Co-mutagen  Any non-mutagenic agent that enhances the effect of a mutagen.

Convax  A trade name for Hemophilus b conjugate and hepatitis B recombinant vaccine.

ConA  Abbreviation of concanavalin A.

Conalbumin  An iron-binding protein found in egg white and avian blood.
Conantokin G  A toxic peptide (also called sleeper peptide) from the venom of Conus geographicus (fish-hunting cone snail) that is an antagonist of brain NMDA receptor.

Conarachin  A minor globulin occurring in the seeds of peanut.

Concanavalin A  A mitogenic lectin from jack bean (Canavalia ensiformis). It stimulates the proliferation of T lymphocytes.

Concanavalin B  A minor crystallizable protein obtained from the pipe seeds of the jack bean.

Concatemer  Two or more DNA or RNA molecules that are covalently joined (end to end) in the same orientation.

Concentraid  A trade name for desmopressin, an antidiuretic hormone.

Concentration Gradient  A condition in which the concentration of a solute changes with distance, e.g., sucrose density gradient used in density gradient centrifugation and pH gradient generated in mitochondria by the electron transport system.

Concerted Acid-Base Catalysis  A catalytic reaction that consists of simultaneous actions of both acidic and basic catalytic groups.

Concerted Catalysis  A catalytic reaction in which there are more than one catalytic grouping in the active site of an enzyme.

Concerted Feedback Inhibition  See concerted inhibition.

Concerted Inhibition  Feedback inhibition in which two or more products are simultaneously involved, e.g., inhibition of glutamine synthetase (an allosteric enzyme) by the six products of glutamine metabolism.

Concerted Model of Allosteric Enzyme  A model describing the action of an allosteric enzyme in which the enzyme exists in two conformational forms (R-form: relaxed form and T-form, tensed form), the two forms differ in their capacity to bind substrate, positive effector, and negative effector. The binding of an effector or substrate shifts the equilibrium from one form to the other leading to regulation of enzyme activity.

Concussion  A condition caused by injury to the head.

Condensation  1. A type of chemical reaction in which two or more molecules combine with the release of water, alcohol, or simple substance. 2. The change of state of a substance (e.g., from vapor to liquid or to solid form).

Condensing Enzyme  Referring to citrate synthetase.

Conditional Mutant  A mutant that grows as a normal organism under permissive conditions and expresses a lethal mutation phenotype under the nonpermissive condition (e.g., conditional lethal mutation).

Condrin-LA  A trade name for a combination drug containing phenylpropanolamine hydrochloride and chlorpheniramine maleate, used as an antihistaminic agent.

Conductance  The electrical property of a solution defined as the reciprocal of the resistance.

Conductiometric Method  A method of chemical analysis in which the end point of a reaction is determined by the measurement of conductance.

Conductivity  The ability of a substance or a mixture of substances to transfer heat or electricity. It is the reciprocal of resistivity.

Cone  A light sensitive cell present in the retina.

Cone Pigment Gene  Genes that encode pigments in the cone cells of the retina and are responsible for color vision.

Configuration  The spatial arrangement of an organic molecule that is conferred by the presence of either a double bond or a chiral center around which substitution groups are arranged in a specific sequence. Configuration isomers cannot be interconverted without breaking a covalent bond or bonds.

Confluence  A state in cell culture where cells have multiplied to cover the surface of the growth vessel.

Conformation Isomer  Any one or more isomers that differ only in their stereochemical conformation.

Conformational Isozyme  The multiple forms of a single gene product that differ in secondary or tertiary structure.

Congenic Strain  The strains of organisms that are different from one another in a small chromosomal segment.

Congenital  Present at the time of birth.

Congeric  Of the same species.

Congespirin  A trade name for a combination drug containing phenylephrine hydrochloride and acetaminophen, used as a bronchodilator.

Congest  A trade name for estrogen.
Conglutination Agglutination of particulate entities bearing C3b by conglutinin.

Conglutinin A protein from bovine serum capable of binding with complement C3b leading to agglutination of particles bearing C3b.

Congo Red (mol wt 697) A dye and pH indicator.

Conidia Plural of conidium.

Conidium An asexual haploid borne on an aerial hyphae.

Coniferin (mol wt 342) The principal glucoside of conifers.

Coniferyl Alcohol (mol wt 180) An alcohol obtained from hydrolysis of coniferin.

Coniine (mol wt 127) The toxic principle of poison hemlock (Conium maculatum).

Conjec-B A trade name for brompheniamine maleate, an antihistaminic drug that competes with histamine for H-1 receptor on effector cells.

Conjugase Synonym of γ-glu-X carboxypeptidase.

Conjugate Acid-Base Pair An proton donor and its corresponding deprotonated species (e.g., acetic acid, donor and acetate, acceptor).

Conjugate Redox Pair An electron donor and its corresponding electron acceptor (e.g., NADH, donor and NAD+, acceptor).

Conjugated Double Bond Any of the two or more double bonds in a molecule where each double bond is separated from the next by a single bond.

Conjugated Protein A protein that is linked to a nonprotein group (prosthetic group).

Conjugation 1. Union of gametes from opposite sexes. 2. Transfer of genetic material from a male strain (F+) to the female strain (F–) in bacteria.

Conjugation Labeling A covalently coupling procedure for introducing a label into a large molecule.

Conjugative Plasmid Any plasmid that mediates the transfer of DNA by conjugation.

Conjugon Referring to that genetic element essential for bacterial conjugation.

Connective Tissue Any supporting tissue that lies between other tissue and consists of cells embedded in the extracellular matrix, e.g., bone, cartilage, and loose connective tissue.

Connexin The main protein component of connexon.

Connexon Water-filled pores in the cytoplasmic membrane formed by a ring of six protein subunits. The connexons from two adjoining cells join to form a continuous channel between the two cells.

Conotoxin Any of the several peptides of the family of ω-conotoxins isolated from the venoms of marine snails. ω-Conotoxins are neurotoxins that inhibit the voltage-gated calcium channel.

Consensus Sequence Average or most typical form of a sequence that is reproduced with minor variations in a group of related DNA, RNA, or protein sequences. The consensus sequence shows the nucleotide or amino acid most often found at each position.

Conservative Substitution Replacement of one amino acid residue in a protein by another amino acid with similar properties, e.g., substitution of glutamate with aspartate.

Conserved Sequence A sequence of nucleotides that has not changed noticeably over a long evolutionary period.

Conspecific Within the same species.

Constant Region The portion of an immunoglobulin molecule that is encoded by the constant
region gene. The amino acid sequence in the constant region remains constant in various types of immunoglobulins.

**Constilac** A trade name for lactulose, a laxative that increases water content and softens the stool.

**Constitutive** Produced in constant amount.

**Constitutive Enzyme** An enzyme that is required in constant amounts by a cell (also known as a house-keeping enzyme).

**Constitutive Genes** Genes that are expressed as a function of the interaction of RNA polymerase with a promoter without additional regulation.

**Constulose** A trade name for lactulose, a laxative that increases water content and softens the stool.

**Contac Capsules** A trade name for a combination drug containing phenylpropanolamine and chlorpheniramine, used as an antihistaminic agent.

**Contac Cough Formula** A trade name for dextromethorphan hydrobromide, an antitussive agent.

**Contact Inhibition** Cessation of cell growth and cell division upon contact with other cells. Contact inhibition is responsible for the formation of a cell monolayer on the surface of a culture vessel.

**Contact Insecticide** A substance that kills insects by penetrating the body surface.

**Continuous Cell Line** A population of cells derived from either a tumor or tissue culture following transformation (also known as an established cell line).

**Continuous Culture** The maintenance of a microorganism in exponential growth by continuous inflow of fresh medium to the culture vessel.

**Continuous Fiber** The microtubules that connect the two poles of the mitotic apparatus.

**Continuous Flow Centrifugation** A type of centrifugation in which the suspension to be centrifuged continuously flows into the centrifuge and the supernatant is continuously removed.

**Contrapsin** A glycoprotein and a plasma protease inhibitor.

**Contrast Medium** Substance used to improve the visibility of structure during radiography.

**Controlling Gene** The gene that switches the cistron on and off.

**Convallatoxin (mol wt 551)** A cardiotonic agent from the blossoms of the lily (*Convallaria majalis*).
Cooperative Binding  The binding of one ligand to its binding site affects the binding of subsequent ligands to the other sites on the same molecule.

Cooperative Hydrogen Bonding  The interaction among adjacent hydrogen bonds in a molecule in which the energy required to form them is less than the sum of the energies required to form the individual bonds but the energy required to break these bonds is greater than the sum of the energies required to break individual bonds.

Cooperative Ligand Binding  The binding of one ligand to one site on the macromolecule increases or decreases the affinity of ligand to the other site.

Coordinate Covalent Bonding  A covalent bond in which two electrons are donated to only one of the bonded atoms.

Coordinate Enzymes  The enzymes that are under the control of an operon system.

Coordinate Induction  Induction of a series of enzyme syntheses in an operon system by a single inducer.

Coordinate Regulation  The regulation of induction or repression of structural genes in an operon system by a single inducer or repressor.

Coordinate Repression  The repression of a series of enzyme syntheses in an operon system by a single repressor.

COP  Abbreviation for a combination drug containing cyclophosphamide, oncovin, and prednisone.

COPA  Abbreviation for a combination drug containing cyclophosphamide, oncovin, prednisone, and adriamycin.

COPAB  Abbreviation for a combination drug containing cyclophosphamide, oncovin, prednisone, and bleomycin.

COPAC  Abbreviation for a combination drug containing CCNU, oncovin, procarbazine, and prednisone.

Copaxone  A trade name for glatiramer acetate, an acetate salt of synthetic polypeptide used for the treatment of multiple sclerosis.

Cophene-B  A trade name for brompheniramine maleate, an antihistaminic drug that competes with histamine for H-1 receptors on effector cells.

Copolymer  A polymeric molecule containing more than one type of monomer unit.

COPP  Abbreviation for a combination drug containing CCNU, oncovin, procarbazine, and prednisone.

Copper  A chemical element with an atomic weight of 64, valence 1 or 2.

Coproantibody  An antibody in the lumen of the gastrointestinal tract or feces.

Coprococcus  A genus of Gram-positive, asporogenous, anaerobic bacteria.

Coprophilic  Referring to organisms that grow preferentially in animal feces.

Coprozoic  Referring to protozoa that are coprophilic.

Copy Choice Hypothesis  The hypothesis states that the new strand of DNA alternates between the paternal and maternal strands of DNA during its replication.

Copy DNA  Referring to complementary DNA (cDNA).

Copy Error  An error made during DNA replication.

Copy Mutant  A mutant plasmid whose copy number differs from the wild-type plasmid.

Copy Number  The number of copies of any gene or plasmid in a given cell.

CoQ  Abbreviation for Coenzyme Q.

CoQH₂  Abbreviation for reduced form of coenzyme Q.

Coquinone  A combination drug containing coenzyme Q₁₀ and alpha lipoic acid used to increase ATP production in mitochondria.

CoR  Abbreviation for Congo red.

Corax  A trade name for chlordiazepoxide hydrochloride, an anti-anxiety agent.
Cord Factor • Corpuscle

Cord Factor  A toxic glycolipid from *Mycobacterium*.

\[ \text{CH}_2\text{O} \quad \text{mycolate} \]

\[ \text{OH} \quad \text{OH} \quad \text{OH} \]

Cordycepin (mol wt 251)  A nucleoside antibiotic from *Cordyceps militaris* that inhibits RNA biosynthesis.

\[ \text{NH}_2 \quad \text{N} \quad \text{N} \quad \text{N} \quad \text{CH}_3\text{OH} \quad \text{O} \quad \text{OH} \]

Core DNA  The DNA segment in a nucleosome that wraps around a histone octamer.

Core Enzyme  RNA polymerase complex without a sigma subunit.

Core Particle  The product resulting from nucleosome digestion that consists of histone octamer and core DNA.

Core Polysaccharide  A component of lipopolysaccharide in bacterial cell walls consisting of ketodeoxyoctonate, heptoses, glucose, and N-acetylglucosamine.

Core Protein  The protein in proteoglycan to which glycosaminoglycans attach.

Coreg  A trade name for carvedilol, an alpha/beta adrenergic blocker used as an antihypertensive agent.

Corepressor  A substance capable of combining with an inactive repressor to form an active repressor.

Corin  A trade name for nadolol, an antianginal drug that blocks the stimulation of beta-1 and beta-2 receptors.

Cori Cycle  A cycle for transfer of lactate produced by glycolysis in the muscle to the bloodstream and then liver where it is converted to glucose and then transported from the liver back to the muscle.

Coricidin  A trade name for a combination drug containing chlorpheniramine maleate and acetaminophen, used as an antihistaminic agent.

Cori’s Disease  A disorder characterized by a large deposition of glycogen in the liver.

Corium  A layer of skin underneath the epidermis.

Cork  Tissue produced by cork cambium in the outer part of the cortex of some stems and roots.

Cork Cambium  The layer of cells capable of undergoing repeated division in the production of cork cells.

Corlopam  A trade name for fenoldopam mesylate, a rapid-acting vasodilator.

Cormax  A trade name for clobetasol propionate used as an anti-inflammatory and immunosuppressive agent.

Corn Steep Water  A concentrated liquid obtained by steeping corn grains in water containing 0.2% SO\(_2\) at temperature 46 to 50°C.

Coronary Angioplasty  A procedure in which a segment of coronary artery narrowed by atheroma is stretched by the inflation of a balloon introduced into it by means of a cardiac catheterization under X-ray screening.

Coronary Bypass Graft  Coronary revascularization in which a segment of a coronary artery narrowed by atheroma is bypassed by an autologous section of healthy saphenous vein.

Coronary Revascularization  A surgical procedure of improving the blood flow through coronary arteries narrowed by atheroma.

Coronary Thrombosis  The blockage of the coronary artery of the heart by a thrombus.

Coronavirus  A virus of the family Coronaviridae capable of causing breathing disorders.

Coroxon (mol wt 347)  A cholinesterase inhibitor and an anthelmintic agent.

\[ \text{C}_3\text{H}_4\text{O}_2\text{N} \quad \text{Cl} \quad \text{OH} \quad \text{CH}_3 \]

Corpuscle  1. Any cell of the body not forming continuous tissue. 2. A cell capable of moving freely.
Correlation Coefficient

A measure of the degree of correlation, a value of +1, −1, and 0 indicating perfect positive, perfect negative, and lack of correlation, respectively.

Correndonuclease

An endonuclease involved in repairing damaged DNA.

Correndonuclease II

A deoxyribonuclease from *E. coli*.

Corrin Ring System

The ring structure of vitamin B₁₂ in which a cobalt atom is chelated.

Corrinoid

Any compound containing the corrin ring system.

Cortaid

A trade name for hydrocortisone.

Cortalone

A trade name for prednisolone, used as an anti-inflammatory agent.

Cortate

A trade name for hydrocortisone cypionate, a hormone.

Cortef

A trade name for hydrocortisone.

Cortenema

A trade name for hydrocortisone retention enema used as an anti-inflammatory agent for treatment of ulcerative colitis.

Cortex

1. A structural layer inside the spore coat of a bacterial spore. 2. The outer primary tissue of the stem or root extending from the primary phloem to the epidermis. 3. The outer layer of an organ, e.g., cerebral cortex, adrenal cortex, etc.

Cortic Ear Drop

A trade name for an ear drop solution containing chloroxylenol, pramoxine HCl, and hydrocortisone.

Corticaine

A trade name for hydrocortisone.

Corticorelin Ovine Triflutate

A trifluoroacetate salt of synthetic peptide used for the determination of pituitary corticotrophic responsiveness.

Corticostatin

A bioactive peptide that inhibits ACTH-stimulated corticosteroid synthesis.

Corticosterone

Any of the adrenal cortex-derived steroid hormones, e.g., glucocorticoids.

Corticosterone (mol wt 346)

A glucocorticoid derived from progesterone.

Corticosterone (mol wt 360)

A glucocorticoid that regulates carbohydrate metabolism and suppresses normal immune responses; used as an anti-inflammatory agent.

Corticotrophin

Variant spelling of corticotropin.

Corticotropin

See adrenocorticotropic hormone.

Corticotropin Receptor

One of a number of membrane proteins that binds corticotropin.

Corticotropin Releasing Hormone

The hypothalamic hormone that controls the secretion of corticotropin.

Corticoviridae

A family of icosahedral, lipid-containing, nonenveloped bacteriophages.

Cortisol

See hydrocortisone.

Cortisone (mol wt 360)

A glucocorticoid that regulates carbohydrate metabolism and suppresses normal immune responses; used as an anti-inflammatory agent.

Cortisone α-Reductase

The enzyme that catalyzes the following reaction:

\[ 4,5-\alpha\text{-dihydrocortisone} + \text{NADP}^+ \rightarrow \text{Cortisone} + \text{NADPH} \]

Cortisone β-Reductase

The enzyme that catalyzes the following reaction:

\[ 4,5-\beta\text{-hydrocortisone} + \text{NADP}^+ \rightarrow \text{cortisone} + \text{NADPH} \]

Cortisporin Cream

A trade name for a combination drug containing neomycin, polymyxin B sulfate, and hydrocortisone acetate used as an anti-infective and anti-inflammatory agent.

Cortivazol (mol wt 531)

A glucocorticoid.

Cortizone

A trade name for hydrocortisone, a hormone.
Cortone • Coulomb’s Law

Cortone • A trade name for cortisone.

Cortrosyn • A trade name for cosyntropin, a synthetic peptide having similar biological activity as ATCH.

Covert • A trade name for ibutilide fumarate, an antiarrhythmic agent.

Corydaline (mol wt 369) • An alkaloid from species of Corydalis (e.g., squirrel corn).

Corynebacterium • A genus of gram positive, aerobic, nonmotile rod-shaped bacteria.

Corynein • Any antibiotic that is produced by the Corynebacterium.

Coryneform • 1. A club-shaped structure. 2. Referring to Gram-positive, asporogenous, pleomorphic, rod-shaped bacteria.

Corynephage • A bacteriophage that infects Corynebacterium.

Corynephage-B • A bacteriophage of Corynebacterium diphtheriae responsible for the production of dipheria toxin.

Coryza • An inflammation of the mucous membranes of the nose.

Corzide • A trade name for a combination drug containing nadolol and bendroflumethiazide.

COS Cell • Any of a number of cell lines derived from monkey cells that contain an integrated segment of SV40 DNA coding for T antigen.

COS-1 • Abbreviation for a type of cell line.

COS-7 • Abbreviation for a type of cell line.

Cosamin DS • A trade name for a combination drug containing glucosamine HCl, sodium chondroitin sulfate, ascorbate, and manganese.

Cosmegan • A trade name for dactinomycin, an antibiotic with antineoplastic activity.

Cosmetic • Referring to any preparation or procedure intended to improve the appearance of an individual.

Cosmic Rays • The high-energy ionizing radiation that originates outside the earth’s atmosphere; consists primarily of protons and other nuclei.

Cosmid • A cloning vector derived from bacteriophage lambda used to carry large DNA fragments in and out of cells.

Cosopt • A trade name for an ophthalmic solution containing dorzolamide hydrochloride and timolol maleate.

Cos-Site • The single-stranded cohesive end of a linear double-stranded DNA, it is responsible for conversion of double-stranded linear DNA to double-stranded circular DNA.

Cosytropin • A peptide adrenocorticotropic hormone.

C_{a1/2} • The concentration (mole/L) of single-stranded DNA in a DNA reassociation reaction multiplied by the time of incubation in seconds.

C_{a2} • The C_{a1} required to proceed to half completion of the DNA reassociation reaction.

C_{a} Curve • The curve obtained by plotting log of C_{a} versus percentage of reassociation.

C_{a} Method • A graphical method for evaluating the renaturation kinetics of denatured and fragmented double-stranded DNA.

C_{a} Plot • A plot of percentage of reassociation versus log C_{a} in a DNA reassociation experiment.

Cotinine (mol wt 176) • An oxidation product of nicotine containing antidepressant activity.

Cosmids • A cloning vector derived from bacteriophage lambda used to carry large DNA fragments in and out of cells.

Cotransduction • The transduction of two or more identifiable genes in a single event.

Cotransitional Transport • Coupling of protein transport across a biological membrane with the synthesis of a peptide signal on a peptide to be transported.

Cotransport • The simultaneous transport of two solutes by a single transporter.

Cotyledon • A seed leaf; a food-digesting and storing part of a plant embryo.

Coulomb • A unit of electrical quantity equal to the amount of charge transferred in one second by a steady current of one ampere.

Coulomb’s Law • The law states that the attraction or repulsion between two charged particles, bodies, or magnetic poles is proportional to the magnitude of their charges or pole lengths and inversely proportional to the sequence of their distance from each other.
Coulometer  A voltmeter for measuring a quantity of electricity.

Coulometry  A method of chemical analysis based on measurements of the quantity of electricity produced in a quantitative electrode reaction.

Coulter Counter  An electric device that identifies, sorts, and counts cells in cell suspensions.

Coumadin  A trade name for warfarin sodium, which inhibits the vitamin K-dependent activity of clotting factors (factor II, III, IX and X).

Coumaphos (mol wt 363)  An insecticide.

\[
\begin{align*}
\text{CH}_3\text{CH}_2\text{O} & \text{S} \backslash \text{O} \\
\text{CH}_3\text{CH}_3 & \text{O} \\
\end{align*}
\]

Coumarin  A cholinesterase inhibitor and insecticide.

\[
\begin{align*}
\text{C}_6\text{H}_5\text{O} & \text{S} \backslash \text{O} \\
\text{CH}_3 & \text{O} \\
\end{align*}
\]

Coumetarol (mol wt 380)  An anticoagulant.

\[
\begin{align*}
\text{O} & \text{O} \backslash \text{CH} \\
\text{O} & \text{O} \backslash \text{OH} \\
\text{CH}_3 & \text{O} \\
\text{C}_2\text{H}_5 & \text{O} \\
\end{align*}
\]

Coumaphos (mol wt 363)  An insecticide.

\[
\begin{align*}
\text{CH}_3\text{CH}_2\text{O} & \text{S} \backslash \text{O} \\
\text{CH}_3\text{CH}_3 & \text{O} \\
\end{align*}
\]

Coumaphos (mol wt 363)  An insecticide.

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\begin{align*}
\text{CH}_3\text{CH}_2\text{O} & \text{S} \backslash \text{O} \\
\text{CH}_3\text{CH}_3 & \text{O} \\
\end{align*}
\]

Coumaphos (mol wt 363)  An insecticide.

\[
\begin{align*}
\text{CH}_3\text{CH}_2\text{O} & \text{S} \backslash \text{O} \\
\text{CH}_3\text{CH}_3 & \text{O} \\
\end{align*}
\]

Coupled Neutral Pump  A coupled pump in which the movement of one ion across the membrane must be linked to the movement of another ion with opposite charge and equal valence.

Coupled Pump  A transport mechanism that pumps one solute across a membrane that is coupled to the transport of a second solute in the opposite direction across the same membrane.

Coupled Reactions  1. Two chemical reactions that have a common intermediate through which energy can be transferred from one reaction to the other. 2. The linking of an exogonic and an endogonic reaction in which there is only a small net change in free energy.

Coupled Transport  The transport of one solute across the membrane that is linked to the transport of a second solute across the same membrane in the opposite direction.

Coupling Factor  Referring to the F1 factor of the mitochondrial ATPase (the nontransmembrane head piece of the membrane-bound ATPase).

COUP-TF  Abbreviation for chicken ovalbumin upstream promoter transcription factor.

COV  Abbreviation for cross-over value.

Covalent Bond  Chemical bond between two atoms formed by the sharing of a pair of electrons.

Covalent Catalysis  Catalysis that requires the transient formation of catalyst-substrate covalent bonds.

Covalent Intermediate  A transient substance formed during covalent catalysis.

Covera-HS  A trade name for verapamil hydrochloride, a calcium channel blocker used as an antianginal, antihypertensive, and antiarrhythmic agent.

Cover-Glass  Synonym for coverslip.

Coverslip  A very thin piece of glass or plastic that is placed on top of a specimen for viewing of the specimen under a microscope.

Cowan I, II, and III  Referring to the strains of Staphylococcus aureus used for producing standard typing antisera.

Cowdria  A genus of Gram-negative bacteria of the tribe Ehrlichiae.

Cowper’s Gland  Either of the two pea-sized glands at the end of the male urinary canal.

Cowpox  An avirulent strain of smallpox used for vaccination against smallpox.
COX  Abbreviation for cyclo-oxygenase.
COX-1  Abbreviation for constitutive cyclo-oxygenase.
COX-2  Abbreviation for inducible cyclo-oxygenase.
Coxackievirus  A virus in the family of picornaviridae.
Coxiella  A genus of Gram-negative bacteria of Rickettsiae.
Cozaar  A trade name for losartan potassium, an angiotensin II receptor antagonist used as an anti-hypertensive agent.
Coyzymase  Referring to a heat stable fraction obtained from cell-free extracts from yeast; it is a mixture of cofactors of NAD, NADP, ATP, ADP, as well as a metal.
CP  Abbreviation for 1. capillary pressure; 2. carbamoyl phosphate; 3. carboxypeptidase; 4. complement protein; 5. crude protein; 6. cyclophosphamide.
CIP  Abbreviation for ceramide 1-phosphate.
Cₚ₅  Symbol for excess heat capacity.
CP Buffer  Abbreviation for citrate/phosphate buffer.
CPA  Abbreviation for 1. carboxypeptidase A; 2. cyclopiazonic acid; 3. cyclopentyladenosine.
Cpal (MboI)  A restriction endonuclease from Clostridium pasteurianum with the same specificity as MboI.
CPAE Cell  Abbreviation for calf pulmonary artery endothelial cells.
CpaseY  Synonym of serine-type carboxypeptidase.
C₃-Pathway  A pathway for conversion of CO₂ to carbohydrate via the ribulose-1,5-bisphosphate carboxylase system (so called because CO₂ is first converted to a stable 3-carbon phosphoglycerate).
C₄-Pathway  A pathway for conversion of CO₂ to organic compounds using phosphoenolpyruvate carboxylase system (so called because CO₂ is first converted to a 4-carbon oxaloacetate).
CPB  Abbreviation for 1. cetyl pyridinium bromide; 2. competitive protein binding; 3. a combination drug containing cytoxan, platinol, and BCNU.
CPBA  Abbreviation for competitive protein binding assay.
CPC  Abbreviation for cetylpyridinium chloride.
CPD  Abbreviation for citrate/phosphate/dextrose.
cpDNA  Abbreviation for chloroplast DNA.
CPE  Abbreviation for cytological evidence resulting from infection of a cell monolayer by a virus.
Cpel (BclII)  A restriction endonuclease from Corynebacterium Petrophilum with the same specificity as BclII.
Cpfl (Mbol)  A restriction endonuclease from Clostridium perfringens with the same specificity as Mbol.
CpG Island  An unmethylated genome region about 0.5 to 1.0 kbp long at the 5′ end of genes in which CpG is frequently observed.
CP-H  Abbreviation for carboxypeptidase H.
CP-HPLC  Abbreviation for chiral phase HPLC.
CPK  Abbreviation for creatine phosphokinase.
CPK BB  Abbreviation for BB isoform of creatine phosphokinase.
CPK Isoenzymes  Multiple molecular forms of creatine phosphokinase. The increase of a specific form of CPK isoenzyme in the blood indicates a clinical disorder (e.g., heart disease).
cPKC  Abbreviation for conventional or classical PKC.
CPK-MB  Abbreviation for MB isoform of creatine phosphokinase.
cPLA₂  Abbreviation for cytosolic phospholipase A₂.
C₄-Plant  Plants that possess C₃ pathway but no C₄ pathway.
C₄-Plant  Plants that possess vascular bundle sheath cells in both C₃ and C₄ pathways.
CPLIM  Abbreviation for cysteine-peptone-liver infusion medium.
cpm  Abbreviation for counts per minute, e.g., the number of radioactive counts per minute.
CPM  Abbreviation for a combination drug containing CCNU, procarbazine, and methotrexate.
CPO  Abbreviation for chloro-peroxidase.
Cpol  A restriction endonuclease from Caseobacter polymorphus with the following specificity:
CPOB • Creatine Amidinohydrolase

Crabtree Effect  The inhibition of oxygen consumption in cellular respiration and the occurrence of high levels of fermentative metabolism by increasing the concentration of glucose (see also Pasteur effect).

CRAC  Abbreviation for calcium-release-activated calcium channel.

Crack  A purified form of cocaine.

Craig Apparatus  An apparatus used in counter-current distribution experiment.

Crambin  A protein from the plant seeds of Crambe abyssinica.

Craniopharyngioma  A tumor on the pituitary gland.

Craniostenosis  A birth defect of the skull.

Crasulacean Acid Metabolism  A mechanism for storing CO2 absorbed at night in C4 plants via the C4 pathway of photosynthesis during the daytime.

CRBP  Abbreviation for cellular retinol-binding protein.

CRD  Abbreviation for carbohydrate recognition domain.

9cRDH  Abbreviation for 9-cis-retinol dehydrogenase.

CRE  Abbreviation for 1. cAMP-response element; 2. Ca2+/cAMP response element.

CRE/AP-1  Abbreviation for cAMP-response element/activator protein-1.

Creatinase  The enzyme that catalyzes the following reaction:

Creatine + H2O ⇌ Urea + sarcosine

Creatine (mol wt 131)  A substance present in muscular tissue of vertebrates serving as a free energy storage compound.

Creatine Amidinohydrolase  See creatinase.
Creatine Kinase • Crigler-Najjar Syndrome

Creatine Kinase  The enzyme that catalyzes the following reaction:

ATP + creatine $\rightleftharpoons$ ADP + phosphocreatine

Creatine Phosphokinase (CPK)  See creatine kinase.

Creatininase  The enzyme that catalyzes the following reaction:

Creatinine + H$_2$O $\rightleftharpoons$ Creatine

Creatinine (mol wt 113)  The end product in creatine metabolism and a constituent of urine.

Creatinine Amidohydrolase  The systematic name for creatinase.

Creatinine Clearance  The rate of removal of endogenous or exogenous creatinine from the blood by the kidney.

Creatinine Coefficient  The number of milligrams of creatinine excreted in 24 hours per kilogram of body weight.

Creatinine Deaminase  The enzyme that catalyzes the following reaction:

Creatinine + H$_2$O $\rightleftharpoons$ N-methylhydantoin + NH$_3$

Creatinine Deiminase  Synonym of creatinine deaminase.

Creatinine Iminohydrolase  The systematic name for creatinine deaminase.

Creatinuria  The presence of excessive amounts of creatine in the urine.

Creatorrhea  The passage of excessive nitrogen in the feces due to the failure of digestion or absorption in the small intestine.

CREBP  Abbreviation for cAMP-response-element-binding protein.

C-Region (Constant Region)  The C-terminal portion of the H or L chain that is identical within immunoglobulin molecules of a given class and subclass apart from genetic polymorphisms.

Crenation  The shrinking of a cell due to loss of water, e.g., red blood cells in a hypertonic solution (also called plasmolysis).

Crenothrix  A genus of iron bacteria.

Creon  A trade name for pancrelipase, a digestive enzyme.

Crescent  Referring to the mature crescent-shaped gametes formed by some species of Plasmodium.

Cresol (mol wt 108)  A phenolic compound with disinfectant activity. It consists of three isomers.

\[
\begin{aligned}
\text{o-cresol} & \quad \text{m-cresol} \\
\text{p-cresol} &
\end{aligned}
\]

4-Cresol Dehydrogenase  The enzyme that catalyzes the following reaction:

4-Cresol + acceptor $\rightarrow$ 4-Hydroxybenzaldehyde + reduced acceptor

Cresol Dye (mol wt 382)  An indicator dye.

\[
\begin{aligned}
\text{O} & \quad \text{O} & \quad \text{OH} \\
\text{H}_3\text{C} & \quad \text{OH} & \quad \text{CH}_3
\end{aligned}
\]

Cresol Red (mol wt 382)  A dye and pH indicator.

\[
\begin{aligned}
\text{O} & \quad \text{O} & \quad \text{SO}_3\text{H} & \quad \text{OH} \\
\text{H}_3\text{C} & \quad \text{OH} & \quad \text{CH}_3
\end{aligned}
\]

Cresolase  See monophenol monooxygnase.

Cretinism  A congenital condition characterized by the arrested mental and physical development due to the lack of thyroid hormone.

Creutzfeldt-Jakob Disease  A human spongiform encephalopathy disorder caused by prion.

CRF  Abbreviation for corticotropin releasing factor (see also corticotropin releasing hormone).

CRH  Abbreviation for corticotropin releasing hormone.

Crigler-Najjar Syndrome  An inherited metabolic defect characterized by jaundice and CNS
disorders, due to a deficiency of the enzyme glucuronyl transferase in the liver.

**Crinone**  A trade name for progesterone, a hormone.

**Crista** 1. The infolding structure of the inner membrane of the mitochondrion. 2. A sensory structure in the inner ear.

**Cristae**  Plural of crista.

**Crit**  Abbreviation for hemacrit.

**Critical Micelle Concentration (CMC)**  The concentration of a surface-active substance that determines the formation of micelles by this substance. At a concentration above CMC, the added substance forms micelles.

**Critical Point Drying**  A method for removing liquids from a specimen in scanning electron microscopy by adjusting the temperature and pressure so that the liquid and gas phases of the liquid are in equilibrium with each other for the purpose of minimizing the disruption of biological structures.

**Crixivan**  A trade name for indinavir sulfate, an antiviral agent.

**Crk**  A protooncogen of avian sarcoma viruses CT10. The name derives from CT10 regulator of kinase.

**CRLR**  Abbreviation for calcitonin-receptor-like receptor.

**CRM 197**  A nontoxic mutant protein related to diphtheria toxin.

**CRM-A**  Abbreviation for cytokine-response modifier-A.

**cRNA**  Abbreviation for complementary RNA.

**Cro Protein**  A regulatory protein in lambda phage life cycle that blocks the synthesis of lambda repressor.

**CRO**  Abbreviation for cathode ray oscillograph.

**Cromoglicic**  A trade name for cromolyn sodium, an anti-allergic agent.

**Cromolyn (mol wt 468)**  A prophylactic antiasthmatic and antiallergic agent.

**Cropropamide (mol wt 240)**  An analgesic agent.

**Cross Agglutination Test**  A serological test in which erythrocytes from an unknown individual are mixed with serum of a known blood type.

**Cross-Bridge**  One of the many protein projections extending from each end of the thick myofilaments in the fibrils within a muscle cell.

**Crossed-Immunoelectrophoresis**  A two-dimensional electrophoresis in which antigens are first separated by gel electrophoresis, and the separated antigens are then electrophoresed in gel containing antibodies at right angle to the first separation.

**Cross-Hybridization**  The hybridization of a polynucleotide probe to another polynucleotide molecule.

**Cross-Infection**  The infection of a bacterium by two or more different phage mutants.

**Cross-Linking**  The formation of covalent bonds among polymeric chains.

**Cross-Matching of Blood**  Matching of blood types of donor and recipient through hemagglutination testing by mixing erythrocytes of the donor with serum of the recipient.

**Cross-Over**  The exchange of genetic material between homologous chromosomes.

**Cross-Over Junction Endonuclease**  The enzyme that catalyzes the endonucleolytic cleavage at the junction between two homologous DNA duplexes.

**Crossover-Nuclease**  A deoxyribonuclease involved in the process of DNA recombination.

**Cross-Over Unit**  The distance in terms of the probability of crossing over occurring between two linked loci on a chromosome. One crossing over unit is the crossing over value of 1% between a pair of linked genes.

**Cross-Reacting Antibody**  An antibody that can combine with antigens that are specific for different antibodies.

**Cross-Reacting Antigen**  An antigen that can combine with antibodies that are produced against different antigens.

**Cross-Reaction**  The reaction of an antibody with an antigen other than the one that induced its formation.
**Cross-Reactivation**  The reappearance of activity in the progeny of a lethal mutant virus following mixed infection of a host cell with one or more active viruses.

**Cross- Reactive Antibodies**  Antibodies capable of combining with nonhomologous antigens or antigens which are not involved in elicitation of antibody production.

**Cross- Resistance**  The resistance of a bacterium to an antibiotic that is associated with its resistance to one or more antibiotics.

**Cross-Sensitization**  The sensitization of an organism with an antigen that is different from the antigen that will be used subsequently to trigger an anaphylactic response.

**Cross-Tolerance**  1. The tolerance toward one antigen resulting from the administration of a cross-reacting antigen. 2. The decrease of effectiveness of a drug due to the exposure to another drug.

**Crotalase**  A protease from the diamond-back rattle snake that hydrolyzes peptide bonds involving COOH groups of arginine in fibrinogen to form fibrin.

**Crotamine**  A polypeptide from the venom of the Brazilian rattle snake.

**Crotamiton (mol wt 203)**  An antipruritic agent and insecticide (scabicide).

**Crotethamide (mol wt 226)**  An analgesic agent.

**Croton Oil**  Oil expressed from seeds of *Croton tiglium* (Euphorbiaceae).

**Crotonase**  Synonym of enoyl-CoA hydratase.

**Crotonic Acid (mol wt 86)**  An unsaturated aliphatic acid found in croton oil.

**Crotoxin**  A polypeptide neurotoxin found in rattlesnake venom.

**Crotoxyphos (mol wt 314)**  An insecticide that functions as a cholinesterase inhibitor.

**Crown Gall**  A neoplastic plant tumor caused by the infection of *Agrobacterium tumefaciens*.

**CRP**  Abbreviation for 1. C-reactive protein. 2. Cyclic AMP receptor protein.

**CRPA**  Abbreviation for C-reactive protein antibody.

**CRPF**  Abbreviation for chloroquine-resistant *Plasmodium falciparum*.

**CRP-XL**  Abbreviation for collagen-related-peptide-cross-linked.

**CRS**  Abbreviation for codon-recognizing site.

**CRT**  Abbreviation for calreticulin.

**Crt**  Abbreviation for cerotoyl group.

**Crucible**  A vessel used for melting and calcining a substance that requires a high degree of heat.

**Cruciform**  1. A cross-shaped structure. 2. The cross-shaped structure formed in DNA due to the presence and pairing of the inverted repeats.

**Crude Extract**  An extract resulting from centrifugation of homogenates of living cells and tissues.

**Cruex**  A trade name for a combination drug containing undecylenic acid and zinc undecylenate, used as a local anti-infective agent.

**Cruzipain**  A cysteine proteinase that hydrolyses chromogenic peptides at the carboxyl arginine or lysine residue.

**Cry-Ab**  Abbreviation for cryptococcal antibody.

**Cry-Ag**  Abbreviation for cryptococcal antigen.

**Cryo-**  A prefix meaning cold or low temperature.

**Cryobiology**  The science that deals with the effect of low temperature on living systems.

**Cryoenzymology**  Low temperature enzymology.

**Cryogen**  1. A substance capable of causing freezing or creating low temperature. 2. A freezing mixture.
Cryogenic • Crystal Scarlet

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Cryogenic 1. Pertaining to cold or low temperatures. 2. Capable of producing low temperature.

Cryoglobulinemia A disorder characterized by the presence of large amounts of cryoglobulins in the blood (e.g., in multiple myeloma patient).

Cryoglobulin A protein with the property of forming a precipitate or gel at cold temperatures.

Cryophilic Thriving at low temperatures.

Cryoprecipitagogue A substance capable of inducing the formation of cryoprecipitates.

Cryoprecipitate Precipitate formed from a solution at low temperature.

Cryopreservation A method of storage of living organisms at low temperature, e.g., use of liquid nitrogen.

Cryoprotectant Substance added to the suspensions of cells prior to cryopreservation to enhance the survival of cells.

Cryoprotein A protein that can be precipitated from a solution by lowering the temperature.

Cryoscope An instrument used for the determination of freezing points.

Cryoscopic Method The determination of either molecular weight or osmotic pressure from the depression of the freezing point of a solvent resulting from the addition of a solute.

Cryosolvent Any mixture of water and organic polar solvent used to maintain the proteins at temperature below 0°C.

Cryostat A device for maintaining constant low temperature for sectioning of frozen tissue by a microtome.

Cryosublimation The process whereby water is sublimed and removed from a frozen sample.

Cryotome A modified microtome that maintains the specimen in a frozen state during the process of sectioning.

Cryoxicide A sterilant that contains ethylene oxide (11%), trichlorofluoromethane (79%), and dichlorodifluoromethane (10%).

Cryptic DNA DNA with unknown function.

Cryptic Gene A gene that has been silenced by a single nucleotide substitution.

Cryptic Mutant A mutant that lacks one or more components of a transport system and is incapable of transporting substrate across a membrane.

Cryptic Plasmid A plasmid that has no apparent effect on the phenotypic expression of the host cell.

Cryptic Species Phenotypically similar species that do not form hybrids in nature.

Crypto- A prefix denoting secret, hidden, concealed, or unrecognized.

Cryptochrome A protein involved in circadian photoreception in Drosophila.

Cryptococcosis An infection caused by the fungus Cryptococcus neoformans.

Cryptococcus A genus of nonfermentative imperfect yeast (Hyphomycetes).

Cryptosporidiosis An infection caused by a species of Cryptosporidium.

Cryptosporidium A genus of parasitic protozoa.

Cryptotope A hidden immunological determinant.

Cryptoxanthin (mol wt 553) A carotenoid pigment with vitamin A activity.

Cryptozoite Stage in the life cycle of Plasmodium in which the parasite is within the host’s tissues and is, therefore, inaccessible to the host’s immunological defenses.

Crystal A solid substance with defined geometric form that is characteristic for different compounds.

Crystal Lattice The three-dimensional arrangement of the atoms in a crystal.

Crystal Scarlet (mol wt 502) A dye.
Crystal Violet (mol wt 408)  A dye.

Crystallin  Structural proteins of the lens of the vertebrate eye.

Crystallizable Fraction  Referring to the Fc fragment of an immunoglobulin.

Crystallization  The joining of molecules or ions from a liquid state to form a solid state.

Crystallographic Model  A molecular model in which the bond lengths and the bond angles are specified.

Crystallization  The joining of molecules or ions from a liquid state to form a solid state.

Crystallographic Model  A molecular model in which the bond lengths and the bond angles are specified.

Crystallography  The study of the geometric forms of crystals.

Crystalloid  A substance that forms a true solution and is capable of being crystallized.

Crystalluria  The presence of crystals in the urine.

Crystamined  A trade name for vitamin B12.

Crystapen  A trade name for penicillin G potassium, an antibiotic that inhibits bacterial cell wall synthesis.

Crystallin AS  A trade name for penicillin G procaine, an antibiotic that inhibits bacterial cell wall synthesis.

Crystodigin  A trade name for digitoxin which inhibits sodium-potassium activated ATPase.

Cs  Symbol for cesium (atomic weight 133, valence 1).

CS  Abbreviation for 1. calf serum; 2. citrate synthetase; 3. chondroitin sulfate; 4. corticoid sensitive; 5. cyclosporine.

137Cs  Abbreviation for radioactive cesium.

C6S  Abbreviation for chondro-6-sulfatase.

C3S Mutation  Abbreviation for a mutation in which cysteine in position 3 is replaced by serine.

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Csp2I (HaeIII)  A restriction endonuclease from *Corynebacterium* species with the same specificity as Hae III.

Csp6I  A restriction endonuclease from *Corynebacterium* species RFL6 with the following specificity:

\[
5' \ldots \ldots GTAC \ldots \ldots 3' \\
3' \ldots \ldots CATG \ldots \ldots 5'
\]

Csp45I  A restriction endonuclease from *Clostridium sporogenes* with the following specificity:

\[
5' \ldots \ldots TTCGAA \ldots \ldots 3' \\
3' \ldots \ldots AAGCTT \ldots \ldots 5'
\]

CspAI  A restriction endonuclease from *Chromatium vinosum* with the following specificity:

\[
5' \ldots \ldots ACCGTT \ldots \ldots 3' \\
3' \ldots \ldots TGGCC \ldots \ldots 5'
\]

c-src  A cellular oncogen present in various vertebrates. It hybridizes with src oncogens of Rous sarcoma viruses.

CSV  Abbreviation for crude synaptic vesicle.

CT  Abbreviation for 1. calcitonin; 2. cholera toxin; 3. chymotrypsin; 4. computed tomography or computerized tomography; 5. connective tissue; 6. Coombs’ test.

CT Scan  Abbreviation for computerized tomographic scan.

CT1  Abbreviation for cardiac triadin-1.

CTA  Abbreviation for 1. cyproterone acetate; 2. cytotoxicity assay.

CTAB  Abbreviation for cetyltrimethylammonium bromide, a precipitant for nucleic acids and mucopolysaccharides.

CTAP  Abbreviation for connective tissue activating peptides.

CTC  Abbreviation for chlorotetacycline.

CTC Solution  A solution of copper tartrate/carbonate.

ctDNA  Referring to chloroplast DNA.

C-Telopeptide  Abbreviation for C-terminal telopeptide.

CTEM  Abbreviation for conventional transmission electron microscope.

C-Terminal  Abbreviation for carboxyl terminal of a protein or peptide.

C-Terminal Amino Acid  The amino acid on the C-terminus of a peptide that carries a free carboxyl group. It is the last amino acid added to a growing peptide chain.

C-Terminus  The carboxyl-terminal end of a protein molecule.

CTF  Abbreviation for 1. Colorado tick fever; 2. cytotoxic factor.

CTFE  Abbreviation for chlorotrifluoroethylene.

CTGF  Abbreviation for connective tissue growth factor.

CTH  Abbreviation for ceramide trihexoside.

CthI (BclI)  A restriction endonuclease from *Clostridium thermocellum* with the following specificity:

\[
5' \ldots \ldots TGATCA \ldots \ldots 3' \\
3' \ldots \ldots ACTAGT \ldots \ldots 5'
\]

CthII (EcoRII)  A restriction endonuclease from *Clostridium thermocellum* with the same specificity as EcoRII.

CTL  Abbreviation for cytotoxic lymphocytes.

CTP (mol wt 325)  Abbreviation for 1. cytidine triphosphate. 2. cytidine-5'-triphosphate.

\[
\text{CTP-3H} \quad \text{Abbreviation for tritium-labeled CTP (cytidine triphosphate).}
\]

CTP Synthetase  The enzyme that catalyzes the following reaction:

\[
\text{UTP} + \text{ATP} + \text{NH}_3 \rightarrow \text{ADP} + \text{CTP} \ + \text{Pi}
\]

CTP-H  Abbreviation for tritium-labeled CTP (cytidine triphosphate).
CTS • Curie (Ci)

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CTS  Abbreviation for computerized tomographic scanner.

CT-Scan  Abbreviation for computed tomographic scan or computerized tomographic scan.

CTSH  Abbreviation for chorionic thyroid-stimulating hormone.

CTU  Abbreviation for centigrade thermal unit.

C-Type Particle  A type of retroviral particle with a centrally located, spherical RNA-containing nucleoid. C-type viral particles are associated with many sarcomas and leukemias.

CTX  Abbreviation for 1. cefotaxime; 2. cytoxan (cyclophosphamide); 3. cholera toxin.

CTZ  Abbreviation for chemo-receptor trigger zone.

Cu  Symbol for copper (atomic weight 64, valence 1).

61Cu  Abbreviation for radioactive copper.

64Cu  Abbreviation for radioactive copper.

CUA  A genetic code or codon for the amino acid leucine.

Cubic Symmetry  A rotational symmetry used for the description of spherical-shaped virions.

CUC  A genetic code or codon for the amino acid leucine.

14C-UCBR  Abbreviation for radioactive carbon-labeled, unconjugated bilirubin.

Cucumisin  A protease with broad specificity derived from musk melon (Cucumis melo).

Cucurbitine (mol wt 116)  A naturally occurring nonprotein amino acid.

\[
\text{CH}=\text{NNHC\text{\text{\#}2}}\text{NH}_{2}
\]

CUG  A genetic code or codon for the amino acid leucine.

Culdocentesis  Aspiration of pus or fluid from the rectouterine pouch through a transvaginal puncture.

Culdoscope  A lighted device used for visual examination of the pelvic cavity and its contents.

Culex  A genus of mosquito.

Culicide  Any substance that kills mosquitoes.

Curicifuge  Agent or substance that expels mosquitoes.

Cultivar  A variety of plant produced through selective breeding by humans and maintained by cultivation.

Culture  Cultivation of microbial cells or tissue cells in or on nutrient medium.

Cuminaldehyde Thiosemicarbazone (mol wt 221)  An antiviral agent.

\[
\text{N} \quad \text{HO\text{\text{\#}2}}\text{S} \quad \text{SO}_{3}\text{H} \\
\text{Cu} \cdot 4 \text{NH}_{3}\text{H}_{2}\text{O}
\]

cUMP  Abbreviation for cyclic UMP.

Cumulative Product Feedback Inhibition  The feedback inhibition for an enzyme reaction resulting from the actions of two or more products produced separately and independently from branched pathways.

Cup Fungi  Fungi that form cuplike fruiting bodies (e.g., some species of Ascomycetes).

Cuprammonium Rayon  Cellulose that has been regenerated from a solution of cuprammonium hydroxide.

Cuprid  A trade name for tretiente hydrochloride, which chelates copper and increases urinary secretion.

Cuprimine  A trade name for penicillamine, an anti-inflammatory agent.

Cupro-protein  A copper-containing protein.

Cuproxoline (mol wt 965)  An antirheumatic agent.

Curare  A mixture of alkaloids from plants (Strychnos toxifera) that function as neurotoxins that block the transmission of nerve impulses.

Curdlan  A polymer of glucose (α,1,3-glucan) found in A. faecalis and Agrobacterium species. It forms a nonreversible gel upon heating.

Curie (Ci)  A unit of radioactivity (1Ci = 3.7 \times 10^{10} dps).
Curing 1. A method of food preservation by permeation with solution containing NaCl, NaNO₂, and NaNO₃. 2. Elimination of a plasmid without loss of bacterial viability.

Curium (Cm)  A chemical element with atomic weight 247, valence 3 or 4.

Current  Movement of electric charges form one point to another through a conductor.

Curthobacterium  A genus of aerobic, asporogenous bacteria (Actinomyzetales).

Cushing’s Disease  A metabolic disorder owing to the overproduction of adrenocorticotropin and characterized by the puffiness of the face, neck, trunk, and muscular weakness with impaired carbohydrate tolerance.

Cut and Patch  A mechanism for repair of DNA by enzymatically removing incorrect nucleotides and substituting correct ones.

Cutaneous  Pertaining to the skin.

Cutaneous Anaphylaxis  A skin reaction produced by intradermal injection of allergen into allergic individuals.

Cutaneous Basophil Hypersensitivity  An immunoologically mediated inflammation of the skin with a prominent basophil infiltration after injection of the sensitizing antigen.

Cuticle  A waxy protective layer on the aerial surface of plant tissues.

Cutin  A heterogeneous polymer of fatty acids that forms cuticles covering the aerial parts of higher plants. It consists of two main fatty acids (16 and 18-carbon fatty acids).

Cutinase  The enzyme that digests cutin.

CUU  A genetic code or codon for the amino acid leucine.

Cuvette  A small glass, plastic, or quartz vessel of specific dimension used to hold a sample for measurement of absorbance by spectrophotometry.

CuZnSOD  Abbreviation for copper-zinc superoxide dismutase.

CV  Abbreviation for 1. cardiovascular; 2. cell volume; 3. cerebrovascular; 4. cresyl violet; 5. crystal violet.

CV-1  An animal cell line derived from the kidney of a male adult of the African green monkey.

CVA  Abbreviation for a combination drug containing cyclohexamide, vincristine, and Adriamycin.

C-Value  The amount of DNA (in picograms) per cell in the haploid genome of a species.

CVB  Abbreviation for a combination drug containing CCNU, vinblastine, and bleomycin.

CVF  Abbreviation for 1. a combination drug containing cytoxan, vincristine, and fluorouracil; 2. cobra venom factor.

CviAI (MboI)  A restriction endonuclease from strain of Chlorella NC64A (PBCV-1) with the same specificity as MboI.

CviBI (HinfI)  A restriction endonuclease from strain of Chlorella NC64A (NC-1A) with the following specificity:

CviBII (MboI)  A restriction endonuclease from strain of Chlorella NC64A (NC-1A) with the same specificity as MboI.

CviBIII (TaqI)  A restriction endonuclease from strain of Chlorella NC64A (NC-1A) with the same specificity as TaqI.

CviCI (HinfI)  A restriction endonuclease from strain of Chlorella NC64A (NE-8A) with the same specificity as HinfI.

CviDI (HinfI)  A restriction endonuclease from strain of Chlorella NC64A (A1-2C) with the same specificity as HinfI.

CviEI (HinfI)  A restriction endonuclease from the strain of Chlorella NC64A (MA-1E) with the same specificity as HinfI.

CviFII (HinfI)  A restriction endonuclease from the strain of Chlorella NC64A (NY-2F) with the same specificity as HinfI.

CviHII (MboI)  A restriction endonuclease from strain of Chlorella NC64A (NC-1C) with the same specificity as MboI.

CviJII  A restriction endonuclease from the strain of Chlorella NC64A (IL-3A) with the following specificity:

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CviKI (CviJI) A restriction endonuclease from strain of *Chlorella* NC64A (CA-1A) with the same specificity as CviJI.

CviLI (CviJI) A restriction endonuclease from strain of *Chlorella* NC64A (CA-2A) with the same specificity as CviJI.

CviMI (CviJI) A restriction endonuclease from strain of *Chlorella* NC64A (IL-2A) with the same specificity as CviJI.

CviNI (CviJI) A restriction endonuclease from strain of *Chlorella* NC64A (IL-2B) with the same specificity as CviJI.

CvioI (CviJI) A restriction endonuclease from strain of *Chlorella* NC64A (IL-3D) with the same specificity as CviJI.

CviQI (RsaI) A restriction endonuclease from strain of *Chlorella* NC64A (NY-2A) with the following specificity:

```
5'..........GTAC..........3'
3'..........CATG..........5'
```

C-Virus Abbreviation for Coxsackie-virus.

CviI (SauI) A restriction endonuclease from *Chromatium vinosum* with the following specificity:

```
5'..........CCTNAGG..........3'
3'..........GGANTCC..........5'
```

CVP Abbreviation for a combination drug containing cyclohexamide, vincristine, and prednisone.

CVPP Abbreviation for a combination drug containing CCNU, vinblastine, procarbazine, and prednisone.

CW Abbreviation for cell wall.

CWDB Abbreviation for cell wall deficiency bacteria.

CWP Abbreviation for cell wall-associated protein.

CX Abbreviation for 1. connexin; 2. cycloheximide.

Cyacetacide (mol wt 99) An antibacterial agent.

Cyanamin A trade name for cyanocobalamin or vitamin B<sub>12</sub>.

Cyanaclamide Hydratase The enzyme that catalyzes the following reaction:

```
Urea $\rightarrow$ Cyanamide + H<sub>2</sub>O
```

Cyanate Hydratase The enzyme that catalyzes the following reaction:

```
Formamide $\rightarrow$ Cyanate + H<sub>2</sub>O
```

Cyanate Hydrolase See cyanate lyase.

Cyanate Lyase The enzyme that catalyzes the following reaction:

```
Cyanate + bicarbonate
\uparrow
C<sub>2</sub>O + carbamate
```

Cyanazine (mol wt 241) An herbicide.

[Cyanazine structure image]

Cyanelles Endosymbiotic cyanobacteria found in various eukaryotes.

Cyanide Any compound that contains the CN group. It inhibits both oxidized and reduced forms of cytochrome oxidase at the final step of the electron transport chain.

Cyanide Test A test used to determine the ability of an organism to grow in the presence of cyanide. It is used to identify certain species of bacteria.

Cyanidin Chloride (mol wt 323) A substance used for treatment of night blindness.

[Cyanidin Chloride structure image]

Cyano- A prefix denoting 1. the cyanide ion or hydrocyanic acid; 2. the –CN group in covalent linkage; 3. blue.
β-Cyanoalanine (mol wt 114) A naturally occurring nonprotein amino acid.

\[
N\equiv C\text{CH}_2\text{CH(NH}_2\text{)COOH}
\]

Cyanoalanine Hydratase The enzyme that catalyzes the following reaction:

\[
\text{L-Asparagine} \rightleftharpoons 3\text{-Cyanoalanine} + \text{H}_2\text{O}
\]

Cyanoalanine Nitrilase The enzyme that catalyzes the following reaction:

\[
3\text{-Cyano-L-alanine} + 2\text{H}_2\text{O} \rightleftharpoons \text{L-Asparate} + \text{NH}_3
\]

Cyanobacteria (Blue-Green Algae) A large group of prokaryotic, photosynthetic organisms that contain chlorophyll (not bacterial chlorophyll) and carry out oxygenic photosynthesis.

Cyanocobalamin Synonym of vitamin B\textsubscript{12}. A hematopoietic compound used to treat anemia.

Cyanocobalamin Reductase The enzyme that catalyzes the following reaction:

\[
\text{NADPH} + 2\text{cob(III)alamin} \rightleftharpoons \text{NADP}^+ + 2\text{Cob(II)balamin}
\]

Cyanofenphos (mol wt 303) An insecticide.

Cyanogen (mol wt 52) A highly poisonous gas.

\[
\text{CN}
\]

Cyanogen Bromide (mol wt 106) A reagent used in protein sequencing and immobilization of protein onto a support surface.

Cyanogenesis The production or yield of cyanide ions or hydrocyanic acid.

Cyanoginosin A toxic cyclic heptapeptide.

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Cyclan • Cyclic CMP Synthetase

Cyclan A trade name for cyclandelate, a vasodilator that inhibits phosphodiesterase and increases cAMP concentration.

Cyclandelate (mol wt 276) A vasodilator that inhibits phosphodiesterase and increases cAMP concentration.

Cyclarbamate (mol wt 368) An anxiolytic agent and a muscle relaxant.

Cycle A time interval in which a regularly repeated sequence occurs.

Cyclonexthrin (mol wt 328) An insecticide for flies, roaches, and grain pests.

Cyclexanone (mol wt 263) An antitussive agent.

Cyclic Adenylic Acid See cyclic AMP.

Cyclical Transmission A mode of transmission of a parasite by a vector in which the parasite undergoes one or more essential stages of its life cycle in the vector.

Cyclic AMP (mol wt 329) An abbreviation for adenosine 3',5'-monophosphate or adenosine 2',3'-monophosphate. An important intracellular regulator or second messenger for a number of cellular processes in animals, bacteria, fungi, and plants.

3',5'-Cyclic AMP Synthetase The enzyme that catalyzes the following reaction:

\[
\text{ATP} \rightarrow 3',5'-\text{Cyclic AMP} + \text{PPi}
\]

Cyclic CMP Abbreviation for cyclic cytidine monophosphate (either 2',3'-cyclic cytidine monophosphate or 3',5'-cyclic cytidine monophosphate).

2',3'-Cyclic CMP (cCMP, mol wt 305) Abbreviation for 2',3'-cyclic cytidine monophosphate, a cyclic nucleotide.

3',5'-Cyclic CMP (cCMP, mol wt 305) Abbreviation for 3',5'-cyclic cytidine monophosphate, a cyclic nucleotide.

Cyclic CMP Synthetase The enzyme that catalyzes the following reaction:

\[
\text{CTP} \rightarrow \text{Cyclic CMP} + \text{PPi}
\]
Cyclic Electron Flow  The cyclic flow of electrons within photosystem I for generation of ATP (the electrons ejected from P700 returns to P700).

Cyclic Fatty Acid  Any of a class of fatty acids that contain a carbocyclic unit such as mannoic acid.

Cyclic GMP (eGMP, 345)  Abbreviation for either 3′,5′-cyclic guanosine monophosphate or 2′,3′-cyclic guanosine monophosphate, an intracellular regulator.

\[
\begin{align*}
\text{guanosine 3}′,5′\text{-cyclic monophosphate} \\
\text{guanosine 2}′,3′\text{-cyclic monophosphate}
\end{align*}
\]

2′,3′-Cyclic Nucleotide Phosphodiesterase  The enzyme that catalyzes the conversion of 2′,3′-cyclic nucleotide to nucleotide monophosphate.

3′,5′-Cyclic Nucleotide Phosphodiesterase  The enzyme that catalyzes the conversion of 3′,5′-cyclic nucleotide to nucleotide monophosphate.

Cyclic Oxidative Photophosphorylation  See photophosphorylation or cyclic flow of electrons.

Cyclic Peptide  A covalently linked circular polypeptide.

Cyclic Photophosphorylation  The synthesis of ATP from cyclic flow of electrons in photosystem I without production of NADPH.

Cyclic UMP (mol wt 306)  A cyclic form of uridylic acid.

\[
\begin{align*}
\text{Cyclidox} & \quad \text{A trade name for doxycycline hydrochloride, an antibiotic that inhibits microbial protein synthesis by binding with 30S ribosome subunits.} \\
\text{Cyclin} & \quad \text{A protein that appears at various stages of the eukaryotic cell cycle; it activates protein kinase and controls the progression from one stage of the life cycle to another. Its concentration rises and falls in various stages of the eukaryotic cell cycle.} \\
\text{Cyclin-Dependent Protein Kinase} & \quad \text{The protein kinase that has to be complexed with cyclin in order to function. It involves triggering different steps in the cell-division cycle by phosphorylating specific target proteins.} \\
\text{Cylindroma} & \quad \text{A benign epithelium tumor.} \\
\text{Cyclindruria} & \quad \text{The presence of casts in the urine.} \\
\text{Cyclitol Antibiotic} & \quad \text{Any antibiotic that contains a cyclic alcohol.} \\
\text{Cyclizine (mol wt 266)} & \quad \text{An antiemetic agent.} \\
\text{Cyclizine Lactate} & \quad \text{A derivative of cyclizine.}
\end{align*}
\]
Cycloallin (mol wt 177)  A naturally occurring nonprotein amino acid.

\[
\text{H}_2\text{N}\text{C} = \text{COOH}
\]

Cyclobarbital (mol wt 236)  A sedative-hypnotic agent.

\[
\begin{align*}
\text{O} & \quad \text{N} \\
\text{C} & \quad \text{H}_2\text{N}
\end{align*}
\]

Cyclobenzaprine (mol wt 275)  A skeletal muscle relaxant that reduces transmission of impulses from the spinal cord to skeletal muscle.

\[
\begin{align*}
\text{CH}_2\text{NCH}_3
\end{align*}
\]

Cycloblastin  A trade name for cyclophosphamide, an alkylating agent that cross-links strands of cellular DNA.

Cyclocort  A trade name for amcinonide, a corticosteroid used as an anti-inflammatory agent.

Cyclocumarol (mol wt 322)  An anticoagulant.

\[
\begin{align*}
\text{H}_2\text{C} & \quad \text{OCH}_3
\end{align*}
\]

Cycloextrins (Cycloamylose)  A group of naturally occurring clathrates and products by the action of Bacillus macerans amylase on starch, e.g., α, β, γ-cycloextrin.

\[
\begin{align*}
\text{H}_2\text{C} & \quad \text{OS}
\end{align*}
\]

α-Cycloextrin (mol wt 972)  A cyclomaltohexaose (consisting of six glucose residues).

\[
\begin{align*}
\text{H}_2\text{C} & \quad \text{OCH}_3
\end{align*}
\]

β-Cycloextrin (mol wt 1135)  A cyclomaltotetraose (consisting of four glucose residues).

\[
\begin{align*}
\text{H}_2\text{C} & \quad \text{OCH}_3
\end{align*}
\]

γ-Cycloextrin (mol wt 1297)  A cyclomaltopentaose (consisting of five glucose residues).

Cycloextrin Glucanotransferase  The enzyme that cyclizes part of a 1,4-α-D-glucan chain by formation of a 1,4-α-D-glucosidic linkage.

Cycloextrin Hydrolase  See cycloextrinase.

Cyclodrine (mol wt 319)  An anticholinergic agent.

\[
\begin{align*}
\text{COOCH}_2\text{CH}_2\text{N(C}_2\text{H}_5)_2
\end{align*}
\]

Cyclofenil (mol wt 364)  A gonad-stimulating agent.

Cycloguanil (mol wt 252)  An antimalarial agent.

\[
\begin{align*}
\text{Cl}
\end{align*}
\]

Cyclohexanone Monooxygenase  The enzyme that catalyzes the following reaction:

\[
\begin{align*}
\text{Cyclohexanone} & + \text{NADPH} + \text{O}_2 \\
& \rightarrow 6\text{-hexanolide} + \text{NADP}^+ + \text{H}_2\text{O}
\end{align*}
\]

Cyclohexanone NADPHS Oxygen Oxidoreductase  The systematic name for cyclohexanone monooxygenase.

Cycloheximide (mol wt 281)  An antibiotic from streptomycin-producing strains of Streptomyces griseus. It inhibits protein synthesis by preventing peptide bond formation on 80S ribosomes. It is also a plant growth regulator and a fungicide.
3- (Cyclohexylamino)-2-Hydroxypropanesulfonic Acid (mol wt 237) A reagent used for blotting of strongly basic proteins for transfer from SDS-polyacrylamide gels to nitrocellulose paper.

Cycloleucine (mol wt 129) A synthetic amino acid and valine antagonist.

Cyclomaltodextrinase The enzyme that catalyzes the following reaction:

\[
\text{Cyclodextrin} + \text{H}_2\text{O} \rightleftharpoons \text{Linear maltodextrin}
\]

Cyclomen A trade name for danazol, a steroid that suppresses ovulation.

Cyclomethycaine (mol wt 360) A topical anesthetic agent.

Cyclomydrist Ophthalmic A trade name for a combination drug containing cyclopentolate and phenylephrine, used as an anticholinergic agent.

Cyclonium Iodide (mol wt 471) An antispasmodic agent.

Cyclooxygenase Synonym of prostaglandin-endoperoxide synthetase.

Cyclooxygenase Pathway An enzymatic pathway for the metabolism of cell membrane-derived arachidonic acid for the production of prostaglandins.

Cyclooxygenation The process that introduces one molecule of dioxygen at C-9 and one at C-15 of a molecule of arachidonic acid.

Cyclopentamine (mol wt 141) A vasoconstrictor and nasal decongestant.

Cyclopentanone Monooxygenase The enzyme that catalyzes the following reaction:

\[
\text{Cyclopentanone} + \text{NADPH} + \text{O}_2 \rightleftharpoons 5\text{-Valerolactone} + \text{NADP}^+ + \text{H}_2\text{O}
\]

Cyclopentanone NADPH Oxygen Oxidoreductase The systematic name for cyclopentanone monooxygenase.

Cyclopentanoperhydrophenanthrene The parent ring structure of steroids.

Cyclopentazide (mol wt 380) An antihypertensive agent.

Cyclopentobarbital (mol wt 234) A sedative-hypnotic agent.

Cyclopentolate (mol wt 291) A mydriatic agent that possesses anticholinergic activity.

Cyclophillin A protein found in the cytoplasm of T cells with strong binding affinity for cyclosporin.

Cyclophosphamide (mol wt 261) An antineoplastic and immunosuppressive agent that interferes with DNA synthesis and transcription.
Cyclopiazonic Acid (mol wt 336)  An inhibitor for calcium-mediated ATPase.

\[
\begin{array}{c}
\text{Cyclopiazonic Acid} \\
\text{(mol wt 336)}
\end{array}
\]

Cyclopropane (mol wt 42)  A colorless, inflammable, explosive gas used as a general anesthetic.

\[
\text{Cyclopropane (mol wt 42)} \\
\text{C}_3\text{H}_6
\]

Cycloserine (mol wt 102)  An antibiotic produced by *Streptomyces garyphalus* that binds to d-alanyl-d-alanine synthetase and inhibits bacterial cell wall synthesis.

\[
\begin{array}{c}
\text{Cycloserine (mol wt 102)} \\
\text{C}_6\text{H}_{13}\text{O}_2\text{N}_2
\end{array}
\]

Cyclospasmol  A trade name for cyclandelate, a vasodilator that inhibits phosphodiesterase and increases cAMP concentration.

\[
\text{Cyclospasmol} \\
\text{CydP}
\]

Cyclosporin A  A cyclic undecapeptide isolated from the fungi *Cylindrocarpon lucidum*, it is a potent immunosuppressive agent used to prevent allograft rejection.

\[
\text{Cyclosporin A} \\
\text{Cyd5}\text{P}
\]

Cyclosporins  A group of nonpolar, cyclic oligopeptide antibiotics with immunosuppressive activity produced by fungi, e.g., *Tolypocladium* and *Trichoderda*.

\[
\text{Cyclosporins} \\
\text{Cyd5}\text{PPP}
\]

Cyclothiazide (mol wt 390)  A diuretic agent.

\[
\text{Cyclothiazide (mol wt 390)} \\
\text{Cyd5}\text{PPP}
\]

Cyclouridine (mol wt 226)  An antiviral and anticancer agent.

\[
\text{Cyclouridine (mol wt 226)} \\
\text{Cyd5}\text{PPP}
\]

Cyclovalone (mol wt 366)  A choleretic agent.

\[
\text{Cyclovalone (mol wt 366)} \\
\text{Cyd5}\text{PPP}
\]

Cycrimine Hydrochloride (mol wt 324)  An anticholinergic agent.

\[
\text{Cycrimine Hydrochloride (mol wt 324)} \\
\text{Cyd3}\text{PP}
\]

Cycrin  A trade name for medroxyprogesterone acetate, a hormone that suppresses ovulation.

\[
\text{Cycrin} \\
\text{CydP}
\]

Cyclodexerin  Abbreviation for cyclodextrin.

\[
\text{Cyclodexerin} \\
\text{Cyd3}\text{P}
\]

Cyclodextrins  A group of nonpolar, cyclic oligopeptide antibiotics with immunosuppressive activity produced by fungi, e.g., *Tolypocladium* and *Trichoderda*.

\[
\text{Cyclodextrins} \\
\text{Cyd5}\text{P}
\]

Cyclodiphenylmethane (mol wt 336)  A choleretic agent.

\[
\text{Cyclodiphenylmethane (mol wt 336)} \\
\text{Cyd5}\text{P}
\]

Cynarin(e) (mol wt 516)  A choleretic agent.

\[
\text{Cynarin(e) (mol wt 516)} \\
\text{Cyd5}\text{P}
\]

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Cyoctol (mol wt 252) An antiacne and anti-aloepecia agent.

Cyomin A trade name for vitamin B12.

CyP Abbreviation for cyclophilin.

CyPA Abbreviation for cyclophilin-A.

CyPB Abbreviation for cyclophilin-B.

CyPC Abbreviation for cyclophilin-C.

Cypermethrin (mol wt 416) An ectoparasiticide.

Cypryline (mol wt 424) An etorphine antagonist.

Cypridopathy Referring to venereal disease.

Cyproheptadine (mol wt 287) An antihistaminic and antipruritic agent that competes with histamine for H-1 receptors on effector cells.

Cyproterone (mol wt 375) A progesterone derivative with anti-androgen activity.

Cyromazine (mol wt 166) An ectoparasiticide.

Cyronine A trade name for the hormone liothyronine (T3).

Cys Abbreviation for cysteine.

CysNO Abbreviation for S-nitrosocysteine.

Cyst A dormant form or resting structure in certain organisms. 2. A closed abnormal sac containing fluid or semisolid material in the body. 3. A bladder.

Cystadenoma A cystic neoplasm lined with epithelial cells and filled with retained materials.

Cystalgia Pain in the bladder.

Cystamine (mol wt 152) The decarboxylation product of cystine.

Cystathionine (mol wt 222) A substance that consists of l-homocysteine and l-serine residues.

Cystathionine β-Lyase The enzyme that catalyzes the following reaction:

\[
\text{L-Cystathionine} + H_2O \xrightarrow{\text{Cystathionine } \beta-\text{Lyase}} \text{Homocysteine} + \text{NH}_3 + \text{pyruvate}
\]

Cystathionine β-Synthetase The enzyme that catalyzes the following reaction:

\[
\text{L-Serine} + \text{l-homocysteine} \xrightarrow{\text{Cystathionine } \beta-\text{Synthetase}} \text{Cystathionine} + H_2O
\]

Cystathionine γ-Lyase The enzyme that catalyzes the following reaction:

\[
\text{L-Cystathionine} \xrightarrow{\text{Cystathionine } \gamma-\text{Lyase}} \text{H}_2\text{N-CH}_2-\text{CH}_2-S-S-\text{CH}_2-\text{CH}_2-\text{NH}_3
\]
Cystathionine \(\gamma\)-Synthetase

The enzyme that catalyzes the following reaction:

\[
\text{L-Cystathionine} + \text{H}_2\text{O} \rightarrow \text{L-Cysteine} + \text{NH}_3 + \alpha-\text{keto-} \text{butanoate}
\]

Cystathioninuria An inherited metabolic disorder characterized by the presence of a large amount of cystathionine in the urine due to a defect in amino acid metabolism.

Cystatin A group of proteins present in tissues and body fluids that inhibit cysteine proteinase.

Cysteamine (mol wt 77) A sulfhydryl compound with a variety of biological functions.

\[
\text{HSCH}_2\text{CH}_2\text{-NH}_2
\]

Cysteic Acid (mol wt 169) An oxidation product of cysteine and a naturally occurring nonprotein amino acid.

\[
\text{NH}_2\text{HOOCH}-\text{CH}_2 \text{COOH}
\]

Cysteine (mol wt 121) A protein amino acid containing sulfur.

\[
\text{CHNH}_2\text{COOH}
\]

Cysteine Desulphydrase The enzyme that catalyzes the following reaction:

\[
\text{D-} \text{Cysteine} + \text{H}_2\text{O} \rightarrow \text{Sulfide} + \text{NH}_3 + \text{pyruvate}
\]

Cysteine Endopeptidase Any thiol proteinase or endopeptidase that has cysteine residue at the active center.

Cysteine Lyase The enzyme that catalyzes the following reaction:

\[
\text{L-Cysteine} + \text{sulfite} \rightarrow \text{L-Cysteate} + \text{sulfide}
\]

Cysteine Peptidase A protease whose active site contains the sulfhydryl group of cysteine.

Cysteine Synthetase The enzyme that catalyzes the following reaction:

\[
\text{Acetyl-L-serine} + \text{hydrogen sulfide} \rightarrow \text{L-Cysteine} + \text{acetate}
\]

Cysteine Transaminase The enzyme that catalyzes the following reaction:

\[
\text{L-Cysteine} + \alpha-\text{keto-} \text{glutарате} \rightarrow \text{Mercaptopyrurate} + \text{glutamate}
\]

Cysteine-tRNA Ligase The enzyme that catalyzes the following reaction:

\[
\text{ATP} + \text{cysteine} + \text{tRNA}^{\text{Cys}} \rightarrow \text{AMP} + \text{PPi} + \text{L-cysteine-tRNA}^{\text{Cys}}
\]

Cysteiny1-tRNA Synthetase Synonym of cysteine-tRNA Ligase.

Cystex A trade name for a combination drug containing methenamine, salicylamide, sodium salicylate, and benzoic acid, used as an anti-infective agent.

Cystic Acidosis An inherited disorder characterized by the functional failure of the mucus-secreting glands.

Cysticercosis Infestation with the larval form of pork tapeworm (Taenia solium).

Cystine (mol wt 240) A sulfur-containing protein amino acid.

\[
\text{HOOC} - \text{CH}_2 \text{SSCH}_2 \text{NH}_2\text{COOH}
\]

Cystine Knot A knot-like structure in a protein formed from three disulfide bonds among six cysteine residues.

Cystine Reductase The enzyme that catalyzes the following reaction:

\[
\text{NADH} + \text{L-cystine} \rightarrow \text{NAD}^+ + 2 \text{L-cysteine}
\]

Cystinosis An inherited metabolic disorder characterized by the inability to utilize cystine leading to the accumulation and precipitation of cystine in tissue.

Cystinuria A metabolic disorder characterized by the presence of excessive amounts of cystine, lysine, and arginine in the urine.

Cystitis An inflammation of the bladder.

Cystography X-ray examination of the bladder following ingestion of radiopaque medium.
Cystolithiasis • Cytidine 3′-Diphosphate

Cystolithiasis  The presence of stones in the urinary bladder.

Cystoma  A tumor that contains cysts.

Cystoscope  An instrument used for examination of disorders of the bladder and kidney.

Cystoscopy  Examination of the urinary tract with a cystoscope.

Cystospaz  A trade name for hyoscyamine sulfate, an anticholinergic agent that blocks acetylcholine, decreases GI mobility, and inhibits gastric acid secretion.

Cyt  Abbreviation for 1. cytochrome; 2. cytosine.

Cyt a  Abbreviation for cytochrome a.

Cyt-b4  Abbreviation for cytochrome b4.

Cyt-245  A component of the phagocytic oxidase complex.

Cyt-b99  A cytochrome of photosystem II of photosynthesis.

Cyt c  Abbreviation for cytochrome c.

Cyt-c1  A protein component of respiratory chain in the inner mitochondrial membrane.

Cyt cd  Synonym of Pseudomonas cytochrome oxidase.

Cyt-P-245  Abbreviation for cytochrome P450.

Cyt-P-445-OR  Abbreviation for cytochrome P450 oxidoreductase.

Cyt-A  Abbreviation for cytolytic toxin-A from Bacillus thuringiensis.

Cytadren  A trade name for aminoglutethimide, an antineoplastic agent and a hormone antagonist.

Cytarabine (mol wt 243)  A nucleoside that acts as an antiviral and antineoplastic agent.

Cyt-B  Abbreviation for cytolytic toxin-B from Bacillus thuringiensis.

Cytidine (mol wt 243)  A ribonucleoside of cytosine and a constituent of RNA.

Cytidine Cy clase  See cytidylate cyclase.

Cytidine 2′-3′-Cyclic Monophosphate (mol wt 305)  A cyclic ribonucleotide of cytosine (cCMP).

Cytidine 3′-5′-Cyclic Monophosphate (mol wt 305)  A cyclic ribonucleotide of cytosine (cCMP).

Cytidine Deaminase  The enzyme that catalyzes the following reaction:

\[
\text{Cytidine} + \text{H}_2\text{O} \rightarrow \text{Uridine} + \text{NH}_3
\]

Cytidine Diphosphate  The diphosphate form of the ribonucleotide of cytidine, e.g., cytidine-5′-diphosphate and cytidine-3′-diphosphate.

Cytidine 3′-Diphosphate (mol wt 403)  The diphosphate form of the ribonucleotide of cytosine.
Cytidine 5′-Diphosphate (mol wt 403) The diphosphate form of the ribonucleotide of cytosine.

Cytidine Diphosphocholine (mol wt 488)  A choline donor molecule.

Cytidine Monophosphate (mol wt 325) The monophosphate ribonucleotide of cytosine (see cytidine 3′ or 5′-monophosphate).

Cytidine 2′-Monophosphate (mol wt 325) A monophosphate ribonucleotide of cytosine.

Cytidine 3′-Monophosphate (mol wt 325) A monophosphate ribonucleotide of cytosine.

Cytidine 5′-Monophosphate (mol wt 325) A monophosphate ribonucleotide of cytosine.

Cytidine 5′-Triphosphate (mol wt 483) The triphosphate ribonucleotide of cytosine, a component used for synthesis of RNA.

Cytidyl Cyclase  See cytidylate cyclase.

Cytidylate Cyclase  The enzyme that catalyzes the following reaction:

\[
\text{CTP} \rightleftharpoons 3',5'-\text{Cyclic CMP} + \text{PPi}
\]

Cytidylate Kinase  The enzyme that catalyzes the following reaction:

\[
\text{ATP} + \text{dCMP} \rightleftharpoons \text{ADP} + \text{dCDP}
\]

Cytidyllic Acid (mol wt 323) The monophosphate form of the cytidine nucleotide (see cytidine-5′-monophosphate or monophosphate).

Cytidylyl Cyclase  See cytidylate cyclase.

Cytoanalyzer  A device used for screening smears that contain cells suspected of malignancy.

Cytochalasin A (mol wt 478) A fungal metabolite that inhibits the polymerization of tubulin.
Cytochalasin B (mol wt 480)  One of a group of fungal metabolites that inhibits glucose transport across the basal membrane of the human placental syncytiotrophoblast.

Cytochalasin D (mol wt 508)  One of a group of fungal metabolites.

Cytochalasin E (mol wt 496)  One of a group of fungal metabolites that inhibits actin polymerization in the blood platelets.

Cytochalasin H (mol wt 494)  One of a group of fungal metabolites.

Cytochalasin J (mol wt 452)  One of a group of fungal metabolites.

Cytochrome a/a₃  A cytochrome complex associated with cytochrome oxidase activity at the terminal step of the electron transport chain or the respiratory chain. The heme prosthetic group contains a formyl group.

Cytochrome b  A cytochrome whose heme group contains no formyl group.

Cytochrome b₅  A cytochrome involved in fatty acid desaturation (production of unsaturated fatty acid).

Cytochrome b₅ Reductase  The enzyme that catalyzed the following reaction:

\[
\text{NAD}^+ + 2 \text{ferrocytochrome b}_5 \rightarrow \text{NADH} + 2 \text{ferricytochrome b}_5
\]

Cytochrome b₆  A cytochrome involved in the formation of b₆-f complexes for the generation of a proton gradient in photosystem I.

Cytochrome b₆-f Complex  A cytochrome complex involved in the generation of a proton gradient in photosystem I.

Cytochrome c  A cytochrome that carries electrons from the cytochrome reductase complex to cytochrome oxidase.

Cytochrome c Oxidase  The enzyme that catalyzes the following reaction:

\[
4 \text{Ferrocytochrome c} + \text{O}_2 \rightarrow 4 \text{Ferricytochrome c} + \text{H}_2\text{O}
\]

Cytochrome c Peroxidase  The enzyme that catalyzes the following reaction:

\[
4 \text{Ferrocytochrome c} + \text{H}_2\text{O}_2 \rightarrow 2 \text{Ferricytochrome c} + 2\text{H}_2\text{O}
\]
Cytochrome c Reductase  The enzyme that catalyzes the following reaction:

\[
\text{NADH} + 2 \text{ferricytochrome c} \rightarrow \text{NAD}^+ + 2 \text{ferrocytochrome c}
\]

Cytochrome \( c_3 \) Hydrogenase  The enzyme that catalyzes the following reaction:

\[
2 \text{H}_2 + \text{Ferricytochrome c}_3 \rightarrow 4 \text{H}^+ + \text{ferrocytochrome c}_3
\]

Cytochrome \( f \)  A type of cytochrome in the electron transport chain that connects photosystems I and II.

Cytochrome \( P_{68} \)  A cytochrome that catalyzes the monooxygenation of a variety of hydrophobic substances. It has a maximum absorption peak at 450 nm.

Cytochromes  A group of heme-containing proteins involved in the electron transport chain for oxidative phosphorylation and photophosphorylation.

Cytocidal  Capable of killing cells.

Cytocide  Substance that kill cells.

Cytocuprein  Synonym of superoxide dismutase.

Cytofluorometry  A flow cytometry that involves the detection of specific fluorescence of the fluorochrome markers.

Cyto genetics  The science that deals with cellular heredity.

CytoGram  A trade name for CMV immune globulin IV produced by DNA recombinant technology and used for the prevention of cytomegalovirus (CMV).

Cytohemin (mol wt 894)  A substance found in heart muscle.

Cytochrome c Reductase  The enzyme that catalyzes the following reaction:

\[
\text{NADH} + 2 \text{ferricytochrome c} \rightarrow \text{NAD}^+ + 2 \text{ferrocytochrome c}
\]

Cytokera tin  Member of a family of intermediate filament proteins characteristic of epithelial cells.

Cytokine  The biologically active substances produced by cells that mediate cell-to-cell communication, e.g., lymphokines from lymphocytes and monokines from monocytes.

Cytokinensin  A plant growth regulator that affects cell division.

Cytokinesis  The division and separation of the cytoplasm during mitosis and meiosis.

Cytokines  A group of N-substituted derivatives of adenine that function as plant growth regulators (e.g., kinetin and zeatin) that simulates cell division.

Cytolipin H  A glycosphingolipid containing lactose and ceramide (N-acyl fatty acid derivative of a sphingosine).

Cystolith  Referring to bladder stones.

Cystolithiasis  The presence of stones in the bladder.

Cytological Map  A diagrammatic representation showing the locations of genes on a particular chromosome.

Cytology  The science that deals with structure, function, and life cycles of cells.

Cytolysin  An antibody or substance capable of lysing cells.

Cytolysis  Disintegration of a cell.

Cytomegalovirus  A virus of the Herpesviridae. It consists of a dsDNA genome and causes cellular enlargement and the formation of eosinophilic inclusion bodies in the nucleus. It may also cause congenital deformities if present during pregnancy.

Cytomegalovirus Immune Globulin  An IgG antibody against cytomegalovirus used for control or treatment of cytomegalovirus infection.

Cytomel  A trade name for liothyronine sodium, a hormone that stimulates metabolism of body tissue and accelerating cellular oxidation (also known as \( T_3 \)).
Cytometer  A device used for counting and measuring blood cells.

Cytometry  A method for counting and measuring cells.

Cytomorphosis  The change undergone by a cell in the course of its life cycle.

Cytone  The cell body of a neuron.

Cytopathic  Producing cytopathological changes in cells.

Cytopathic Effect  The degenerative cytopathological change on a cell monolayer caused by virus.

Cytopenia  The diminution of the cellular elements in the blood.

Cytophagia  The ingestion of cells by another cell, e.g., phagocytes.

Cytophilic  Having an affinity for cells.

Cytophilic Antibody  Antibody that binds to the surface of cells bearing appropriate Fc receptors.

Cytophotometry  A technique employing both microscope and spectrophotometer for determination of cells or cellular components.

Cytoplasm  The protoplasmic contents of a cell excluding cell organelles.

Cytoplasmic Gene  Referring to the genes present in mitochondria and chloroplasts.

Cytoplasmic Inheritance  The inheritance that is not associated with nuclear DNA but depends upon the replication of cytoplasmic organelles, e.g., mitochondria and chloroplasts.

Cytoplasmic Membrane  The membrane that forms the outer limit of the protoplast, it consists of lipid bilayers and proteins.

Cytoplasmic Microtubules  The loosely organized, dynamic network of microtubules in the cytoplasm of eukaryotic cells.

Cytoplasmic Polyhedrosis Virus  An insect virus of the family Baculoviridae. It has been used as a cloning vehicle for eukaryotic genes and for biological control of caterpillars.

Cytoplasmic Streaming  Flow of cytoplasm within a cell or between adjacent cells.

Cytoplast  1. A unified structure that provides the rigidity needed to hold the various structures of the eukaryotic cell in their appropriate locations. 2. The intact cytoplasmic content of a cell excluding the nucleus.

Cytopoiesis  Production of cells.

Cytopoiesis-U  A trade name for cytarabine (cytosine arabinoside), an antitumor agent that inhibits cellular DNA synthesis.

Cytophagy  The ingestion of cells by another cell, e.g., phagocytes.

Cytophilic Antibody  Antibody that binds to the surface of cells bearing appropriate Fc receptors.

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Cytotec  A trade name for misoprostol, an antiulcer agent.

Cytotoxic  Capable of causing cell death.

Cytotoxic Anaphylaxis  An anaphylactic reaction occurs when cytotoxic antibody (e.g., IgE) is present or injected into an individual or animal.

Cytotoxic Antibody  An antibody capable of causing cell death in the presence of complement, e.g., complement fixing antibody.

Cytotoxic Cell  A cell capable of killing other cells, e.g., cytotoxic T cell or activated macrophage.

Cytotoxic Drug  Any drug that kills cells.

Cytotoxic Hypersensitivity  Type II hypersensitivity; an antibody-mediated cytotoxic reaction, e.g., blood transfusion reaction.

Cytotoxic T Cells  A subpopulation of T cells that recognize and kill histoincompatible target cells in the absence of antibody.

Cytotoxins  Substances capable of causing death of cells or inhibiting growth of the cells.

Cytotropic  Having an affinity for living cells.

Cytotropic Antibodies  Antibodies capable of sensitizing target cells for subsequent anaphylaxis, e.g., with IgE antibody.

Cytovene  A trade name for ganciclovir, an antiviral agent that inhibits viral DNA synthesis.

Cytovillin  Synonym of ezrin.

Cytoxan  A trade name for cyclophosphamide, an alkalyating agent.

Cytozoic  Living within a cell.

Cytozoon  A protozoan parasite within a cell.

Cz  Abbreviation for cefazolin, an antibacterial agent.

CZE  Abbreviation for capillary zone electrophoresis.

CZI  Abbreviation for crystalline zinc insulin.