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multilamellar vesicle See vesicle.

multimer OLIGOMER.

multiparticulate virus COVIRUS.

multiphasic zone electrophoresis DISC GEL ELECTROPHORESIS.

multiple alleles A group of three or more alternative alleles, any one of which may occur at the same locus on a chromosome.

multiple binding MULTIPLE EQUILIBRIA.

multiple codon recognition The binding of a given molecule of tRNA to more than one codon, as postulated by the Wobble hypothesis.

multiple component virus COVIRUS.

multiple development A chromatographic technique, used particularly with paper or thin-layer chromatography, in which the sample is developed repeatedly with either the same or different solvents.

multiple displacement mechanism NONSEQUENTIAL MECHANISM.

multiple equilibria The interactions that occur between the macromolecule that has several binding sites and the ligands that bind to these sites.

multiple-event curve MULTIHIT SURVIVAL CURVE.

multiple factor hypothesis The hypothesis that quantitative traits, such as size and weight, result from the cumulative effect of a group of genes. *See also* polygene.

multiple forms of an enzyme A collective term for all the proteins that possess the same enzyme activity and that occur naturally in a single species; includes genetically independent proteins, heteropolymers, genetic (allelic) variants, proteins conjugated with other groups, proteins derived from one polypeptide chain, polymers of a single subunit, and forms differing in conformation.

multiple gene POLYGENE.

uncertain but a general disease occurs. In the case of multiple sclerosis, the axons fail to conduct nerve impulses. The disease is characterized by changes in speech, and weakness. *Aka* demyelination.

multiplet A multiple of the nuclear magnetic resonance frequency.

multiplication cycle The period from the infection of a cell to the formation of new virus particles and their release from the cell.

multiplicity *See* enzyme multiplicity; spore multiplicity; RNA multiplicity; spore multiplicity.

multiplicity of infection The number of virus particles that have entered a cell. The number of cells in a culture that are infected, the number of cells in the culture that are infected, the number of virus particles added to the culture, and the total number of cells in the culture. *MOI*.

multiplicity reactivation The restoration of activity of a virus that has been inactivated by the simultaneous infection of a cell with this and other viruses. The process is thought to be a change whereby a virus particle is reactivated from the undamaged state of the virus particle and from otherwise inactivated virus particles. *Abbr* MR. *See also* multiplicity reactivation.

multistep induction theory A theory of carcinogenesis according to which cancer is induced as a result of a sequence of stages. It is believed that there are two such stages: initiation and promotion. Initiation is caused by mutations, and promotion is caused by the expression of these mutations. *See also* induction theory.

old age disease ALZHEIMER'S DISEASE.

old cells 1. Bacterial cells in the stationary phase of growth. 2. Cells that have been stored for a prolonged time.

old tuberculin Tuberculin prepared by concentrating and filtering a culture of the tubercle bacillus, *Mycobacterium tuberculosis*. *Abbr* OT.

old yellow enzyme A flavoprotein from yeast that catalyzes the oxidation of NADPH and that was isolated in 1932 by Warburg and Christian.

oleandomycin An antibiotic, produced by *Streptomyces antibioticus*, that is closely related to erythromycin.

olefin An unsaturated aliphatic hydrocarbon; an alkene.

oleic acid An unsaturated fatty acid that contains 18 carbon atoms and one double bond. *See also* promoter.

oleophilic HYDROPHOBIC.

oleophobic HYDROPHILIC.

oleosome A spherosome that is rich in lipids but devoid of acid phosphatase and other hydrolytic enzymes.

Olestra Trademark for a synthetic fat substitute not yet approved by the FDA.

oligodynamic effect The growth inhibitory effect of some metals (such as silver and copper) in their elementary form on bacteria; tested for by placing a metal disk on a freshly inoculated petri plate and measuring the zones of nongrowth surrounding each disk after incubation.

oligogene A gene that, by itself, produces a significant phenotypic effect as opposed to a polygene which, by itself, produces only a small effect.

oligomer A protein molecule that consists of two or more polypeptide chains, referred to as either monomers or protomers, linked together covalently or noncovalently. *See also*

oligosaccharide A linear or branched carbohydrate that consists of from 2 to 10 saccharide units joined by means of glycosidic bonds.

oligosaccharin One of a group of polypeptidic molecules. They differ from hormones, which have multiple effects, in that each one regulates only a single physiological process such as defense against disease, cell growth, production, or differentiation. Cytokines are fragments of the cell wall that are released from the latter by enzymatic action.

oligotrophic lake A deep and clear lake having a depth of 15 m or more and a small plant population at various depths. It has a low rate of nutrient supply in relation to its volume of water. In such a lake the total biomass and the productivity are low. The bottom layers of the lake are saturated with dissolved oxygen throughout the year. *See also* eutrophic lake; mesotrophic lake.

O-linked oligosaccharides *See* glycoprotein.

O-locus The locus of the operator.

-oma Suffix meaning tumor.

-OMe Methoxy group.

omega angle The torsion angle that is defined by rotation about the C¹-N peptide bond in proteins. *Sym* ω .

omega fraction CHYLOMICRONS.

omega loop A polypeptide chain conformation in globular proteins that is shaped like the Greek letter omega. A loop is a segment of a polypeptide chain, that folds back upon itself, and defined in terms of (a) segment length, (b) absence of regular secondary structure, and (c) distance between the N and C termini.

omega oxidation An oxidative pathway for fatty acids in which the terminal methyl group of the fatty acid (usually one containing 10 carbon atoms) is oxidized first to a methyl group and then to a carboxyl group, leading to the formation of a dicarboxylic acid.