

Avery Glossary

Antibody – (Also called immunoglobulins) Any of a large number of proteins that are produced by specialized immune system cells (B cells) in response to an antigen, and act specifically against that antigen in an immune response. (Antigens are foreign substances that may be a threat to the body, such as virus particles, spores, or bacterial toxins.)

Antigen – A substance that induces the formation of antibodies because it is recognized by the immune system as a threat. It may be a foreign substance from the environment, such as chemicals, or formed within the body, such as bacterial or viral toxins.

Autolytic enzymes – Enzymes that are produced within an organism that cause the destruction, or self-digestion, of the tissues and/or cells of the organism.

Culture Media – An artificially produced biochemical or biophysical environment for the propagation of bacterium.

Diphenylamine – A colorless crystalline compound that is used as a stabilizer for plastics and in the manufacture of dyes, explosives, pesticides, and pharmaceuticals.

Diphtheria – A infectious disease caused by the bacterium *Corynebacterium diphtheriae*, characterized by the production of a systemic toxin and the formation of a false membrane on the lining of the mucous membrane of the throat and other respiratory passages, causing difficulty in breathing, high fever, and weakness. The toxin is particularly harmful to the tissues of the heart and central nervous system.

Dische diphenylamine test – A chemical test utilized to detect the presence of DNA in a substance.

DNA, or deoxyribonucleic acid – The fundamental substance of which genes are composed; An antiparallel double helix of nucleotides linked by phosphodiester, or sugar-phosphate, bonds to adjacent nucleotides in the same chain and by hydrogen bonds to complementary nucleotides in the opposite chain.

DNase – An enzyme that degrades DNA to nucleotides.

Gene – A hereditary unit consisting of a sequence of DNA that occupies a specific location on a chromosome and determines a particular characteristic in an organism.

Hydrolyzing – Breaking a bond in a molecule by adding water.

Immunochemistry – The branch of medical science that studies the body's immune system; the chemistry of immunologic phenomena.

In vitro – An experimental situation outside an organism; biological or chemical work done in the test tube rather than in living systems. “In vitro” is Latin for “in glass.”

In vivo – An experimental situation in a living cell or organism; biological or chemical work done in living systems.

Mucoid Colony – A group of bacteria in a culture derived from the increase of an isolated single organism that is large, dome-shaped, and shiny, containing large quantities of capsular polysaccharide material that may be drawn out in viscous strings.

Nucleotide – A subunit that polymerizes into nucleic acids (DNA or RNA); each nucleotide consists of a nitrogenous base, a sugar, and one to three phosphate groups.

Pneumococcus – A nonmotile bacterium (*Streptococcus pneumoniae*) that is the most common cause of bacterial pneumonia. It is often associated with meningitis and other infectious diseases.

Pneumonia – An acute or chronic disease marked by inflammation of the lungs and caused by viruses, bacteria, and/or other microorganisms or physical and chemical irritants.

RNase, or Ribonuclease – Any nuclease specifically catalyzing the cleavage of phosphate ester linkages in ribonucleic acids. Ribonucleases are grouped as those cleaving internal bonds, the endoribonucleases, and those cleaving at termini, the exoribonucleases.

RNA, or ribonucleic acid – A single-stranded nucleic acid that plays an important role in the flow of genetic information and which is similar to DNA but having ribose sugar rather than deoxyribose sugar and uracil rather than thymine as one of the pyrimidine bases.

Serum – The clear yellowish fluid obtained upon separating whole blood into its solid and liquid components; also the clear portion of any body fluid.

Sodium deoxycholate – A bile salt used as a detergent to make membrane proteins water soluble.

Therapeutic serum – An immune serum or antitoxin injected for the treatment of a disease.

Titration – A procedure for causing two solutions to react by the controlled addition of one to the other via a burette, a type of uniform-bore glass tube used in chemical experimentation. In the procedure, some indicator must be used to locate the equivalence point, which is the point at which equal quantities of opposite solutions exist to cancel each other out.

Transformation – The modification of a genome by the external application of DNA from a cell of different genotype.

Uptake, or “taking up” – The absorption and incorporation of a substance by living tissue.