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THE CHAIR OF MICROBIOLOGY, VIROLOGY, IMMUNOLOGY

Glossary
of microbiology, virology and immunology

for the medical students of II-III year of the study

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The methodical manual for practical lessons on microbiology, virology, immunology for the medical students of II-III year of the study are approved by the Central Methods Board of ZSMU as a methodical manual on practical lessons for students of the medical faculty.

The independent practical work of students is an important part of the syllabus in the course of microbiology, virology and immunology.

It helps students to study this fundamental subject.

МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ

Запорізький державний медичний університет

Кафедра мікробіології, вірусології та імунології

Словник

з мікробіології, вірусології та імунології

для іноземних студентів II-III курсів
медичних факультетів
спеціальності «Лікувальна справа»

Словник з мікробіології, вірусології та імунології для іноземних студентів II - III курсу медичних факультетів, спеціальність «Лікувальна справа» допоможе швидко знаходити необхідні мікробіологічні терміни та їх пояснення при підготовці до практичних занять, до тестування у комп'ютерному класі та на паперових носіях та при підготовці до підсумкового модульного контролю, до «КРОКУ-1».

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The glossary is intended for rapid reference. It helps medical students to study this fundamental subject.

The emphasis is on medical, biologic and microbiological words and phrases that are used frequently for study of microbiology.

The specific names of microorganisms, antimicrobial agents, and infectious diseases are in the index and not repeated here.

A

Acid-fast
Describes an organism that resists acid decolorization after straining.

Aciduric
Resistant to effects of acid.

Acquired immunity
Immunity developed following exposure to infectious agents or by infusion of antibodies.

Acquired immunodeficiency syndrome (AIDS)
An immune system disease caused by human immunodeficiency virus (HIV) infection that is marked by significant depletion of CD_4 T cells resulting in increased susceptibility to a variety of opportunistic infections, certain cancers, and neurological disorders.

Acute viral gastroenteritis
Condition characterized by vomiting and diarrhea.

Adaptive immunity
Host defenses that are mediated by B and T cells following exposure to antigen and that exhibits specificity, diversity, memory, and self–nonself recognition.

Adhesion
Bacterial protein that is involved in the adhesion to the eukaryotic host cell.

Adhesins
The various substances produced by bacteria-equatorial cell (proteins, lipopolysaccharides, etc.) that facilitate attachment of cells to the corresponding maxi-organisms. For example, the enamel of the teeth, respiratory mucosa and digestive systems.

Adhesion
The attachment of microorganisms to sensitive cells and subsequent breeding of the pathogen on the surface or inside these cells.

Adenoviruses
Viruses of the family Adenoviridae, colliding with people conjunctivitis, hemorrhagic cystitis, respiratory diseases, gastroenteritis, etc.

Adsorption
A series of events, culminating in free phage attachment to a bacterium, involving virion movement (via diffusion), virion encounter with a bacterium, virion attachment, and, included by some but not all authors, transfer of the phage genome into the bacterial cytoplasm.

Aerobic
The presence of oxygen.

Agammaglobulinemia
Absence of immunoglobulins in the blood.

Agar
A polysaccharide derived from algae used as a solidifying agent in culture media.

Agarose gel
Highly purified agar.

Agglutination
Serological reaction in which the bonding of corpuscular antigens (microorganisms, erythrocytes, etc.) under the action of the corresponding antibodies, which manifests the formation of sludge or flake.

Adjuvant
Immunologic agent that stimulates the immune system and increases the response to a vaccine without having specific antigenic effect by itself.

Alanine aminotransferase
An enzyme found in the liver and blood serum, the concentration of which is often elevated in cases of liver damage.

Allele
Alternate forms of a gene at the same chromosomal locus.

Allergen
A substance which, when repeated administration causes an allergic reaction.

Allergy
The reaction of the modified microorganism for iterated on the introduction of foreign substances.

Alloantigen
An antigen that exists in alternate allelic forms.

Allosteric
Property of a protein that leads to a change in conformation and function associated with attachment of a smaller effector molecule.

Alternative pathway
An antibody-independent mechanism of complement activation.

Aminoglycosides
Antibiotics produced by micro-organisms and Streptomices Micromonosporum, which inhibit protein synthesis on ribosomes of bacteria, it turns a good effect on gram-negative bacteria and pathogens of tuberculosis.

Amniotic fluid
Fluid in amniotic sac surrounding the fetus.

Anaerobe
Microorganism that grows and survives only in the absence of oxygen.

Anaerobic
The absence of oxygen.

Anaerobe
Bacterium that is unable to divide in the presence of oxygen, usually having a fermentative metabolism.

Anaerobic respiration
An anaerobic type of metabolism in which organic (and in a special case also inorganic) compounds are degraded and external electron acceptors other than oxygen are used electron transport-coupled phosphorylation ATP synthesis by the membrane-bound ATP synthase with the electrochemical gradient across the cytoplasmic membrane as the driving force.

Anamnestic
Enhanced immunologic memory response on reexposure to antigen.

Anaphylaxis
Immediate and severe antibody-mediated hypersensitivity reaction.

Anergic
Absence of ability to respond to antigen.

Anergy
A state of unresponsiveness to antigens.

Anicteric
Absence of clinical jaundice.

Anneal
Subject to controlled heating and cooling to achieve a particular property.

Anoxia
Lack of adequate oxygenation of blood or tissues.

Anterior horn cell
Motor neuron in the anterior gray matter of the spinal cord.

Antagonism
the oppression of one by another microorganism. This is a form of struggle for power supplies and energy. Antagonistic relationship between acoustic pronounced in

places, the natural habitat vennogo a large number of microorganisms (soil, the digestive tract of humans and animals).

Antagonism of the active
Formation by microorganisms of organic acids, alcohols and toxic products (anti-biotics), oppressing, or kill the bacterial cell.

Antagonism of the passive
The depletion of the culture medium more active micro-organism, which is faster, scraps ziruet substrate alters the redox potential and surface tension.

Antibiotics
Chemotherapeutic agents, demon-differentiable microorganisms, animal cells, distribution, as well as their derivatives and synthetic products. They have a selective ability to inhibit and delay the growth of microorganisms or cause their death, as well as inhibit the development of malignant tumors.

Antibody
A glycoprotein molecule produced by plasma cells in response to introduction of an antigen; can bind to the antigen with exact specificity.

Antigens
Any genetically heterogeneous substances, when introduced into an organism capable of causing the production of specific immunoglobulins (antibodies). This series of complexes of the complex chemical structure.

Antiglobulin serum
Serum obtained by immunization ¬ Nye rabbit and human globulin that contains the bivalent antibody to any human vecheskomu globulin, including antibodies and incomplete.

Antibodies (immunoglobulins)
Heterogeneous plasma proteins produced in response to the antigen and specifically reacting with them.

Antimicrobial agent
Substance active against microorganisms but not obligatory of microbial origin. It could be synthetic, semisynthetic, or originate from plants or mammals.

Antigenic drift
Random mutation of a virus leading to new variants not recognized by the immune system.

Antiseptic
The destruction of bacteria in the damaged and intact areas of the skin and mucous membranes.

Antiserum
Serum containing specific antibodies.

Antiretroviral agent
Any drug used in treating patients with human immunodeficiency virus (HIV) infection.

Antiviral resistance
The developed resistance of a virus to a specific drug.

Antitoxin
An antibody that neutralizes an exotoxin.

Antitussive
Substance that helps control coughing.

Antiviral drugs
A class of medication used specifically for treating viral infections. As with antibiotics for bacterial infections, specific antivirals are used for specific viruses.

Arthroconidia
Conidia that develop within the hyphae and eventually break off.

Aryepiglottis
Related to the epiglottis and the arytenoid cartilage.

Asepsis
Exclusion of pathogenic organisms.

Aseptic meningitis
Meningeal inflammation associated mostly with an increase of cells (pleocytosis).

Atypical pneumonia
Infection of the pulmonary airspace that fails to produce the sudden onset and rapid clinical course associated with pneumococcal (‘‘typical’’) pneumonia.

Attenuated
Reduced in virulence, (eg, organisms in a live vaccine).

Attenuation
Genetic alteration of infectious viruses to reduce their potential to cause disease.

Autoclave
Sophisticated pressure cooker used to kill microorganisms.

Autoimmunity
An immune response against the body's own tissues.

Autolysis
Lysis of a cell by its own enzymes.

Autotroph
An organism that uses carbon dioxide as its source of carbon for new cell growth. Autotrophs can be either phototrophs or chemotrophs.

Autotrophy
Self-feeding; autotrophy is the ability of an organism to synthesize all cell carbon constituents exclusively from inorganic carbon. Therefore, if an autotrophic organism was to be grown in the presence of labeled CO_2, every single carbon in the cell would become labeled (except the ones derived from essential growth factors added to the medium).

Axenic
Refers to pure cultures of a microorganism without presence of a contaminating or symbiotic organism.

B

Bacteria
One of three phylogenetic groups, or domains, at the highest level. Bacterial cells are prokaryotic and lack nuclei, like the Archaea, and in contrast to Eucarya.

Bacteriophage
Virus that infects a bacterial host.

B cell
Bone marrow–derived lymphocyte that can differentiate a plasma cell and produce antibody.

Bacillus
Rod-shaped bacterial cell.

Bacteremia
Bacteria in the blood.

Bacteriocins
Proteins produced by one bacterium that kill another of the same or other species.

Bacteriostatic
Inhibition of bacterial growth without killing.

Bacteriuria
Bacteria in the urine.

B cells
These lymphocytes mature in the bone marrow and are responsible for humoral immunity.

Biofilm
Extracellular film produced by an organized community of microbial cells.

Bioterrorism
Use of infectious agents to deliberately produce disease.

Biotype
Subtype within a species characterized by physiologic properties.

Blackwater fever
Condition in which hemoglobinuria develops, resulting in the production of dark urine, along with malaria.

Blood–brain barrier
Functional barrier preventing passage of large molecules to the brain parenchyma.

Bubonic plague
Infection produced by *Yersinia pestis* from rodents and transmitted to humans by the bite of infected fleas, is the most explosively virulent disease known, which begins with a bubo and spreads to the bloodsteam. Also called Black Death.

Bioavailability
The property of a drug to be absorbed and distributed within the body in a way that preserves its useful characteristics; for example, it is not broken down, inactivated, or made insoluble.

C

Candida albicans
Common opportunistic human pathogenic yeast causing candidosis.

Capsid
The outer protein coat of a virus that protects its nucleic acid.

Capsomeres
Protein subunits of viral capsids.

Capsules
An external layer usually consisting of a complex polysaccharide coating the surface of many species of pathogenic bacteria.

Carbuncle
A necrotic staphylococcal infection of skin and subcutaneous tissue that is formed of coalesced furuncles (boils).

Carcinoma
Malignant growth of epithelial cells.

Cardiolipin
A phospholipid occurring naturally in mitochondrial membranes against which antibodies are formed in syphilitic infection.

Carriers / transporters
Membrane proteins that function to transport substances into or out of the cell through the cytoplasmic membrane.

Catabolism
The breakdown of nutrients to precursor compounds for anabolism or for dissimilation.

Catalase
Enzyme that catalyzes the reduction of toxic hydrogen peroxide to oxygen and water.

Cell division genes
Genes that encode for proteins that specifically function during the division process.

Cell envelope
Is the set of layers that delimit and wrap a bacterial cell, normally composed of the cytoplasmic membrane and cell wall (sacculus) plus an outer membrane in Gram-negative bacteria.

Cell-mediated immunity
Immune reactions in which T lymphocytes secrete cytokines to modify or destroy foreign or infected cells.

Cell strain
Culture that consists of diploid cells, commonly fibroblastic, which can be redispersed and regrown a finite number of times.

Cell wall
The tough envelope surrounding many cells, including nearly all bacteria and archaea. Located outside the cytoplasmic membrane.

Cerebrospinal fluid
Fluid that fills spaces within and surrounding the central nervous system.

Channel proteins
Proteins that form aqueous pores or channels through membranes.

Chancre
Sore or ulcer that develops at the site of an infection. Most often used to describe the primary syphilitic lesion.

Chemokines
Proteins or glycoproteins that are involved in cell-to-cell communication

Chemoprophylaxis
Use of antimicrobics to prevent infection.

Chemotaxis
Attraction of a motile cell to a chemical.

Chemoautotrophy
The use of reduced inorganic compounds and CO_2 as the primary sources of energy and carbon for biosynthesis.

Chemoheterotrophy
The process in which organisms are using organic compounds as the primary sources of carbon and energy for biosynthesis.

Chemoprophylaxis
Preventive treatment with chemical agents such as drugs.

Chemosynthesis
The use of chemical energy instead of light to drive the assimilation of CO_2 as the sole carbon source for biosynthesis of cellular material; chemical energy comes from light-independent oxidation of inorganic electron donors.

Chemotaxis
The movement along a chemical lconcentration gradient either toward or away from a chemical stimulus.

Chemotroph
An organisms that derives its energy from reduced inorganic or reduced organic compounds.

Chlorophyll
A ubiquitous pigment that is responsible for light energy absorption in the photosynthetic apparatus of most marine phototrophs.

Childbed fever
Puerperal endometritis caused primarily by group A streptococci.

Chitin
Polysaccharide forming exoskeletons of some insects or cell walls of fungi.

Chlamydoconidia
Conidia that develop within hyphae.

Cholera
A particularly dangerous, quarantine communicable diseases caused by Vibrio cholerae, characterized by toxin-cal lesions of the small intestine, profuse diarrhea, a violation of water-salt metabolism.

Chorioallantoic membrane
The outer membrane surrounding an avian embryo within the egg shell.

Chorionic membrane
The outer extraembryonic membrane from which the placenta originates.

Chronic granulomatous disease
Genetic disorder causing absence of H_2O_2 production and myeloperoxidase activity of phagocytes. Results in repeated infections with catalase positive bacteria.

Chromosome
DNA molecule that contains all the genetic information necessary for the life of the bacterium. Most often double-stranded, covalently closed, circular, and self-replicating.

Chronic infection
Persistent infection by microorganisms.

Chronic release
Release of mature virions from infected bacteria by extrusion or budding; chronic release neither destroys the bacterium nor ends the phage infection.

Cilia
Surface structures of some eukaryotic cells that beat rhythmically to move mucus over surfaces or confer motility on some single-celled organisms.

Clone
Identical progeny of a single cell, gene, or genes.

Co-agglutination
Agglutination involving two organisms, one of which acts as an inert particle coated with specific antibody to the other.

Cocci
Spherical or oval bacteria typically arranged in clusters or chains.

Coccus
Spherical bacterial cell.

Co-cultivation
Process that can be used for unmasking latent virus by growing susceptible cells with those from affected tissue.

Coliform
An imprecise term referring to Gram-negative facultative bacteria generally resident in the intestine.

Colonial morphology
Features of isolated colonies of bacteria that vary greatly, such as shape, texture, color, and other features

Colostrum
Initial secretion of the breast after delivery (contains antibodies and lymphocytes).

Commensal
An organism participating in a relationship in which that species derives benefit while the other is unaffected.microbiome. The entourage of associated microflora in a host.

Communicability
Ability of an the organism to shed in secretions.

Competence
Development of the ability to bind and take up DNA from the medium.

Competent
A bacterial cell able to take up free DNA fragments.

Complement
A system of serum proteins that act in sequence to mediate inflammatory and some immune responses.

Concomitant immunity
The ability of adult worms from a primary infection to survive in a host resistant to reinfection.

Conidia
Asexual fungal reproductive spore-like bodies.

Conidiophore
Stalk-like fungal structure that bears conidia.

Conjunctivitis
Inflammation of the conjunctiva, which may involve cornea, sclera, or sclera.

Conjugation
Transfer of DNA between bacteria by a process requiring cell-to-cell contact. Unidirectional transfer of genetic information (in this article, a plasmid) involving direct cellular contact between a donor (male) and a recipient (female).

Conjugative pilus
An extracellular filament encoded by a conjugative plasmid involved in establishing contact between plasmid-carrying donor cells and recipient cells.

Constriction, septation
Mode of cell envelope invagination during division. During constriction all envelope layers move inward simultaneously and the daughter cells move gradually apart; septation involves the ingrowth of the cell envelope forming a T-like structure.

Conjugation, conjugative transfer
The process by which two bacterial cells make close contact with each other and transfer DNA from one to the other; segments of DNA can be quite large.

Continuous culture
An ‘open’ culture system in which fresh (sterilized) medium is introduced at a steady flow rate , from which the culture fluid is continuously removed at the same rate.

Core polysaccharide
Component of lipopolysaccharide that contains some unusual carbohydrate residues and fairly constant in structure among related species of bacteria.

Councilman bodies
Cytoplasmic eosinophilic masses produced from hyaline necrosis of hepatocytes caused by yellow fever or another arbovirus infection.

Counterimmunoelectrophoresis
A technique for increasing the sensitivity and speed of the immunodiffusion procedure by the application of an electrophoretic field.

Croup
Manifestations of laryngeal obstruction from inflammation or other causes.

Cultivation
Growing the bacteria on the nutrition environments in the laboratory.

Culture of cells
Somatic or embryonic stem cells in humans or animals, cultured in the laboratory conditions.

Cyanosis
Blue color of skin caused by lack of oxygen.

Cystic fibrosis Congenital disease of secreting glands affecting pancreas, respiratory tract, and sweat glands. Associated with viscid respiratory mucus and chronic respiratory infections.

Cytokine
Messenger proteins released by cells (lymphocytes, monocytes, etc) that mediate activities in other cells.

Cytokine storm
Caused by the secretion of cytokines from viral infection, producing cell damage rather than direct viral replication.

Cytology
The study of cells rather than of tissues and organs.

Cytoplasm
Grainy, granular or dispersed mixture of colloids consisting of water, proteins, lipids, hydrocarbons, DNA, RNA, and other substances.

Cytopathic effect (CPE)
The action of the virus into cells, which is their reproduction. CPE can manifest destruction (lysis) of infected cells measured neniem their morphology (size and shape change of the cell, the cell nucleus, the appearance of vacuoles, or inclusions, which are the intracellular concentrations of viruses, syncytium formation) and a violation of their functions.

Cytoplasm
Cellular contents excluding the nucleus.

Cytotoxin
Bacterial toxins that cause cell damage.

D

Dane particle
The complete and intact hepatitis B virus particle.

Darkfield microscopy
Method in which a condenser focuses light diagonally on the specimen in such a way that only light is reflected from particulate matter.

Decelerating phase
The period of time in the culture growth cycle in which nutrients are depleted, waste products are accumulated, and growth becomes progressively limited.

Defective interfering particles
Noninfectious genomes that interfere with the replication of the infectious virus.

Defensins
A family of microbial, cationic, cystine rich polypeptides abundant in the azurophilic granules of polymorphonuclear leukocytes.

Definitive host
Species in which the parasite reproduces sexually.

Dendritic cell
An antigen-presenting cell found in lymph nodes, spleen and thymus.

Defective interfering particles
Noninfectious genomes that interfere with the replication of the infectious virus.

Defensins
A family of microbial, cationic, cystine rich polypeptides abundant in the azurophilic granules of polymorphonuclear leukocytes.

Dermatophyte
Fungus that causes skin infections.

Dermis
Skin connective tissue immediately below the epidermis.

Diphtheria
An acute infectious disease caused by Corynebacterium diphtheriae, characterized by fibrosis, inflammation in the pharynx, larynx, and the phenomena of severe intoxication.

Diphtheria toxin
An A-B toxin that acts in the cytoplasm to inhibit protein synthesis irreversibly in a wide variety of eukaryotic cells.

Diploid
Possessing two sets of chromosomes.

Direct fusion
Method by which certain viruses enters a cell.

Direct transposition
Excision of the transposon from its original location and insertion in a simple cut-and-paste manner into its new site without replication.

Disease index
Number of persons who develop a disease divided by total number infected.

Disseminated infection
Infection that spreads throughout the body.

Disseminated intravascular coagulation (DIC)
A clinical syndrome with multiple causes. Thrombocytopenia and complex coagulation abnormalities are prominent.

Dissimilation
The oxidation of a reduced (in)organic compound to provide energy for biosynthesis and cell maintenance.

Dissociation
A form of spontaneous variability of bacteria, which arose after insertion into the chromosome of bacterio phage cells and R - plasmids.

Disease cycle
The chain of events involved in the life cycle of a pathogen and in the development of the disease caused by this pathogen.

DNA-mediated transformation
Pathogenic Neisseria are able to specifically transport DNA from the environment into recombination integrate it into the genome.

DNA polymerase
An enzyme that synthesizes new DNA using the parental strand as a template.

DNA replication
Process of copying parental strands of DNA to daughter strands, using DNA polymerases and other accessory proteins that initiate, prime, elongate, and terminate the process.

Drug resistance
Decreased susceptibility to antiviral usually due to changes in the amino acid residues of target enzyme.

Duplication
The production of a redundant segment of DNA, usually adjacent to the original segment.

Dysbiosis
A violation of the species composition of the normal intestinal infections and under the influence of infectious diseases, and as a result of prolonged or irrational use of antibiotics.

Dysentery
An infectious disease caused by bacteria of the genus Shigella, occurring with a primary lesion of the colon, severe intoxication and diarrhea.

Dysphagia
Difficulty in swallowing.

E

Eclipse phase
Period of infection in which no infectious viruses are found inside the cell.

Ecology of microorganisms
Section of Microbiology, studying the habitat (habitat) and the relationship of microorganisms to the environment.

Ecosystem
Community of living beings (biocenosis) and habitat (biotope).

Electrophoresis
Procedure for separating charged particles by differences in their migration in an electric field.

Elephantiasis
Grotesque swelling of the extremities and genitalia.

ELISA
Enzyme-linked immunosorbent assay (*See* **Enzyme immunoassay**).

Emerging fungal infections
Fungal infections caused by new or uncommon fungi.

Emerging infection
A newly identified and previously unknown infectious disease in humans, often resulting from a breach in the species barrier between humans and animals that carry the infectious agent. Since 1970, there have been over 40 emerging infections identified, causing diseases ranging from diarrheal disease among children, hepatitis, and AIDS to Ebola and Marburg hemorrhagic fevers.

Encapsidation
Process of enclosing the viral genome in a protein capsid.

Encephalitis
Inflammation of brain tissue.

Endotoxin
In Gram-negative sepsis, the lipid A components of LPS may stimulate macrophages and endothelial cells to overproduce cytokines and proinflammatory mediators. This can lead to septic shock, a syndrome involving hypotension.

End problem
In DNA replication, constraint on the completion of DNA chains on a linear template.

Endemic
A disease that is continuously present at subepidemic levels in a particular region, locality, or group.

Endonuclease
An enzyme of bacterial cell wall by binding to the antibiotic, forming holes in the shell mukopeptid-tion, which leads to the formation of protoplasts and spheroplasts.

Endonuclease
Enzyme of a class that hydrolyzes internal bonds of DNA or RNA. Involved in synthesis and breakdown of nucleic acids.

Endospore
A heat- and chemical-resistant spore within some Gram-positive bacteria.

Endotoxin
A toxic lipopolysaccharide moiety of the Gram-negative bacterial cell wall outer membrane.

Enteric fever
Prolonged febrile illness originating in the gastrointestinal tract. Typhoid fever is the prototype.

Enterobacteriaceae
A family of the Proteobacteria that includes Escherichia coli and related Gram-negative bacteria.

Enterobactin
A phenolate siderophore produced by *E coli* and some other enteric species of bacteria.

Enterohemorrhagic E. coli (EHEC)
A bacterium that causes hemorrhagic colitis.

Enteropathogenic E. coli (EPEC)
A bacterium that causes diarrhea after colonization of the mid-distal small intestine.

Enterotoxigenic E. coli (ETEC)
The bacterium that is the most common agent of watery 'tourist's' diarrhea.

Enterocytes
Intestinal epithelial cells.

Enterotoxin
Bacterial exotoxin that affects the intestinal mucosa causing vomiting and/or diarrhea.

Enteroviruses
Enteric viruses, the genus of viruses of the family Picornaviridae, which includes Coxsackie virus A and B, ECHO.

Environmental factors
Environmental conditions to which organisms respond to adaptive responses.

Enzootic
Disease present at low levels at all times in an animal community.

Enzymes
Proteins that catalyze chemical reactions which otherwise would occur only slowly if at all; extracellular enzymes are held near the surface of the cell or released into the environment.

Enzyme immunoassay
A method for detecting antigen–antibody reactions by labeling one of the reagents with detectable enzyme marker.

Epidemic
A disease that rapidly affects many people in a circumscribed period of time.

Epidemiology
Epidemiology classically studies the health and illness of a population; but herein is defined as the study of the combination of clinical presentation of disease, identification of the pathogen, the distribution of the pathogen in a population, and other factors to deduce where an infection began and how it spread throughout a population

Episome
Plasmid or viral DNA that can replicate extra-chromosomally or can integrate into chromosome.

Eradication
The complete interruption of transmission of an infectious disease and the disappearance of the virus, bacterium, or parasite that caused the infection. The only infectious disease that has been eradicated is ‘smallpox’, which was certified as eradicated in 1980.

Erysipelas
Rapid-spreading infection of the deep layers of the dermis caused by group A streptococci with risk of bacteremia.

Erythema
Red color in tissues and skin caused by dilatation of blood vessels.

Erythema migrans
The expanded bulls-eye lesion associated with Lyme borreliosis.

Erythrocyte
Red blood cell.

Etiology
Cause of a disease.

Eubiotics
Biological preparations, cooked of living bacteria, representatives of the micronormal bowel flora, which are used to treat imbalances, call (bifidumbacterin, colibacterin, lactobacterin, etc.).

Eukaryotes
Have a separate core and morphologically divided metoticheski resemble plant and animal cells (fungi, algae, protozoa).

Exocrine glands
Glands excreting their products to skin, intestinal, respiratory, or genitourinary tracts.

Exogenote
An external molecule of DNA introduced into a recipient.

Exogenous allergy
A form of allergy, in which living and nonliving allergens enter the body from the outside.

Exotoxin
A soluble protein produced by a microorganism that can enter a host cell and catalyze the covalent modification of a cellular component to alter host cell physiology.

Exponential (or logarithmic) growth period
The period of time in the culture growth cycle in which the growth rate is maximal and constant.

Extrinsic incubation period
The period of time required for virus multiplication to enhance the capacity to transmit infection to vertebrates by bite.

F

Facultative
Bacteria able to grow aerobically or anaerobically.

Fc fragment
The stalk of the Y-shaped antibody structure.

Fecal–oral spread
Direct or finger-to-mouth spread of infection, the use of human feces as a fertilizer, or fecal contamination of food or water.

Feedback inhibition
Process in which the end product of the pathway controls the activity of the first enzyme in the pathway.

Fermentation
An anaerobic type of metabolism in which organic compounds are degraded in the absence or without the use of external electron acceptors. A mixture of oxidized and reduced metabolites is produced and secreted by cells.

Fibroblast
Specialized cell producing collagen and elastic connective tissue.

Facilitated diffusion
Movement of molecules across a membrane from higher to lower concentration mediated by proteins that permit the passage of specific molecules only.

Filament
Structure that consists of polymerized molecules of a single protein species called flagellin.

Filamentous hemagglutinin (FHA)
A rod-like protein with the ability to bind to and agglutinate erythrocytes in *Bordetella.*

Filtration
Method by which both live and dead microorganisms can be removed from liquids, by positive- or negative-pressure filtration.

Fimbriae (pili)
Surface adhesins that mediate bacterial adherence to host cells.

Firmicutes
A monophyletic group of Gram-positive bacteria whose genomes possess low GC content. The mollicutes are a subgroup of the firmicutes.

Fission
A mode of vegetative reproduction found in the yeast genus Schizosaccharomyces. Fission yeasts grow lengthwise and divide by forming a cell septum that

Flagellae
Surface structures that provide bacteria with motility and the ability to move toward nutrients and away from toxic materials (chemotaxis).

Flagellum
A proteinaceous filament of several micrometer length that enables bacterial motility. Through a basal body, it is integrated into the cell envelope. Proton motive force drives a rotor located in a stator.

Fluorescence
Light emitted by a substance when irradiated with light of a shorter wavelength.

Fluorescin
Yellow dye produced by *P aeruginosa* and other free-living less pathogenic *Pseudomonas*.

Fluorochrome
A fluorescent dye.

Fomites
Inanimate objects transmitting infectious agents.

Formaldehyde
An alkylating agent whose vapor can be used without pressure to decontaminate larger areas such as rooms.

Frameshift mutation
Change in the reading frame by which the ribosomes translate the mRNA from the mutated gene.

Fulminant
Rapid and severe development (eg, of an infection).

Fungemia
Fungi in the bloodstream.

Funiculitis
Inflammation a cord-like structure, usually the spermatic cord.

Furuncle
Purulent infection of a hair follicle; a boil.

Fusiform
Tapering at both ends.

G

Gametocyte
Male or female sexual cell of the malarial parasite found in the blood of humans and transmissible to mosquitoes.

Ganglion
Group of nerve cells outside the spinal cord.

Gangrene
Death of tissue.

Gene
Physical unit of heredity. Structural genes, which make up the majority, consist of DNA segments that determine the sequence of amino acids in specific polypeptides. Other kinds of genes exist. Regulatory genes code for synthesis of proteins that control expression of the structural genes, turning them off and on according to circumstances within the microbe.

General secretory pathway (GSP)
The simplest and most common mechanism for protein secretion used by both Gram-positive and Gram-negative bacteria.

Genome
The complement of genes present in a living organism that determines its taxonomic structure, metabolic characteristics, behavior, and ecological function.

Genetic drift
Changes in gene frequency caused by the random sampling of genes during transmission across generations (rather than by natural selection).

Genetic engineering
Methods by which the genomes of plants, animals, and microorganisms are manipulated, and includes but is not limited to recombinant DNA technology.

Gene transfer agent
A prophage-like element that promotes generalized transduction of bacterial DNA but cannot replicate to form infective phage particles.

Generalized transduction
The phage-mediated transfer of any region of bacterial DNA from one bacterium to another. Generalized transduction can be mediated by temperate or virulent phage.

Genotype
Classification based on genetic constitution. Genes possessed by organism.

Genus
A well-defined group of species that is clearly separate from other micoorganisms.

Giemsa stain
A combination of basic and acidic dyes used to stain blood smears and to demonstrate some protozoa.

Glomerulonephritis
Inflammatory disease of the kidney glomeruli.

Glomerulus
Microscopic organ of specialized capillaries in the kidney that filters waste products from the blood.

Glycosidase
An enzyme of bacterial cell wall.

Glutaraldehyde
Alkylating agent highly lethal to essentially all microorganisms.

Gnotobiotic
Animals reared under aseptic conditions, which may either be sterile ("germ free") or in which defined microflora are introduced.

Golgi
Eukaryotic cellular organelle composed stacks of folded sacs, which prepare materials for secretion and other cellular processes.

Gnotofor
An animal that contains one or more microorganisms.

Gonococcus
Gram-negative diplococci family Neisseriaceae, causing gonorrhea in humans and blenorheu.

Gonorrhea
A sexually transmitted infection in anthroponotic diseases, caused by the gonococcus, characterized by purulent inflammation of the mucous membranes of the genitourinary system issues and the mucous membrane of the eye in the newborn (ophthalmia).

Gram-negative shock or endotoxic shock
Fever and shock syndrome brought on by an endotoxin.

Gram-negative bacteria
A group of bacteria with cell envelopes composed of two membranes, the inner and the outer, lipopolysaccharide-containing membranes as well as thin peptidoglycan cell wall layers.

Gram-positive bacteria
Two groups of bacteria, both with thick peptidoglycan cell layers. One group, the low Gram-positive bacteria, lacks an outer membrane. The other, the high Gram-positive 'acid-fast' bacteria, has a thick outer cell membrane overlying the cell wall.

Group translocation
Process that involves the chemical conversion of the solute into another molecule as it is transported.

Growth medium
An aqueous solution containing all the nutrients necessary for microbial growth

Gumma
Soft, gummy granulomatous lesion which is one of the features of tertiary syphilis.

H

H antigen
Antigenic term for the flagella of bacteria of the Enterobacteriaceae family.

Halophilic
Preferring or requiring a high salt content (eg, for growth).

Haploid
Half the number of chromosomes of eukaryotic tissue cells (See **Meiosis**) or number of chromosomes in asexual organisms.

Hapten
A molecule not immunogenic by itself but with the ability to elicit antibody production when attached to a larger molecule.

Heat-stable enterotoxins
Soluble peptides that are secreted by bacteria, which bind to host cells and stimulate a signal transduction pathway within the host cell.

Heat-shock response
A phenomenon in which up to 20 genes may be transcriptionally activated on an upward shift in temperature or on imposition of several kinds of chemical stress.

Helicobacter pylori
Helicobacter pylori is one of the most common bacteria affecting humans, colonizing more than half of the world's population. H. pylori colonizes the gastric mucosa, frequently persisting for the entire life of the host.

Helper T (T_H) cell
T cell needed for effective presentation to B cells.

Hemadsorption
Adherence of red blood cells to a surface.

Hemagglutination
Agglutination of erythrocytes by binding of antibody or microorganisms.

Hemagglutination reaction
is applied to the ob-servation hemagglutinating virus in the culture fluid of infected cell cultures or horionallantoisnoy or amniotic fluid of chicken embryos.

Hemagglutinin
Specific glycoprotein molecules on the surface of some viruses, which have the property of binding to the surface of the red blood cells of some animal species.

Because there are multiple binding sites, one virus can bind to two red cells causing them to clump (agglutinate).

Hemoglobulinemia
Free hemoglobin in the blood.

Hemolysin
A substance or enzyme causing lysis of erythrocytes.

Hemolysis
Disruption of red blood cells with liberation of hemoglobin.

Hemolytic–uremic syndrome
A syndrome that includes hemolytic anemia, thrombocytopenia, and renal dysfunction.

Hemorrhagic colitis
Bloody diarrhea caused by enterohemorrhagic E. coli (EHEC).

Hepatocellular
Pertaining to liver cells (hepatocytes).

Heteroploid
Eukaryotic cell with abnormal number of chromosomes.

Heterotrophs
Microorganisms growing on an organic compound that provides carbon and energy.

Heterotroph
A microorganism that requires organic carbon as energy and carbon source. At hydrothermal vents, heterotrophs degrade biomass and organic substrates derived from chemolithoautotrophic bacteria and archaea; in the surface biosphere, heterotrophs rely on photosynthetic biomass.

Heterotrophy
Organic compounds are utilized as carbon sources.

Heterozygous
Possessing different alleles at a particular genetic locus in a diploid cell.

Hexamer
In virology, a capsomer comprising six subunits.

Hilar lymph nodes
Nodes at the root of the lung.

Histiocyte
Tissue macrophage.

Histocompatibility
Antigens on tissue cells that are recognized by the host as self or foreign.

Homeostasis
Tendency to stability of conditions within a complex biologic system.

Homozygous
Possessing the same alleles at a particular genetic locus in a diploid cell.

Horizontal transmission
Spread of infection through an animate insect vector.

Host range
The limited spectrum of cell types that a virus is capable of infecting.

Humoral
Mediated by fluids. In immunology relates to antibody-mediated immunity as opposed to cellular immunity.

Humoral immune response
The production of antibodies that circulate through the blood and other body fluids, binding to antigens, and helping to destroy them.

Humoral immunity
Host defenses that protect against extracellular pathogens and are mediated by B cell-secreted antibodies present in the plasma, lymph, and tissue fluids.

Hyaluronic acid
Acid mucopolysaccharide comprising the ground substance of connective tissue. Also found on bacterial surfaces.

Hyaluronic acid capsule
A polymer containing repeating units of glucuronic acid and *N*-acetylglucosamine.

Hybridization
Process in which denatured, single-stranded nucleic acids from different sources are annealed.

Hybridoma
A clone derived from fused cells of different origin (eg, from an antibody producing lymphocyte and a tumor cell).

Hydrolases
Bacterial enzymes (esterases, proteases, nucleases), causing hydrolysis of the substrate.

Hypersensitivity
Exaggerated and harmful immune response to a normally innocuous antigenic stimulus.

I

Identification
The definition of species specificity of the microorganism.

Ig
Abbreviation for immunoglobulin antibodies. Classes include IgG, IgM, IgA, IgD, IgE, and sIgA.

Immune body
The body, the mechanisms which do not allow him to violate the constancy of the internal environment or quickly eliminate the violation.

Immune status
A complex of nonspecific and of the specific mechanisms for the antibacterial, antiviral and antitumor defense of organisms. Structural and functional state of the human immune system, defined by a complex of clinical and laboratory immunological parameters.

Immunization
A method of creating an artificial immune system to prevent the definition of the universe of infectious disease.

Immunity
Immunity to infectious diseases for. Way to protect the organism from genetically family living bodies and substances.

Immunity of the species
A hereditary, congenital.

Immunocompromise
Deficiency in some components of the body's immune mechanisms.

Immunocompetent
An individual with a normal immune system; the individual is capable of developing an immune response to an infection.

Immunocompromised
An individual whose immune system is compromised in some way, the individual lacks the ability to mount a normal immune response to an infection and is often unable to resist or fight off infection.

Immunocyte
Cell of the lymphoid series that responds to an antigenic stimulus by producing antibodies or initiating cell mediated immune processes.

Immunogenicity
A violation of the immune status of human age, poor functioning of the immune system, its failure to perform cellular and protective sectoral response.

Immunodiffusion
A procedure involving diffusion of antigen and antibody toward each other in a gel. A visible precipitate develops where optimal concentrations interact.

Immunofluorescence
A microscopic procedure using antibody labeled with a fluorescent dye that allows visible detection of sites of reaction with antigen.

Immunogen
An antigen that induces an immune response.

Immunogenetics
The science that studies the inheritance of intraspecific and interspecific antigenic differences, howling tissue incompatibility and the inheritance of immunity.

Immunogenicity
The ability to induce antigen-organisms in the maximum immune response.

Immunological tolerance
The lack of immune response of the organism ¬ tion of the effect of antigen, the ability to produce immunoglobulins of the effect of antigen to in the immune response interact only T-and B-lymphocytes.

Immunomodulators
A group of biologically active substances that can stimulate or weaken the immune defenses.

Immune status
Structural or functional state of the human immune system, defined by complexes of clinical and immunological laboratory of indicators.

Immunoblotting
A highly sensitive method based on a combination of structed electrophoresis and enzyme immunoassay or radioimmunoassay.

Immunofluorescence assay (IFA)
Based on the fact that the tissue antigens or bacteria treated with pulse splits hyaluronic acid, which is part of becoming ¬ intercellular substance.

Immunoglobulins
Are a heterogeneous group of proteins and their physico-chemical properties of sub-divided into five classes: IgM, IgG, IgA, IgD, IgE

Immunogram
Advanced clinical analysis of blood integer due to the introduction of indicators to measure subpopulations of T, B and null lymphocytes, helper and suppressor populations of T-lymphocytes.

Immunological memory
The ability of lymphoid cells responding reinforced by reaction with another meeting with the homologous antigen, to react more actively and to build immunity strictly according to the type of the secondary immune response.

Immunology
The science that studies the features of the formation of the protective mechanisms of immunity to infectious diseases.

Immunotherapy
treatment of infectious diseases her vaccines, serums, immunoglobulins.

Intermediate host
Species in which the parasite reproduces asexually.

In vitro
Occurring in the test tube.

In vivo
Occurring in the living animal.

Incidence
The number of new cases of a disease within a specified period.

Inclusion body
A morphologically distinct intracellular mass of viruses or virus components.

Inclusion bodies
Precipitated and denatured proteins inside a cell. These are usually formed in bacteria when a heterologous protein is overproduced.

Incubation period
Time between exposure to an organism and appearance of the first symptoms.

Indirect samples
Specimens of inflammatory exudates that have passed through sites known to be colonized with normal flora.

Induction (prophage induction)
The transition of a lysogenic infection to a productive one, involving expression of numerous prophage genes that otherwise remain quiescent in an uninduced lysogen.

Influenza
An acute respiratory viral infections, mass function, which is characterized by fever, intoxication and inflammation of the mucous membranes of the upper respiratory tract.

Innate immunity
Nonspecific host defenses that occur rapidly in response to a pathogen and involve anatomic, physiologic, endocytic, phagocytic, and inflammatory mechanisms.

Insertional mutagenesis
Mechanism in which the viral promoter or enhancer is sufficient to cause the inappropriate expression of a cellular gene residing in the immediate vicinity of the integrated provirus.

Integument
Enveloping layer, eg, skin, membrane, or cuticle.

Integrins
Family of transmembrane proteins of eukaryotic cells that interact with extracellular matrix and cytoskeleton proteins

Interference
Method of viral detection in cell culture in which the infecting virus can be detected by challenging the cell culture with a different virus.

Interferon
Class of cytokines that have nonspecific antiviral activity.

Interleukin
Class of cytokines produced by macrophages or T cells that mediate growth and differentiation of cells, particularly lymphocytes.

Interstitial
Spaces between the cells of a tissue.

Insertional mutagenesis
Mechanism in which the viral promoter or enhancer is sufficient to cause the inappropriate expression of a cellular gene residing in the immediate vicinity of the integrated provirus.

Invasin
A class of molecules that either directs bacterial entry into cells or provides an intimate direct contact between the bacterial surface and the host cell plasma membrane.

Inversion
Change in the direction of a segment of DNA by splicing each strand of the segment into the complementary strand.

In vitro and in vivo
Describing or referring to studies carried out in the test tube and in animals, respectively.

Iodine
An effective disinfectant that acts by iodinating or oxidizing essential components of the microbial cell.

Iodophors
Agents that are combined with carriers (povidone) or nonionic detergents that gradually release small amounts of iodine

Ionizing radiation
Light that carries greater energy than ultraviolet light, causes direct damage to DNA, and produces toxic free radicals and hydrogen peroxide from water within the microbial cells.

Isoantigen
Normal substance present in one individual that may elicit an antibody response in another.

Isomerase
Enzymes involved in carbohydrate exchange no.

Isotonic
Of the same osmotic pressure as a solution on the other side of a semipermeable membrane.

K

K antigen
Antigenic term for surface polysaccharides of the Enterobacteriaceae bacteria.

Kaposi's sarcoma
Multiple malignant vascular tumor. Occurs most commonly as a complication of AIDS.

Keratitis
Inflammation of the cornea of the eye.

L

Labile toxin (LT)
An AB toxin that has the physical property of heat lability.

Lag period
The period of time during the culture growth cycle in which growth is not detectable.

Latency
A quiescent period of infection when most or all of the viral lytic genes are silenced, and the virus is not making progeny virus.

Latent period
The length of time from the beginning of infection until progen virions are found outside the cells.

Latex beads
Used to adsorb soluble antigens. The treated beads agglutinate with specific antibody.

Legionellosis (Legionnaires' disease)
An acute infectious disease caused by Legionella pneumophila with severe general intoxication, lesions of the lungs and other organs.

Leishmaniasis
Protozoan disease of humans and animals caused by leishmania is transmitted by mosquitoes, is characterized by lesions of internal organs (visceral leishmaniasis) or the skin and mucous membranes (cutaneous leishmaniasis).

Lentiviruses
HIV-1 and HIV-2, which cause AIDS, are lentiviruses.

Leptospirosis
An infectious disease caused by Zeptospira interrogans, characterized by lesions, blood venosnyh kapilllyarov, liver, kidneys, muscles, central nervous system.

Leptospires
Aerobic thin, spiral bacteria from a number of spirochetes.

Leukemia
Malignant tumor of white blood cells.

Leukocyte
White blood cells including granulocytes, lymphocytes, and monocytes.

Life cycle
The stages in the growth and development of an organism that occur between two successive occurrences of the same stage, for example, sporulation of the organism.

Limitation of growth
The restriction on microbial growth by the availability of the nutrient that is first consumed to completion even when all other essential nutrients are present in excess. This growth-limiting nutrient determines the maximum amount of biomass that can be formed in this system; at low concentrations in batch culture and in the chemostat it also determines the rate (kinetics) of growth.

Lipid
A phospholipid containing glucosamine.

Lipopolysaccaride
Special molecular in the outer leaflet of the Gram-negative cell membrane, which is toxic to humans.

Lipoprotein
Classes of conjugated proteins in which proteins are combined with a lipid (fat) such as cholesterol. These complexes are the form in which lipids are transported in the circulation. Lipoproteins are classified by their density and chemical properties.

Lipid
A phosphorylated glycolipid common to all Gram-negative bacterial lipopolysaccharides.

Lipoteichoic acid
A type of teichoic acid linked to a glycolipid in the underlying Gram-positive cell membrane.

Listeriosis
Zoonotic infectious disease in human proceeds according to the type of sepsis with lesions of the central nervous system, tonsils, lymph nodes, liver and spleen. The reservoir of infection - many species of rodents, agricultural

Lymph
Tissue fluid derived from the bloodstream and passing to the lymphatics.

Lymphokines
Polypeptides that are generated during the interaction of T and B lymphocytes.

Lymphocyte
Specialized white blood cells whose function is to identify and destroy invading antigens, are subdivided into B and T cells.

Lysine
specific antibodies, causing the solvent-renie bacteria, plant and animal cells.

Lysogenicity
The ability of lysogenic bacteria to lysis when prophage is released from the bacterial genome, repro-induces and becomes virulent bacteriophage.

Lysozyme
Mucolytic enzyme that destroys mureinovy layer of the bacterial cell. Contained in the following gases, saliva, serum, leukocytes, human milk and tissues of the human body.

Lysis
Release of mature virions from an infected bacterium via the destruction of both the bacterium and the phage infection.

Lysogen
A bacterium that harbors a prophage.

Lysogeny
A phage infection in which phage virions are not produced and the phage genome replicates only so as to continue infecting bacterial progeny as they are produced via binary fission. Typically, this involves phage existence as a prophage that is integrated into the bacterial genome.

Lysosome
Intracellular organelle containing hydrolytic digestive enzymes.

Lysozyme
Enzyme that breaks down bacterial peptidoglycan.

Lytic cycle
A productive infection that ends with bacterial lysis and release of free phage.

Lytic phage
A phage that displays a lytic cycle given productive infection; an obligately lytic phage cannot display a lysogenic cycle.

M

M cell
Specialized antigen delivery cell of the intestinal mucosa.

Macrophage
Mononuclear phagocytic leukocytes that play roles in adaptive and innate immunity. There aremany types of macrophage present in blood or fixed in tissues.

Maintenance therapy
Drug treatment given for a long time to maintain its effect after the condition has been controlled or to prevent recurrence.

Measles
An acute viral disease, characterized fever, catarrhal inflammation of mucous membranes and upper respiratory tract and eyes, and rashes on the skin, intoxication and poppy useful to the top of his respiratory tract infection occurs stuffy-droplets.

Membrane attack complex
Complement proteins inserting in membrane.

Memory cell
Immunce T-cell which recalls past experience.

Meningitis
Inflammation of the meninges that are membranes covering the brain and the spinal cord, resulting from a bacterial or viral infection.

Meningococcemia
Infection of the bloodstream by meningococci in the absence of meningitis

Mesophiles
Organisms that grow optimally in the middle temperature range, usually defined by the ambient temperature on Earth's surface (20–42^{o}C).

Mesophilic
Thermal descriptor for cultured members of the domain Bacteria or Archaea that reproduce at a minimal temperature of 10^{o}C, optimal temperature near 37 ^{o}C, and maximal temperature of 45 ^{o}C.

Mesosome
A complex invagination of the bacterial cell membrane.

Metagenomics
Large-scale sequencing of DNA isolated or cloned from microbial communities in the environment, which may be analyzed for genes and genomes using computational analysis.

Microaerophilic
Growth is best at oxygen concentrations between atmospheric and anaerobiasis.

Microbial ecology
The study of interactions and relationships between microorganisms and their environment.

Microbiota
Complex bacterial population that is normally found in a site on the human body; usually protective or neutral with respect to human health.

Microbiota shift disease (dysbiosis)
Disease that results from a shift in the composition of the microbiota rather than from invasion by a single pathogen.

Mitochondria
Complex cytoplasmic organelles of eukaryotic cells involved in oxidative phosphorylation.

Mixis
Production of a new genotype by recombination of genes from two sources.

Mobilizable plasmid
Conjugal plasmid that carries an origin of transfer (oriT) but lacks genes coding for its own transfer across the bacterial envelope.

Molecular mimicry
Epitopes of infectious agents that stimulate immune reactions to host tissues as well as the homologous antigen.

Monoclonal
Derived from a single cell.

Morphology
The shape, size, and form of an organism or cell.

Mother cell
One of the two cells formed by the sporulation division. It is required for spore formation but ultimately lyses. It is sometimes called the sporangium.

Mumps epidemic
An acute viral infection of children, characterized by the defeat of the parotid salivary glands and in some cases other organs.

Mumps
An infectious disease caused by viruses catfish genus Paramyxovirus. The virus is transmitted from the saliva.

Muropeptide
Each of the monomeric subunits of peptidoglycan.

Mutagen
Substance that increases the mutation rate of cells or organisms.

Mutations
Changes to the base pair sequence of the genetic material of an organism.

Mutation
Any inheritable alteration of DNA. operon Adjacent genes coordinately expressed.

Mycelium
The mass of hyphae that forms the vegetative and aerial parts of the streptomycete colony before sporulation.

Mycolic acid
A long-chain organic acid found in the waxy cell envelope of mycobacteria and related acid-fast high Gram-positive bacteria.

Mycology
Science devoted to the study of fungi.

Mycosis
A fungal infection.

Mycoses or mycotic infections
Diseases caused by yeasts or molds.

Mycotoxin
Toxin formed by fungi in the environment.

N

Narrow-spectrum agent
Highly active against many Gram-positive and Gram-negative cocci, but little activity against others, such as enteric Gram-negative bacilli.

Natural selection
Changes in gene frequency caused by specific detrimental or beneficial effects of those genes

Neuraminidase
An enzyme, present on the surface of some viruses, which catalyzes the cleavage of a sugar derivative called neuraminic acid.

Non A, non B hepatitis
Term used to identify hepatitis not due to hepatitis A or B, but now rarely used because of the discovery of other specific hepatitis viruses.

Noncommunicable infection
Not transmitted from human to human.

Nonpermissive cell
Cell that does not allow virus to replicate, but may be able to transform the cell.

Normal flora
Microorganisms frequently found in body sites in normal healthy persons.

Nosocomial
Acquired within a hospital.

Nucleocapsid
The nucleic acid and surrounding protein coat (capsids) that form the basic structure of viruses.

Nucleoid
The double-stranded circular DNA genome of a bacterium.

Nucleolus
Round body within a eukaryotic nucleus that is the site of synthesis of ribosomal RNA.

Nutritional categories of microorganisms
Categories based on the principal carbon (CO_2 or reduced organic compounds) and energy sources (light or reduced (in)organic compounds) of microorganisms; there are four nutritional categories: photoautotrophs, photoheterotrophs, chemoautotrophs, and chemoheterotrophs.

Nutrient
An organic or inorganic compound that is used by microorganisms as a building block for the synthesis of new cell material. In a wider sense, also compounds not incorporated into the microorganism, but serving as a source of energy or as terminal electron acceptor. Nutrients are grouped into classes depending on the physiological purpose they serve, the quantity required, and whether or not they are essential for growth.

Nucleoid
A term for the bacterial chromosome when it is in a compact configuration, either inside a cell or as an isolated structure.

Nucleoplasm
The DNA-containing region in the bacterial or archaeal cell.

O

O antigen
Antigenic term for outer membrane lipopolysaccharide of the Enterobacteriaceae family of bacteria.

O antigen polysaccharide side chain
The major surface antigen of Gram-negative cells.

Obligate parasites
Microorganisms, in which all life cycle stages associated with macroorganisms (rickettsiae, chlamydiae, and viruses).

Oncogene
Gene whose activation is associated with malignant change and progression.

Oncoretrovirus
One of two major groups of retroviruses that infect humans. They

Opportunistic infections
Infections caused by saprophytic fungi or not true parasites.

Opportunistic organism
An organism that is generally harmless and becomes pathogenic in an immunocompromised host.

Opportunist
A microorganism that causes disease only when the body's defenses are compromised or bypassed.

Opsonin, opsonization
Antibody or complement coating of microbes, which facilitates their phagocytosis.

Opsonins
Normal antibodies and immune sera, modifying microorganisms and preparing them for more intensive fagotsitirovany.

Organotropnost
The ability of pathogenic bacteria in certain bodies reflects host.

Ornithosis
Zoonotic disease of feral, you predicted by the Chlamydia psittaci and characterized by fever, intoxication, lung damage, nervous system, enlarged liver and spleen.

Orchitis
Inflammation of a testis.

Organelles
Membrane-bound cytoplasmic structures of eukaryotic cells, which perform specific functions.

Osteomyelitis
Inflammation of bone marrow and adjacent bone.

Otitis externa
Unflammation of the ear canal with purulent ear drainage.

Outer membrane
The outer lipid bilayer of many prokaryotes and some eukaryotic organelles. In

Gram-negative bacteria, they consist of an outer lipopolysaccharide leaflet and an inner phospholipids leaflet plus proteins. In high Gram-positive bacteria, the outer membranes incorporate mycolic acids.

Oxidase
Oxidation-reduction enzyme that catalyzes transfer of electrons to molecular oxygen with formation of water.

P

Pandemic
Worldwide severe epidemic.

Panencephalitis
Inflammation of all tissues of the brain.

Papule
Small, firm, elevated nodule on the skin.

Parasite
An organism participating in a relationship in which that species derives benefit while the other is harmed.

Parasitism
Describes the relationship between parasite and host.

Parenteral
Administration by injection rather than by mouth.

Parotid glands
Salivary glands beneath the cheek.

Passive immunity
The transfer of antibodies from one person to another.

Passive transport
Diffusional passage of a compound across a membrane.

Pasteurization
Process of heating milk or other liquids to destroy microorganisms.

Pathogenesis
The process by which a disease occurs.

Pathogenic
Capable of causing disease.

Pathogenicity island
Large block of genes found on the bacterial chromosome, which have fundamental characteristics that are different from the rest of the genome of the current host organism.

Penicillin-binding proteins (PBPs)
Proteins involved in bacterial peptidoglycan assembly outside the cytoplasmic membrane. They bind specific antibiotics.

Peptidoglycan
A bacterial wall component built from glycan chains interconnected by cross-linked peptide side chains. The glycan chains are made up of disaccharide units, which are composed of N-acetylglucosamine and N-acetylmuramicacid. Crosslinking through the peptide side chains provides for a strong network.

Peptone
Protein hydrolysed product used as a source of amino acids in bacterial culture media.

Periplasm / periplasmic space
Is the compartment between the cytoplasmic membrane and the outer membrane in Gram-negative bacteria.

Permease
A proteinaceous system functioning in the transport of specific substances through a membrane.

Permissive cell
Cell that permits production of progeny virus particles or viral transformation.

Permease
A proteinaceous system functioning in the transport of specific substances through a membrane.

Persistence
Long-term or long-term preservation of the circulation of the causative agent in a particular organism.

Peyer's patches
Lymphoid follicles in the ileum.

Phage
Common abbreviation for bacteriophage.

Phagocyte
A cell that ingests foreign material.

Phagolysosome
The digestive vacuole formed by fusion of the cell lysosomes with the phagocytic vacuole.

Phenol
A potent protein denaturant and bactericidal agent.

Phenotype
The properties expressed by the complete genome under particular conditions.

Phosphotransferase system (PTS)
A multicomponent system for the transport of carbohydrates into the bacterial cell. The PTS is composed of two general energy-coupling proteins and a set of sugar-specific permeases. The incoming sugars are phosphorylated at the expense of phosphoenolpyruvate concomitant with their transport.

Phospholipid bilayer
A membrane consisting of two leaflets, each composed of phospholipid.

Photoautotrophs
Microorganisms that use light for energy and carbon dioxide for their carbon source. An organisms that derives its energy from sunlight, usually through the process of photosynthesis.

Photoautotrophy
The use of light and CO_2 as the primary sources of energy and carbon for biosynthesis.

Photoheterotrophy
The use of light and reduced organic compounds as the primary sources of energy and carbon for biosynthesis.

Phylogeny
Inference of evolutionary relationships among microorganisms based on the extent of nucleotide or amino acid sequence differences among orthologues.

Piedra
Infection of the hair characterized by black or white nodules attached to the hair shaft.

Pilot proteins
Accompany the phage genome into the bacterial cell and serve the function of "piloting" the nucleic acid to a particular target.

Pili
Proteinaceous filaments on a bacterial cell surface that can adhere to other organisms, notably eukaryotic epithelia. Their dimensions are markedly smaller than those of flagella.

Pilus
Fibrillar structure on the surface of a bacterial cell.

Pinocytosis
Uptake of fluids into a cell by a mechanism analogous to phagocytosis.

Plaque
A patch or flat area. An area of lysis in fixed host cells by an infecting virus.

Plasma
Noncellular component of whole blood.

Plasma cells
Key immune system cells, which synthesize antibodies.

Plasmid
Extrachromosomal, circular DNA molecule employed to introduce DNA fragments into a host organism.

Plasmids autonomous, integrated
Mobile genetic structure of bacteria, representing a closed of the ring double-stranded DNA.

Plasmids were integrated
Including the additional DNA in respect to bacterial cells associated with chromosome.

Plasmids pathogenicity
Monitor-integer rulentnosti and pathogenicity of bacteria.

Plasmin
Derived from plasminogen; dissolves fibrin.

Platelet
Small anucleate cell involved in filling small holes in blood vessels and in clotting mechanisms.

Pleomorphism
Variation in shape and size.

Pneumonic plague
Highly contagious pneumonia secondary to bubonic plague that is transmitted person to person by the respiratory droplet route.

Poliomyelitis
Selective destruction of anterior motor horn cells in the spinal cord and/or brainstem.

Polyene antibiotics
Natural antibiotic, pro-dutsiruemye different species Streptomyces, bind to the cytoplasmic membrane of ergosterol, resulting in out of the cells with low molecular weight compounds (nystatin, amphotericin B).

Polyclonal activation
Simultaneous activation of different antibody producing clones of lymphocytes.

Polymerase chain reaction
Continuous enzyme-mediated amplification of a nucleotide sequence that allows its detection and analysis.

Polymorphonuclear
Two or more lobes to the nucleus.

Polymyositis
Inflammation of many muscles. Poliomyelitis an acute viral disease that characterize the damage to the nervous system, inflammatory changes of nasal mucosa and intestines; epidemic disease caused by polio virus, which affects the nervous system, causing paralysis.

Polymyxins
Antibiotics such as deterministic cations reagents that violate the cytoplasmic membrane of literacy ritsatelnyh bacterial toxins.

Population
Group of individuals belonging to the same species and living in close proximity, so that individuals may potentially recombine their genes, compete for limiting resources.

Potential division sites
Cellular sites beyond the nucleoid areas. They occur at cell pole or in the cell center, provided that the nucleoids have segregated.

Premunition
Host-mounted immunologic response that limits parasite multiplication and moderates the clinical manifestations without eliminating the infection.

Prevalence
Indicates the total number of cases existing in a population.

Primary cultures of cells
Obtained directly from the tissues of multicellular organisms, which are usually not able to divide (neperevivaemye) and used one fold.

Primary production
Is the formation of organic compounds from inorganic carbon species using light or

chemically derived energy.

Primary response
The result of an initial contact with a new antigen.

Prion
Infectious agent composed only of proteins and appears to be responsible for some transmissible and inherited spongiform encephalopathies in animals and humans. Name given to certain unconventional pathogens, suggesting their apparently proteinaceous and infectious nature.

Productive infection
Phage infection that results in production of free phage.

Prodrome
The further reproduction and co-activator lonizatsiya tissue disease, is a production of enzymes and toxins. Prodrome can last from several hours to several days. In many infections in this period of the pathogen into the environment is not allocated.

Prodromal
Initial symptoms before the characteristic manifestations of disease develop.

Prokaryote
Organism lacking a true nucleus. Possesses a single chromosome.

Prokaryotes
Microorganisms that do not possess a membrane-bounded nucleus, including all members of both the Archaea and Bacteria.

Process of an infection
The process of interaction between macro-and microorganism.

Promoter
A DNA sequence upstream of a gene that is recognized and bound by the RNA polymerase and used to initiate transcription.

Properdin
High protein in blood serum.

Protozoa
Unicellular eukaryotic mikroor the body naturally in the animal kingdom.

Protease
A proteolytic enzyme.

Proteus
Opportunistic Gram-negative bacteria theory of rod-shaped, peritrihi, spores and capsules are not to form. Cause pockets of purulent infection, food talk sikoinfektsiyu, pyelonephritis, cystitis and pyosepticemia with endotoksicheskim shock. The type species P. vulgaris.

Prophage
Complete bacterial virus genome integrated in the chromosome. The phage genome during a lysogenic an infection (lysogeny).

Prophylaxis
Measures or treatments designed to prevent disease.

Protein engineering
The design, development, and production of new protein products with properties of commercial value.

Proteinase (endopeptidase)
An enzyme that breaks down proteins.

Protoxin
Precursors of toxins that can be transformed into the form of the toxin.

Proto-oncogene
Normal cell that possesses homologs of oncogene

Protoplasm
The viscid colloidal solution that makes up living matter.

Protoplast
A Gram-positive bacterium that has lost its cell wall.

Prototroph
Bacterial strains with complete synthetic pathways from which auxotrophs may be derived.

Protozoan
A unicellular member of the animal kingdom.

Proventriculus
An enlargement of the alimentary tract of an invertebrate that precedes the stomach.

Provirus
Complete viral genome integrated into a eukaryotic genome.

Pseudolysogeny
A phage infection that stalls prior to entrance into either lysogenic or productive states, typically due to bacterial starvation. Additional phage phenomena are also described using this terms, however.

Pseudohypha
A structure that has recurring bud-like constrictions and less rigid cell walls than a hypha.

Pseudomembrane
Membrane that consists of necrotic tissue, inflammatory cells, and bacteria.

Pseudopod
A pseudopodium. Moving extrusion of the cytoplasm of an amoeboid cell that brings about movement or ingestion of food particles.

Pseudopeptidoglycan
Also denoted as pseudomurein. The peptidoglycan equivalent of some archaeal species. It contains no D-amino acids. The disaccharide units of the glycan chains are composed of N-acetylglucosamine and N-acetyltalosaminuronic acid.

Psychrophile
A microorganism that grows best or exclusively at low temperatures.

Purpura
Multiple hemorrhages in the skin, mucous membrane, or other organs.

Purulent meningitis
Infections of the meninges associated with a marked, acute inflammatory exudate usually caused by a bacterial infection.

Pustule
Pus in a vesicle, infected hair follicle, or sweat gland producing a visible inflammatory swelling.

Pyocyanin
Blue pigment produced by *P aeruginosa*. chloride that are highly bactericidal in the absence of contaminating organic matter.

R

Radioimmunoassay
A method for detecting antigenantibody reactions that uses a radioisotope as a readily detectable label.

Reaction hemadsobtion
The ability to culture cells infected with viruses adsorbed on its surface of red blood cells.

Reactive oxygen intermediates
Superoxide, hydrogen peroxide, singlet oxygen, produced by phagocytes.

Reading frame
The way in which nucleotides in DNA and mRNA are grouped into codons of three for reading the message.

Receptor
Component of the cell surface to which another substance or organism attaches specifically.

Receptor-mediated endocytosis
A type of endocytosis triggered by the binding of a ligand on the pathogen to a receptor on a cell surface.

Recombinant clone
Clone containing a recombinant DNA molecule.

Recombination
A process in which two DNA molecules are broken and rejoined in such a way that portions of the two molecules are exchanged.

Reducing agents
Chemicals placed in culture media to lower the oxidation-reduction potential.

Replication
The process by which an exact copy of parental or viral DNA is made using the parental molecule as a template.

Replication cycle
The series of steps that a virus or cell goes through to multiply.

Replication fork
The point at which duplex DNA separates into two single strands during the process of DNA replication. Associated with replication forks are DNA helicases to separate the strands and DNA polymerases to synthesize new DNA strands.

Replicative transposion
Moving of a transposon to a new site while leaving a copy behind.

Replicon
DNA molecule that can replicate autonomously (chromosome or plasmid)
resistance When a strain can grow in the presence of higher concentrations of the antibiotic compared to other strains of the same species.

Repressor
A regulatory protein that binds to an operator sequence and inhibits transcription of the adjacent gene(s).

Respiration
Fueling metabolism whch utilizes oxygen.

Restriction enzymes
Enzymes recognizing a specific DNA sequence around which it will cleave both strands of a DNA segment.

Reticuloendothelial system
System of phagocytic monocytes, particularly those in the spleen, bone marrow, and lymph nodes.

Retrovirus
RNA virus, the genome of which is transcribed into DNA by the enzyme reverse transcriptase.

Retroviridae
A family of viruses with single-stranded RNA that upon infection generate a DNA copy via a viral reverse transcriptase (RT).

Reverse transcriptase
RNA-dependent DNA polymerase that uses a viral RNA genome as a template to synthesize a DNA copy.

Reverse transcription
Use of a viral RNA genome to synthesize a DNA copy.

Ribonucleic acid (RNA)
A molecule of nucleic acid that differs from DNA by containing ribose rather than deoxyribose. RNA is formed on a DNA template. Several differing molecular classes of RNA are produced (messenger, transfer, and ribosomal) that play roles in the synthesis of protein and other cell functions. It reflects the exact nucleoside sequence of the genetically active DNA.

Ribosomal RNA (rRNA)
RNA present in ribosomes including transfer RNA (tRNA) involved in protein synthesis.

Ribotyping
The use of rRNA to probe chromosomes for typing.

RNA polymerase
The enzyme that synthesizes RNA using a DNA template (also termed DNA-dependent RNA polymerase).

Plasmid
An extrachromosomal DNA segment, usually circular, which is capable of autonomous replication via a segment of the plasmid called the replicon.

R plasmid (R factor)
Plasmid containing antimicrobial drug resistance gene.

Recombinant DNA
DNA molecule, obtained outside the cell by combining natural or synthetic DNA fragments skih with molecules capable of replays cation in the cell.

Reproduction
The ability of bacteria to samovosproizve-deniyu, increasing the number of individuals per unit volume.

Respiration
The process of oxidation of organic compounds of oxygen in the bacterial cell.

Rubella
An acute viral disease, occurring with a fine-grained ekzoitemoy, lymphadenopathy, mild fever, and fetal damage in pregnant women. Sources of infection - person with rubella. The virus enters the body through mucous membranes of the respiratory tract, then enters the bloodstream and spreads throughout the naturally. Mostly ill children.

S

Saprophyte
An organism that grows on and derives its nourishment from dead or decaying organic matter.

Sarcoidosis
Disease of unknown etiology characterized by granulomatous lesions of many tissues and organs.

Scaffolding proteins
Constituents intermediate in the assembly of a bacteriophage head.

Secondary active transport
Active transport of substances using the sodium or proton motive force as the energy source driving substrate accumulation or efflux.

Secretory IgA
A complex of two IgA molecules and the secretory piece.

Secretory piece
Protein on the surface of local epithelial cells.

Selective media
Culture media designed to suppress the growth of common organisms to allow isolation of a targeted pathogen.

Selection
Placing organisms under conditions where the growth of those with a particular genotype is favored.

Sepsis
A clinical term used synonymously with septicemia.

Sepsis syndrome
Findings of sepsis in addition to altered perfusion.

Septicemia
A clinical term indicating evidence of systemic disease associated with presence of organisms in the blood (*See* **Bacteremia**).

Seroconversion
Development of antibodies in response to an infection.

Serodiagnosis
Diagnosis of an infection by serologic procedures.

Serotonin
Vasoconstricting amine usually derived from platelets

Serotype
Subtype of species detectable with specific antisera.

Serum
Liquid part of blood separable after clotting.

Sex pilus
Specialized structure involved in exchange of genetic material between some Gram-negative bacteria.

Sinus A tract leading from an infected area or hollow viscus to the surface; a wide venous blood channel; accessory nasal sinuses that are blind sacs draining to the nasopharynx.

Slim disease
The severe intractable wasting and diarrhea of AIDS.

Slime layer
Term sometimes used for polysaccharide surface components of bacteria that do not constitute a morphologic capsule.

Spontaneous agglutination
Nonspecific agglutination of bacteria due to the lack of polar groups in the medium.

Spores
A specialized microbial form that facilitates survival and dissemination.

Sporogony
Sexual reproduction process in sporozoan parasites leading to formation of oocysts and sporozoites.

Sporozoite
Motile, elongated, infective stage of sporogony.

Sporulation
One bacterial cell forms one spore under adverse conditions.

Sputum
Purulent material generated in the alveoli and small air passages.

Standard precautions
Measures recommended by the Centers for Disease Control and Prevention, including use of gowns and gloves when in contact with patient blood or secretions.

Stasis
Stagnation or cessation of flow of body fluids.

Stationary phase
The period of time in the culture growth cycle in which growth stops.

Sterilization
Complete killing, or removal, of all living organisms from a particular location or material.

Symbiont
An organism participating in a relationship in which both species derive benefit.

Symbiosis
The intimate association between phylogenetically different organisms, often restricted to relationships from which all organisms derive benefit.

Symbiosomal membrane
Membrane of host origin bounding an intracellular symbiotic microorganism.

Syncytium
A multinucleate mass of fused cells.

Syndrome
Group of clinical manifestations characterizing a particular disease or condition.

Synergistic
Enhanced rather than additive effect of two agents or processes acting together.

Synthetic antibiotics
Antibiotics produced by chemical synthesis.

T

Taxonomy
Science of classification

T cells
Bone marrow–derived, thymus-matured lymphocytes; involved in a variety of cell-mediated immune reactions, eg, helper, suppressor, and cytotoxic.

T-dependent antigen
Antigen that incorporates T cells in the process of activating B cells.

Tegument
The protein-filled region that fills the space between capsid and envelope.

Teichoic acid
A class of negatively charged polymers expressed on the cell surface of Gram-positive bacteria that are either linked covalently to the peptidoglycan (wall teichoic acids) or linked to lipids in the cytoplasmic membrane (lipoteichoic acids).

Temperate phage
A phage that is capable of displaying lysogeny, though infections by temperate phage are often productive and do not lead to lysogeny.

Tetanospasmin
A neurotoxic exotoxin, a product of *Clostridium tetani.* Also called tetanus toxin.

Therapeutic index
The numerical ratio of the concentration needed to achieve a desired effect in 50% of the patients and the concentration that produces unacceptable toxicity in 50% of the patients.

Thermophile
Heat-loving organisms that grow optimally at elevated temperatures, usually with temperature optima above $50^{o}C$; hyperthermophiles grow optimally above $80^{o}C$.

Thymus
A lymphoid organ located in the anterior upper mediastinum, which is required for early development of immune functions and the maturation of T cells.

Tinea nigra
Skin infection characterized by brown to black macular lesions, usually on the palms or soles and occurring in tropical climates.

Tinea pedis
Infection involving scaling and splitting of the skin between the toes. Also called athlete's foot.

Tissue engineering
The design, development, and production of tissue cells (biomaterials) for use on or in humans.

Titer
Highest dilution of an active substance (eg, antibody in serum) that still causes a discernible reaction (eg, an agglutination reaction).

T lymphocyte
A lymphocyte that matures in the thymus and circulates in the blood and thymic tissue. It participates in the normal function of the immune system and expresses a TCR, and CD_3 and CD_4 or CD_8.

Toxic shock syndrome
Potentially fatal illness caused by staphylococcal or streptococcal toxins.

Transconjugant
A cell that has received a plasmid from another cell as a result of conjugation.

Transcription
The process by which single-stranded RNA with a base sequence complementary to the template strand of DNA or RNA is synthesized.

Transduction
The transfer of genetic material from donor to recipient bacterium mediated by a bacteriophage (a bacterial virus). The DNA is carried within the bacteriophage, replacing some or all of the bacteriophage DNA.

Transcription factor
A protein needed to activate or repress transcription but is not part of the RNA polymerase enzyme.

Transcription unit
The DNA sequence that extends from the promoter to the terminator; it may include more than one gene.

Transfer intermediate
A nucleoprotein particle composed of a single-strand of the DNA destined for export and one or more proteins that facilitate DNA delivery to recipient cells.

Transfer RNA (tRNA)
Small RNA that binds an amino acid and delivers it to the ribosome for incorporation into a protein.

Transformation
The transfer of genetic material from donor to recipient bacterium in which DNA from the donor is taken up by a competent recipient

Transforming retrovirus
Transforming virus that carries cellular genes.

Translation
The process of decoding messenger RNA into proteins using the protein synthesis machinery, including ribosomes, aminoacyl–tRNA synthetases, and other factors.

Transposon (transposable genetic element)
DNA segment able to migrate from replicon to replicon (plasmid or chromosome) while retaining its physical integrity. A transposon can insert itself into nonhomologous DNA, exit, and relocate independently of the general recombination function of the host.

Tropism
Having an affinity for a particular organ, or moving toward or away from a particular stimulus.

Type-specific immunity
Protection from subsequent infection with strains of the same M type of streptococci, for example.

Type IV secretion system
A conserved family of macromolecular translocation systems evolutionarily related to conjugation systems for translocating DNA or protein effector molecules between prokaryotic cells or to eukaryotic hosts.

U

Ultraviolet (UV) light
Has the wavelength range of 240 to 280 nm, is absorbed by nucleic acids, and causes genetic damage.

Unit of activity
The minimum number of antibiotic-tick, which retards the growth of standard strains of known species of microorganism under certain conditions.

Uremia
Toxic accumulation of nitrogenous metabolites due to renal insufficiency.

Urethra
Tube carrying urine from the bladder to the exterior.

Uropathic
Causing disease of the urinary tract.

V

Vaccine
A preparation that contains an antigen, consisting of an organism or a part of an organism, that is used to confer immunity against the disease that the organism causes. Vaccines can be natural, synthetic or derived from recombinant DNA technology.

Vaccination
The administration of an immunogen (toxoid) to stimulate an immune response that protects the host from infection by the microorganism that produces the immunogen.

Varicella
Chickenpox.

Vector
An animate transmitter of disease (eg, an insect). In molecular biology a genetically engineered molecule able to transport foreign DNA.

Vegetative cell
A bacterial cell that is growing actively.

Vertical transmission
The transmission of microorganisms from a parent to offspring host.

Viremia
Presence of a virus in the bloodstream.

Virion
A complete virus, including the coat and nucleic acid core.

Viroid
Infectious circular RNA molecule that lacks protein shell.

Virokine
Protein secreted from infected cells that acts as a cytokine, helping cells to proliferate and increase virus production.

Viropexis
Viral entry into the cell by endocytosis.

Virulence
Relative ability of a pathogen to cause disease on a given host plant.A term expressing degrees of pathogenicity.

Virulent phage
A phage that is able to replicate only via the lytic cycle.

Viruria
Viruses in the urine.

W

Western blot
Test for antibodies to specific proteins separated by gel electrophoresis.

Wild-type allele
Normal, usually active, form of a gene.

Wright's stain
Stain for blood cells that has properties similar to those of Giemsa stain.

X

Xenodiagnosis
Recovery of a parasite by allowing an arthropod to feed on the patient and See king the parasite in the arthropod.

Xerostomia
Dry mouth from dysfunction of the salivary glands.

Y

Yatrogenic infection
An infection, you are out to be carrying out various medical procedures.

Yeast
Simple fungal cell which reproduces by budding.

Yersiniosis
Acute zoonotic disease caused by Yersinia enteracolitica, flowing with a fever, intoxication, the defeat of the digestive tract and the generalization of the pathological process.

Z

Zoonoses
A group of infectious diseases in humans in which the source and the reservoir of infection is infected animals (patients or carriers).

Zoonotic infection
A disease transmissible to humans from an animal host or reservoir.

Zygote
The cell that results from fusion of male and female gamete.

Zymodeme
An isoenzyme typing pattern.

Recommended reading list

Main literature

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