

The Relationship between Person and Bacteria, their Influence on the Human Organism

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Annotation

This in the article man and bacteriarelationship their a person to the organism effect with the participation of to a person dependence situations in nature types, distribution methods information about.

Enter

Bacteria (Latin bacteria cell, stick) are widespread in nature are single-celled, chlorophyll-free groups originating from the plant world, which are diverse in terms of their biological properties. Bacteria belong to the kingdom of prokaryotes, division of scotobacteria. are single-celled, chlorophyll-free groups originating from the plant world, which are diverse in terms of their biological properties. Bacteria prokaryotes kingdom, scotobacteria to the department belongs to They are from eukaryotes improved of the stem absence, in the cytoplasm mitochondria, endoplasmic of the membrane absence of plasmids existence, only to prokaryotes special was, cell to the composition included, separately of heteropolymers presence with differ. Bacteria of the cell structure constant and temporarily constant didn't happen structural from parts consists of. Cell the wall everyone bacteria for special has been bacteria cell for of course need has been structure into [1], cell dry 5 of part from to 35% weight organize does _ Cell the wall various tasks does: of the cell internal part external from the effects protection does, of the cell increase and in division, breath get and nutrition in processes participates [2]. Cell the wall to bacteria special private receptors keeps Everyone bacteria by the Gram method painted while, gansian violet or crystal violet (three phenyl methane to the group incoming main paints) acceptance by doing and holding to stay looking gram positive and Gram negative to groups is divided. This is the difference cell of the wall to himself special structure and chemical to the composition depends. Everyone in bacteria cell of the wall thickness from 100A° to 200A° will

come. Bacteria constant didn't happen structures spores, plasmids and superficial structures - capsule, xivchins and eyelashes enters [3].

Mycoplasmas are prokaryotes kingdom, scotobacteria section (19) mycoplasmas to the group Mollicutes to the class Musorlasmataceae and Acholeplasmataceae to their families belongs to are microorganisms. Both families even man for disease calling species keeps _ Mycoplasmas: - human, animal, plant and insect in organisms' parasitism by doing lives of microbes to himself special are groups. Their own small sizes, membrane from floats past leave, some to antibiotics endurance with they are to viruses near stands _ No cell, no food environments grow up take and structure to himself feature with to bacteria is similar. Mycoplasmas polymorphous, them spherical in the form of, some at the time tail tumor with 110 - 150 nm in size elementary body as determination can. Same mother that's it elementary corpuscles bacteria from floats transition feature has all organisms surroundings environment with exchange substances, their nutrition and increase for enough amount food substance necessary of these bacteria his own the body parts synthesis does. Own in turn different of substances oxidation and return as a result necessary energy harvest will be Bacteria for energy source light and inorganic and organic are substances. Microorganisms energy source and electron giver to donors according to phototrophs and to chemotrophs divided, bacteria for energy source The sun light is considered Chemomorphs energy oxidation and return from reactions takes To phototrophs only saprophyte microorganisms enters In people disease from triggers chemosynthesis doer microorganisms leader place occupies. Hemotrophs own in turn to chemolithotrophs and to chemoorganotrophs is divided. Hemolitotrophs - energy inorganic of substances takes; chemoorganotroph of bacteria nutrition for organic substances necessary Lithotrophs - energy inorganic of substances takes They are nature to himself special is a construction materials corrodes metals rust , oil reserves dries , the quality reduces Hemolitotrophs hot microorganisms enters Such bacteria oceans 1000 atm at the bottom . and from him high pressurized in places, too salty in lakes, on mountain rocks, heated sandy in the deserts will be From this except cotton _ collections and haystacks inside being their on fire to leave coming can Organotrophs saprophyte and parasite to microorganisms is divided [4].

Literature analysis and methodology.

Saprophytes are dead organisms organic remains with edible bacteria. Parasites are alive in the body live; master in the cell his at the expense of edible microorganisms. Autotrophs - carbon or nitrogen source inorganic substances was, free living microorganisms big type Autotrophs carbon source as mainly carbon dioxide or his salts, nitrogen source as molecular nitrogen, ammonium salts, nitrates and from others is used . 27 Prototrophs-in the composition only salt and carbohydrate has been environments grows, they themselves for need to be necessary metabolites synthesis do it takes Auxotrophs - their own development for special to substances needs has been of prototrophs options. Auxotrophs from prototrophs difference in them metabolic of processes one part covered and they are themselves for necessary metabolites synthesis to do opportunity lost, that's it because of to the environment amino acid, vitamin and another necessary substances is added [5].

In clinical medicine, PCR diagnostics is one of the most popular methods of analysis in various fields: Urogynecology. Infectious diseases of this kind are characterized by a weak severity of symptoms and a chronic course, often causing infertility and miscarriage in women. Using PCR, you can detect the presence of a whole "bunch" of genital infections: chlamydia, several types of mycoplasma, ureaplasma, trichomoniasis, gardnerella, candida, gonococcus, and treponema. In addition, a group of viruses that affect the urogenital tract in both sexes, in particular herpes virus and human papillomavirus, can also be PCR-diagnosed. Their timely detection and treatment helps to avoid the risk of malignant diseases of the cervix in women[6].

Neonatology There are many microorganisms that can affect the fetus in the womb. PCR diagnostics can effectively detect the presence of neonatal infections both in the prenatal stage and in newborns. Dangerous infections include cytomegalovirus, toxoplasma, rubella and herpes viruses, chlamydia, mycoplasma. Blood service. To avoid the risk of transfusion, PCR is also used for patients infected with dangerous diseases of blood or plasma (HIV, syphilis, hepatitis). It significantly exceeds the accuracy of serological methods, since it is able to isolate even those infections that have a long incubation period and are not determined using routine studies during the first few weeks. Infectious Disease Clinic. These include viral hepatitis, HIV / AIDS, salmonellosis, helicobacteriosis, cholera, brucellosis, tularemia, diphtheria, toxoplasmosis and other infections. Phthisiology and pulmonology. PCR diagnostics can identify the causative agents of SARS and recurrent chronic bronchitis, which are chlamydia and mycoplasma. In addition, with its help it is possible not only to make a diagnosis, but also to conduct species identification of the pathogen, i.e. identify a specific strain. The PCR method is also used for early and highly accurate diagnosis of tuberculosis [7].

Use by PCR in soil, water, food

By PCR, pathogens can be detected not only in the human body, but also in soil, water, and food. Limitations of the method, however, do not think that PCR diagnostics have no drawbacks. It has its own limitations, but their number is so insignificant that it cannot adversely affect the popularity and effectiveness of the method: the likelihood of amplification of the DNA of not only a living, but also a dead microorganism. When conducting PCR diagnostics to monitor the effectiveness of treatment, certain requirements must be observed. In particular, PCR should be performed after a certain period of time (1-2 months), during which the pathogen completely disappears in the body. The possibility of a cross reaction. Selection of DNA fragments (primers) is carried out on the basis of knowledge about the genetic structure of a particular microorganism. But theoretically, the same fragment can be present in other microorganisms, whose genome has not yet been deciphered. Their presence in the sample can lead to a false positive result of the analysis. The variability of microorganisms. This ability of pathogens to mutate sometimes leads to the fact that some of their strains become elusive in the process of PCR analysis. To reduce risks, standards for the volume of testing PCR diagnostic test systems have been developed, including cross-reaction testing and testing of all known strains of a specific pathogen[8].

STAGES OF STUDY BY PCR

Urine. The first 50 g of morning urine are collected in a sterile container. Sputum. Sputum is collected in a sterile vial in an amount of 15–20 mg.

Blood, serum, plasma. For analysis, venous blood (1–1.5 ml) is used, collected from a patient on an empty stomach in a sterile test tube. Biomaterial can be stored for no more than a day at a temperature of 4 ° C. Freezing blood is strictly prohibited[1, 3].

Biological fluids. These include saliva, prostate juice, amniotic fluid, pleural, cerebrospinal fluid, articular fluid. Collected by puncture using sterile instruments in an amount of 0.1-1.5 ml in sterile tubes.

Biopsies, i.e. biopsy material. Typically, biopsy specimens of the duodenum or stomach are sent for analysis to detect *Helicobacter pylori* infection. The volume of material is 2-3 mm ³[4, 8].

Results

Microorganisms collect - them grow up for artificial conditions Create means Food of environments basis new meat waste kept meaty water organize does Simple and complex, liquid and hard nutritious environments is separated. Common ones include GPA and GPB.

Complicated environments special, differential diagnostic, elective fermentative feature determination for Hiss environments enters _ Nutritious of environments basis that is meat waste kept meaty water organize does _ Normal and complex, juicy and hard nutritious environments separate _ Simple environments include GPB and GPA. Complicated environments: custom differential diagnostic, enriching, elective of microbes proteolytic and saccharolytic features determination for applicable environments is divided.

Summary

Everyone bacteria to the temperature 3 in comparison main to groups divided into: psychrophiles, mesophiles and thermophiles. To psychrophiles Cold resourceful from the waters lake, sea and from the oceans separate received microorganisms includes, their optimal temperature is 200 C, mesophiles for - 34-370 C, thermophiles for and - 500 C. Optimal conditions Create for special device - thermostats is used. Collection term of bacteria type depends. Hard and liquid nutritious environments, one type belongs to one or one how many from cells organize found microbes sum pure is called product (charged).

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