

Microbiology

(Lectures 6h/week, Laboratory 3h/week Assessment : final exam at the end of each term or September)

General properties of microorganisms, prokaryotic cells cytology, nomenclature and classification of bacteria, bacterial growth, metabolism of bacteria. Genetics of Bacteria: plasmids, bacteriophages, transposons, gene transfer in bacteria.

General properties of fungi, parasites and viruses, environmental influences germs, chemotherapeutics against infection

- Clinical Bacteriology infections developed: Gram (+) granules: staphylococci, streptococci. Gram (+) bacteria: Corynebacteria, Listeria, bacilli, clostridia. Gram (-) granules: meningococcus, gonococcus. Gram (-) bacteria: pseudomonas, brucella, bornteteles, Enterobacteriaceae, vibrios, hemophilia. Spirochetes: Treponema pale, Borrell, leptospire. Spiral: Campylobacter. Mycobacteria: Mycobacterium tuberculosis, Mycobacterium leprae. Actinomycetes. Nokardies. Rickettsiae. Chlamydia. Mycoplasmas.
- Clinical Virology infections caused by RNA and DNA viruses, namely: RNA viruses: picomaviral: Enteroviruses (polioviruses, viruses Coxsackie A & B, viruses ECHO, enteroviruses 68-71) and rhinoviruses. Reovirus: Reo-viruses, Rota-viruses. Toga-viruses: rubella virus. Orthovlennoioi: Viruses flu. Paravlennoioi: viruses mumps, measles virus, paravlenoioi 1, 2, 3 and 4, respiratory syncytial virus. Baculoviruses: rabies virus. Retroviruses: HTLV I & II, HIV. DNA viruses: papovavirus: human papilloma viruses. Adenoviruses. Herpes: types 1 to 8. Varicella - zoster. Cytomegalovirus (CMV). Virus Epstein-Barr (EBV). Special groups of viruses: arboviruses. Hepatitis virus: HAV, HBV, HCV, HDV, HEV, GBV-G or HGV. Slow viruses.
- Clinical Parasitology developed: Introduction to Parasitology - Classification.
Protozoa: Sarkomastigofora: E. histolytica, Naegleria, Acanthamoeba, Hartmanella. Giardia lamblia, Trichomonas vaginalis. Flagellated blood and tissues: Leishmania
Metazoa: PWN - Generally, Strongyloides stercoralis, Enterobius vermicularis, Ascaris lumbricoides. Tapeworms - General. Taenia saginata, Taenia solium, Echinococcus granulosus. Flukes - General. Schistosoma mansoni, S. haematobium, S. japonicum.
- Clinical Mycology developed: Introduction to Clinical Mycology - characteristic properties of fungi pathogenic for humans fungal pathogenesis of fungal infections of the human, clinical and laboratory diagnosis of fungal infections. Superficial fungal infections (infections, pathogenesis, clinical manifestations, laboratory diagnosis) - Dermatophytes: microspores hairy epidermofyton - Superficial fungal infections caused by other fungi: Malassezia furfur, Candida, Aspergillus. Fungal subcutaneous tissue (causes and pathogenesis). Systemic fungal infections (causes and pathogenesis). Opportunistic fungal infections: Genus Candida - C. albicans, Gender Cryptococcus - C. neoformans.

During laboratory exercises developed microbiological techniques: Gram stain, Ziehl Neelsen. Formulation bacteria with bacteriophage, Test sensitivity to chemotherapeutic. Also developed techniques related to the isolation and standardization of microorganisms from blood cultures, urine, CSF, upper and lower respiratory and stool.

Details of Basic Immunology

Antigens - Immunogens - haptens. Antibodies - Immunoglobulins, structure and biological properties. Genetic immunoglobulins. Supplement, chemical composition and biological properties. Phagocytosis. Phagocyte system disorder. Cytokines. Monokytarokines, Lymphokines. Anatomical organization of the immune system: cells - tissues. Cellular basis of the immune response. Major cell populations: B-lymphocytes, B-lymphocytes functions. Chemical Principles immunity: Role of T cells in immune-chemical mechanisms of positive and negative regulation - B cell memory. Major Histocompatibility System: Genes-molecules-functions. T-lymphocytes. Subpopulations CD4 + / CD8 +, Th1, Th2 - functions. Mechanisms cytolysis: cytotoxic lymphocytes, NK-cells. Macrophages - ontogeny - receptors - functions in preimmune and immune phase. Experimental models-clinical entities hypersensitive reactions, I, II, II, IV. Congenital and acquired immunodeficiencies. Primary deficits in function B and T lymphocytes. Combined immunodeficiencies. Abnormalities of the cells of non-specific immunity. Acquired immunodeficiencies. Immunization. Active-Passive immunization. Clinical applications. Contamination and infection. Microorganisms as causes of disease, methods of transmission. During laboratory exercises developed: In vitro interaction of antigen - antibody in the diagnosis of infectious / autoimmune diseases - Principles and applications of techniques: agglutination reactions, precipitation reactions, immunoelectrophoresis, Nephelometry, Immunofluorescence, ELISA

Hygiene and Epidemiology

(Lectures 5h/week, Practical 8h/student Assessment: final exam at the end of each term or September)

- Design, execution and evaluation of results of an epidemiological study
- Retrospective studies
- Prospective studies
- Descriptive epidemiology
- Epidemiology of infectious diseases
- Evaluation of therapeutic actions