THE CONTENT OF THE TRAINING PROGRAM IN VIROLOGY

General Virology

1. General information about viruses. Viral taxonomy. Structure of viruses.
2. Replication of viruses. Viral genetics. Functioning of the viral infected cell.
3. Pathogenesis of viral infection. Viral persistence.
4. Immunity in viral infections. Effectors of natural immunity. Interferons. Effectors of acquired immunity.
5. Viral vaccines. Classification and mode of action.
6. Main syndromes of viral etiology. Epidemiology of viruses. Zoonoses.
7. Antiviral therapy. Antiviral resistance.

Special Virology

1. Picornaviridae. Classification. Structure, replication, pathogenesis, clinical syndromes, diagnostic principles, elements of epidemiology. Polio vaccines.
2. Viral gastroenteritis. Viral etiological agents stacked in GEV. Structure, replication, pathogenesis, clinical syndromes, diagnostic principles, elements of epidemiology, prevention methods.
3. Arboviruses. Classification. Structure, replication, pathogenesis, clinical syndromes, diagnostic principles, elements of epidemiology, methods of prophylaxis and treatment.
4. Rhabdoviridae. Structure, sensitivity to physicochemical agents, habitat, replication, pathogenesis, clinical syndromes, diagnostic principles, elements of epidemiology, rabies vaccination.
5. Orthomyxoviridae. Structure, replication, pathogenesis, clinical syndromes, diagnostic principles, epidemiology. Avian and swine flu, characteristics. Influenza vaccines. Drugs active on influenza viruses.
6. Paramyxoviridae. Classification. Structure, replication, pathogenesis, clinical syndromes, diagnostic principles, elements of epidemiology, methods of prophylaxis – MMR vaccination.
7. Retroviridae. Classification. Structure, replication, pathogenesis, clinical syndromes, diagnostic principles, elements of epidemiology

8. HIV-AIDS. Structure, replication, pathogenesis, clinical syndromes, diagnostic principles, elements of epidemiology. HIV infection versus AIDS, differentiation through clinical and laboratory arguments. Antiretroviral therapy.
9. Parvoviridae. Classification. Structure, replication, pathogenesis, clinical syndromes, diagnostic principles, elements of epidemiology
10. Hepatitis viruses with fecal-oral transmission. Definition. Classification. Structure, replication, pathogenesis, clinical syndromes, diagnostic principles, elements of epidemiology. Methods of prophylaxis and treatment
11. Parenterally transmitted hepatitis viruses. Definition. Classification. Structure, replication, pathogenesis, clinical syndromes, diagnostic principles, elements of epidemiology. Methods of prophylaxis and treatment.
12. Adenoviridae. Classification. Structure, replication, pathogenesis, clinical syndromes, diagnostic principles, elements of epidemiology
13. Herpesviridae. Classification. Structure, replication, pathogenesis, clinical syndromes, diagnostic principles, elements of epidemiology. Antiviral drugs active on herpesvirus infection.
14. Papovaviridae. Structure, replication, pathogenesis, clinical syndromes, diagnostic principles, elements of epidemiology. Involvement of human papillomaviruses in cervical carcinoma.
15. Poxviridae. Classification. Structure, replication, pathogenesis, clinical syndromes, diagnostic principles, elements of epidemiology, vaccination.
6. Viruses and cancer. Oncogenes and anti-oncogenes. Cells transformed virally. DNA and RNA viruses involved in carcinogenesis.
17. Emerging viruses. Filoviruses. Arboviruses.
18. Highly pathogenic coronaviruses: SARS CoV, SARS CoV-2 and MERS Co-V.