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| Medical Parasitology Three major groups;  Parasitic protozoa  Parasitic helminths (worms)  Arthropods (directly cause disease or act as vectors)  Epidemiology and control  disease etiology  disease surveillance  drug resistance  geographical spread  Screening  Biomonitoring  comparisons of treatment effects in clinical trial b. Chemotherapy  Immunoparasitology (a broad branch of biomedical science that covers the study of all aspects of the immune system in all organisms)  mechanisms of host-parasite interactions  parasitic evasion  host inflammatory responses and pathology  host protection mediated by effector molecules and cells  regulatory responses elicited by infection  the critical role of the crosstalk between the innate and acquired immunities in host defense.  Pathophysiology (the study of the processes underlying disease)  mechanisms of pathogenicity from the structural and physiological processes  plasma protein kinetics  the hematological indices associated with parasitic infections  body defense against parasitic infection;  i. including immunoglobulin E-like antibodies  ii. vasoactive amines and peptides  iii. immunoglobulin M.  the effects of fever as a pathophysiological factor in the course  Molecular and cellular biology, genetics and (Promising breakthroughs in the development of vaccines against diseasecausing parasites)  State-of-the-art genomic sciences, and next-generation DNA sequencing  molecular biology of surface antigens and their roles in parasite invasion and survival  gene function and transcription underlying antigenic variation and diversity in kinetoplastids and apicomplexans  vectors, and parasite–vector interactions  chemotherapeutic targets and drug design, including insecticide resistance in key vectors  introduction to molecular epidemiology  Taxonomy and phylogenetic  Resolution of phylogenetic frameworks and diagnostic markers differs across listed taxa.  Mycology  Medical Mycology  Veterinary and environmental Mycology  Industrial Mycology  Plant Mycology  Medical Mycology Fields of research  Phylogeny of fungal pathogens  Epidemiology and public health mycology  New approaches in the diagnosis  Treatment of mycoses  Antifungal susceptibilities  Taxonomy  Immunology of fungal infections  pathogenesis and virulence |