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Nota di contenuto	Contents; Current books of interest; Preface to the First Edition; Preface ; A: Biology and Phylogeny ; A.1 Introduction; A.2 Discovery of Acanthamoeba spp.; A.3 Speciation and genotyping; A.4 Cell biology ; A.5 Nuclear genome ; A.6 Mitochondrial genome ; A.7 The complete Acanthamoeba castellanii genome ; A.8 Motility ; A.9 Molecular basis of motility ; A.10 Acanthamoeba actin; A.11 Acanthamoeba myosin ; B: Life Cycle and Ecological Significance; B.1 Ecology; B.2 Ecosystem; B.3 Life cycle ; B.4 Stress management in cyst-forming pathogenic free-living protists B.5 Regulators of the life cycle B.6 What stimulates encystation? ; B.7 Feeding; B.8 Metabolism; B.9 Acanthamoeba is a heterotroph (chemo-organotroph); B.10 Hydrogenosomal-type anaerobic ATP generation pathway in Acanthamoeba castellanii; B.11 Isolation of Acanthamoeba from the environmental samples; B.12 Storage ; B.13 Testing viability of trophozoites and cysts; C: Acanthamoeba Infections ; C.1 Acanthamoeba keratitis; C.2 Granulomatous amoebic encephalitis due to Acanthamoeba; C.3 Cutaneous acanthamoebiasis; C.4 Multiple sclerosis and Acanthamoeba; D: Pathogenesis D.1 Acanthamoeba keratitis D.2 Granulomatous amoebic encephalitis due to Acanthamoeba; D.3 Loss and gain of virulence; D.4 Acanthamoeba: an opportunistic pathogen; D.5 Crossing of the biological barriers ; D.6 Direct virulence factors ; D.7 Contact-dependent mechanisms ; D.8 Contact-independent mechanisms ; D.9

Indirect virulence factors; E: Acanthamoeba and the Immune System; E.1 Non-specific immune system ; E.2 Specific immune system ; E.3 What are the basic types of parasite immune evasion strategies?; E.4 Acanthamoeba and immune response
E.5 Effect of immune suppressive component in marijuana, cannabinoid delta-9-tetrahydrocannabinol on Acanthamoeba encephalitis E.6 Acanthamoeba and the central nervous system autoimmunity; F: Chemotherapeutic Strategies Against Acanthamoeba Infections ; F.1 Chemotherapeutic agents and Acanthamoeba; F.2 Membrane-acting agents ; F.3 Inhibitors of DNA synthesis and polyamine metabolism ; F.4 RNA synthesis inhibition ; F.5 Protein synthesis inhibition ; F.6 Tricyclic neuroleptic agents (calmodulin inhibition); F.7 Artesunate F.8 Antimicrobial compounds from natural products (in addition to the aforementioned antibiotics) F.9 Drug targets in Acanthamoeba; F.10 Drug resistance in Acanthamoeba; F.11 Disinfectants and Acanthamoeba; F.12 Future prospects for treatment ; G: War of the Microbial Worlds: Who is the Beneficiary in Acanthamoeba Interactions with Other Microbes; G.1 A host for viruses; G.2 A host for yeast; G.3 A host for protists; G.4 Acanthamoeba and bacteria interactions ; G.5 Is Acanthamoeba an evolutionary ancestor of macrophages?; G.6 Acanthamoeba as evolutionary precursor of pathogenicity; G.7 Who is the beneficiary in bacteria-Acanthamoeba interactions?

Sommario/riassunto

This fully up-to-date book covers all aspects of Acanthamoeba biology. Following the success of the first edition, the author has extensively revised and expanded the text to produce a new volume that includes all the latest research and information on every aspect of this organism. There is a particular emphasis on the Acanthamoeba genome sequence and the novel insights gained from the application of molecular methods to Acanthamoeba developmental/cellular biology, in terms of metabolism and morphogenesis, classification, ecology and role in the ecosystem, host-pathogen interactions, virulenc
