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Nota di contenuto	Chapter 1. Introductory Chapter: The Importance of Heat Shock Proteins in Survival and Pathogenesis of the Malaria Parasite Plasmodium falciparum -- Chapter 2. General Structural and Functional Features of Molecular Chaperones -- Chapter 3. The Role of Hsp70s in the Development and Pathogenicity of Plasmodium falciparum -- Chapter 4. Role of the J Domain Protein Family in the Survival and Pathogenesis of Plasmodium falciparum. Chapter 5. Role of Hsp90 in Plasmodium falciparum Malaria -- Chapter 6. The Role of Malaria Parasite Heat Shock Proteins in Protein Trafficking and Remodelling of Red Blood Cells -- Chapter 7. Role of Heat Shock Proteins in Immune Modulation in Malaria -- Chapter 8. Bioprospecting for Novel Heat Shock Protein Modulators: The New Frontier for Antimalarial Drug Discovery? -- Chapter 9. Heat Shock Proteins as Targets for Novel

Antimalarial Drug Discovery -- Chapter 10 -- Heat Shock Proteins of Malaria: Highlights and Future Prospects.

Sommario/riassunto

This new edition describes the role of heat shock proteins in the life cycle of malaria parasites, particularly in the context of intracellular parasite stages. Thoroughly revised, this work provides a general introduction to the structural and functional features of heat shock proteins with a special focus on their role as molecular chaperones in ensuring protein quality control. The emphasis is on the heat shock protein families from Plasmodium falciparum, and their role in proteostasis and the development of malaria pathology. Moreover, the authors explore the latest prospects of targeting heat shock proteins in antimalarial drug discovery either directly or in combination therapies. Readers will experience a functional analysis of the individual families of heat shock proteins and their cooperation in functional networks, including both the parasite-resident proteome and the exportome released into host cells during intracellular stages. Subcellular and extracellular organelles such as the apicoplast and the Maurer’s Clefts associated with Plasmodium species are discussed in detail. The book highlights the role of heat shock proteins in the development and function of these structures. Biochemical expertise and the inclusion of novel therapeutic solutions make this collection a unique reference for experts in heat shock protein research, parasitology and infectious diseases, cell stress, molecular biology and drug discovery. Not least, advances in malaria control will contribute to ending epidemics and ensuring healthy lives in line with the UN Sustainable Development Goals.