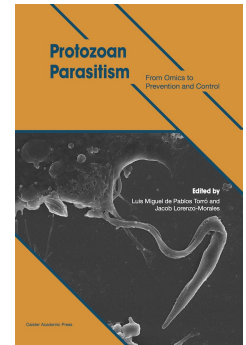


Protozoan Parasitism

From Omics to Prevention and Control



Edited by: Luis Miguel de Pablos Torró and Jacob-Lorenzo Morales

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Over the last fifteen years a large collection of protozoan parasite genomes have been sequenced, annotated and made available on public databases. This wealth of information has stimulated and fuelled new research into vaccine and drug discovery, new approaches for high-throughput experimentation and the genetic engineering of key protozoan parasites.

In this timely book expert international authors review the current hot-topics in this area to provide an up-to-date overview. The book is divided into two parts. The first part is dedicated to *Trypanosoma cruzi*, an organism not only responsible for a serious tropical disease but also a good model system for fundamental and applied biology research. Part two of the book is dedicated to four other important protozoa: *Leishmania*, *Naegleria*, *Entamoeba* and *Acanthamoeba*. Chapters are written from a molecular biology and genomics perspective and focus on a common goal: the development of new strategies for the control and prevention of infection.

This volume is essential reading for anyone working on protozoan parasites in academia, government, and biotechnology companies.

Chapter 1. From proteins to molecular targets: *Trypanosoma cruzi* proteomic insights in drug development (Giselle V-F Brunoro, Marcelle A Caminha and Rubem FS Menna-Barreto)

Chapter 2. High throughput screenings: new breeze in anti-*Trypanosoma cruzi* drug discovery (Julio Alonso-Padilla and Ana Rodríguez)

Chapter 3. Protein glycosylation in *Trypanosoma cruzi* and mass spectrometry-based strategies for glycan and glycoprotein characterization (Rebeca Kawahara, Joyce Saad, Walter Colli, Maria JM Alves and Giuseppe Palmisano)

Chapter 4. High-throughput genetic engineering in *Trypanosoma cruzi* (Luis Miguel de Pablos)

Chapter 5. Omics approaches for understanding gene expression in *Leishmania*: clues for tackling leishmaniasis (Jose M Requena, Pedro J Alcolea, Ana Alonso and Vicente Larraga)

Chapter 6. Natural Products in Human Leishmaniasis Therapy: Last Two Years of Research (J. Piñero, A. Lopez-Arencibia, M. Reyes-Battle, I. Sifaoui, C. Wagner, A. Castillo, E. Córdoba-Lanús and J. Lorenzo-Morales)

Chapter 7. *Naegleria fowleri*: biology and pathogenesis (Ruqaiyyah Siddiqui and Naveed A Khan)

Chapter 8. *Entamoeba histolytica*: from high-throughput technology to new drugs (Anjan Debnath and Sharon L Reed)

Chapter 9. Gene silencing and therapeutic targets against *Acanthamoeba* infections (Jacob Lorenzo-Morales, María Reyes-Battle, Ines Sifaoui, Atteneri López-Arencibia, Olfa Chiboub, Aitor Rizo-Liendo, Carlos J Bethencourt-Estrella, Francisco Arnalich-Montiel, Pedro Rocha-Cabrera and José E Piñero)

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