

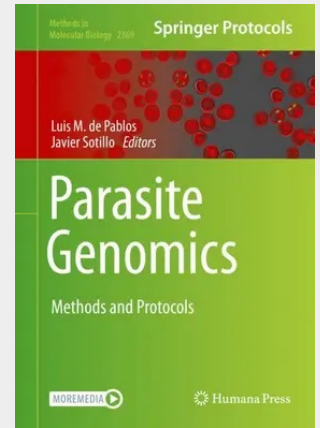
## Parasite Genomics

Methods and Protocols

This detailed book provides a comprehensive series of innovative research techniques and methodologies applied to the parasite genomics research area, all applying different approaches to analyzing parasite genomes and furthering the study of genetic complexity and the mechanisms of regulation. Beginning with chapters on novel sequencing and the bioinformatics pipeline, the volume continues by exploring diagnostic approaches using genomic tools, host-parasite interactions, as well as the genomics of parasite-derived extracellular vesicles. Written for the highly successful *Methods in Molecular Biology* series, chapters include introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible laboratory protocols, and tips on troubleshooting and avoiding known pitfalls.

Authoritative and practical, *Parasite Genomics: Methods and Protocols* creates a detailed picture of genomic approaches for researchers seeking a better understanding of characterizing parasite nucleic acid content.

Nanopore Long Read DNA Sequencing of Protozoan Parasites: Hybrid Genome Assembly of *Trypanosoma cruzi*.- Chromosomes Conformation Capture Coupled with Next Generation Sequencing (Hi-C) in *Plasmodium falciparum*.- Sequencing and Reconstructing Helminth Mitochondrial Genomes Directly from Genomic Next-Generation Sequencing Data.- Automated Phylogenetic Analysis Using Best Reciprocal BLAST.- An Illumina MiSeq-Based Amplicon Sequencing Method for the Detection of Mixed Parasite Infections Using the *Blastocystis* SSU rRNA Gene as an Example.- *Giardia duodenalis*: Detection by Quantitative Real-Time PCR and Molecular Diversity.- Conditional Gene Deletion in Mammalian and Mosquito Stages of *Plasmodium berghei* Using Dimerizable Cre Recombinase.- Coupling Auxin-Inducible Degron System with Ultrastructure Expansion Microscopy to Accelerate the Discovery of Gene Function in *Toxoplasma gondii*.- Genome-Wide Analysis of RNA-Protein Interactions in *Plasmodium falciparum* Using eCLIP-Seq.- Transcriptional Analysis of Tightly Synchronized *Plasmodium falciparum* Intraerythrocytic Stages by RT-qPCR.- Analysis of the Interaction between *Plasmodium falciparum*-Infected Erythrocytes and Human Endothelial Cells Using a Laminar Flow System, Bioinformatic Tracking and Transcriptome Analysis.- Integration of Genomic and Transcriptomic Data to Elucidate Molecular Processes in *Babesia divergens*.- Integration of Functional Genomic, Transcriptomic, and Metabolomic Data to Identify Key Features in Genomic Expression, Metabolites, and Metabolic Pathways of *Babesia divergens*.- Genome Analysis of Programmed DNA Elimination in Parasitic Nematodes.- Helminth Microbiota Profiling Using Bacterial 16S rRNA Gene Amplicon Sequencing: From Sampling to Sequence Data Mining.- Methods for the Isolation and Study of Exovesicle DNA from Trypanosomatid Parasites.- Isolation and Analysis of MicroRNAs from Extracellular Vesicles of the Parasitic Model Nematode *Nippostrongylus brasiliensis* and *Trichuris muris*.



**213,99 €**  
199,99 € (zzgl. MwSt.)

Lieferfrist: bis zu 10 Tage

**Artikelnummer:** 9781071616802  
**Medium:** Buch  
**ISBN:** 978-1-0716-1680-2  
**Verlag:** Springer  
**Erscheinungstermin:** 28.07.2021  
**Sprache(n):** Englisch  
**Auflage:** 1. Auflage 2021  
**Serie:** Methods in Molecular Biology  
**Produktform:** Gebunden  
**Gewicht:** 852 g  
**Seiten:** 336  
**Format (B x H):** 183 x 260 mm

