Malaria Parasites: Genomes and Molecular Biology

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Chapter abstracts . How to Order

The completion of the *Plasmodium falciparum* genome sequence in late 2002 hearlded a new era in malaria research. The search began in earnest for new drugs and vaccines to combat malaria, a disease which afflicts up to 500 million people worldwide and is responsible for the deaths of more than one million people each year. The new genomic data is aiding a greater understanding of the living parasite and its interaction with the insect vector and human host.

In this book internationally renown experts provide up-to-date reviews of the most important aspects of postgenomic malaria research. Topics covered include: the *P. falciparum* genome and model parasites, bioinformatics and genome databases, microsatellite analysis, analysis of chromosome structure, cell cycle to RNA polymerase I and II mediated gene expression, role of the nuclear genome, the parasite surface and cell biology, and much more.

The book is essential reading for all parasitologists and scientists with an interest in malaria.

Key Features:

- * Detailed Discussions of Cutting Edge Topics
- * Expert International Authors
- * Fully Up-To-Date
- * Broad Coverage
- * Post Genome Technologies Reviewed
- * Furthers our Understanding of the Living, Dynamic Parasite
- * Useful Index

Reviews:

"the most important aspects of post-genomic malaria research" from BookNews Inc.

"edited by one of the most respected teams in parasitology ... its depth and coverage are second to none. ... could not be more timely ... the parasitic biology of *Plasmodium* is revealed in all its molecular glory as never before. Buy it." *from* Mike Dyer writing in <u>Nature Genetics</u> 36(6): 545. June 2004.

"the book's 16 Chapters provide an excellent and informative snapshot of our current understanding of the parasite from a genomic perspective. ...edited and illustrated to a very high standard." *from* Mike

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Barrett writing in <u>The Biochemist</u>. August 2004.

Chapter List:

Introduction: The *Plasmodium falciparum* Genome Project D.J. Carucci, P.M. Goodwin, M. Gottlieb and V. McGovern

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Chapter 2: The Genome of Model Malaria Parasites, and Comparative Genomics Jane Carlton, Joana Silva and Neil Hall

Chapter 3: Getting the Most out of Bioinformatics Resources Jessica C. Kissinger and David S. Roos

Chapter 4: Manipulating the *Plasmodium* Genome Teresa Gil Carvalho and Robert Ménard

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Chapter 8: Gene Expression Kirk W Deitsch

Chapter 9: Regulation of rRNA Transcription and Processing During the *Plasmodium* Life Cycle Thomas F. McCutchan, Rosalinda van Spaendonk, Chris Janse, Jun Fang, and Andrew P. Waters

Chapter 10: Cell Cycle Control in *Plasmodium falciparum*: A Genomics Perspective Christian Doerig and Debopam Chakrabarti

Chapter 11: The Apicoplast Ross F. Waller and Geoff I. McFadden

Chapter 12: The Surface of the *Plasmodium falciparum*-infected Erythrocyte Joseph D. Smith and Alister G. Craig

Chapter 13: Merozoite Cell Biology Agnieszka E. Topolska, Lina Wang, Casilda G. Black, and Ross L. Coppel **Chapter 14**: Sexual Development of Malaria Parasites C.J. Janse and A.P. Waters

Chapter 15: Ookinete Cell Biology R.E. Sinden, Y.I.H. Alavi, G.A. Butcher, J.T. Dessens, J.D. Raine, and H.E. Trueman

Chapter 16: Molecular and Cellular Biology of Chloroquine Resistance in *Plasmodium falciparum* Karena L. Waller, Sylvia Lee and David A. Fidock

How to buy this book

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