Malaria Parasites: Genomes and Molecular Biology

Publisher: Caister Academic Press
Editor: A.P. Waters and C.J. Janse Leiden University Medical Centre, Leiden, The Netherlands
Publication date: March 2004
ISBN: 0-9542464-6-2
Price: GB £115 or US $230 (hardback).
Pages: xii + 546

Chapter abstracts . How to Order

The completion of the Plasmodium falciparum genome sequence in late 2002 heralded 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 post-genomic 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 Nature Genetics 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

**Chapter List:**

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

**Chapter 1:** The Genome of *Plasmodium falciparum*
Neil Hall and Malcolm Gardner

**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

**Chapter 5:** *Toxoplasma gondii* a Model Organism for the Apicomplexans?
Dominique Soldati and Markus Meissner

**Chapter 6:** Microsatellite Markers and Population Genetics in *Plasmodium falciparum*
Deirdre Joy, Jianbing Mu, and Xin-zhuan Su

**Chapter 7:** Chromosome Structure and Dynamics of *Plasmodium* Subtelomeres
Artur Scherf, Luisa M. Figueiredo and Lúcio H. Freitas-Junior

**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

Home Page