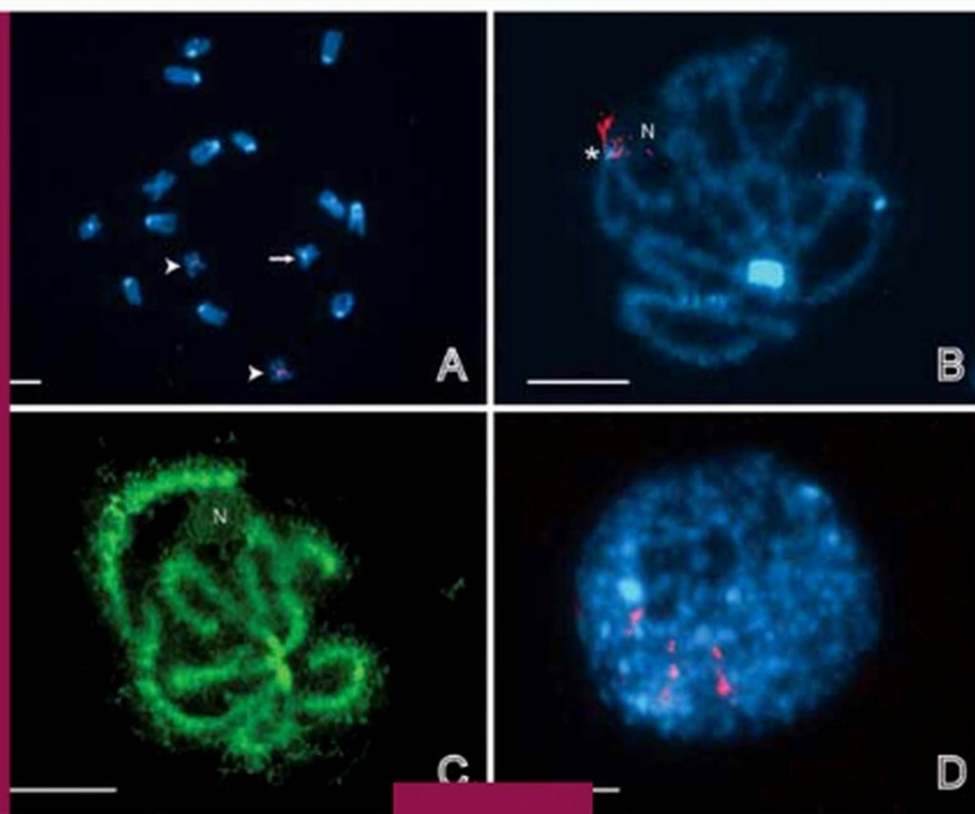


ADVANCES IN PARASITOLOGY



74

Edited by
D. ROLLINSON • S.I. HAY



Advances in
PARASITOLOGY

VOLUME **74**

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INTRODUCTION OF EDITORIAL BOARD MEMBERS

In 2011, the Editorial Board of *Advances in Parasitology* has been renewed. This is our first formal opportunity to welcome them and also to thank the retiring members who have given such excellent service to the series over many years. Nine new members covering the length and breadth of contemporary parasitology have joined the two series editors. The excellence and thematic diversity of the Editorial Board can be seen from the extended biographies below. Their role is to add depth to our ability to solicit exciting new work and find appropriate reviewers. We are confident that their gravitas, passion and counsel will help us continue to guarantee the high standard of published papers and maintain our enviable impact factor.

In addition to rejuvenating the Editorial Board, two important reforms to *Advances in Parasitology* will be manifest in 2011. The first is to adopt an electronic manuscript-handling system to streamline the editorial and peer-review process. The second, in common with 780 other Elsevier science and technology electronic books, 1,600 Elsevier journals, and Sciverse Scopus, is that the content will be made available to economically disadvantaged scientists through the Research4Life program (<http://www.research4life.org/>), comprised of HINARI, AGORA, and OARE. Together we hope these changes will allow *Advances in Parasitology* to consolidate and enhance its position as the journal of choice for comprehensive parasitological reviews. The biographies are to follow in alphabetical order.

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BIOGRAPHY OF ALL EDITORIAL BOARD MEMBERS

Dr. María-Gloria Basáñez

María-Gloria is a reader in parasite epidemiology and the Head of the Helminth Ecology Research Group at Imperial College London. The focus of her research is on the population biology and transmission dynamics of filarial and protozoan vector-borne diseases, directly and indirectly transmitted helminth infections and infectious blindness (onchocerciasis, trachoma), with particular reference to the mathematical epidemiology of neglected tropical diseases and its implications for control. Current research areas also include the population dynamics of malaria within the mosquito and the investigation and management of anthelmintic resistance in human infections. Her interest in tropical medicine, parasitology and medical entomology started in Venezuela where, from 1982 to 1986, she was a founder member of the Amazonian Centre for Research and Control of Tropical Diseases (CAICET). In 1987, she obtained an M.Sc. in applied parasitology and medical entomology at the Liverpool School of Tropical Medicine. From 1988 to 1990, she lectured at the Institute of Tropical Medicine, Universidad Central de Venezuela. Her Ph.D. (1996) was at Imperial College London, where she became interested in the quantification of the density-dependent processes that regulate parasite abundance within vectors and humans, as well as the development of mathematical models for transmission dynamics and control. In 1996–1999, she became a short-term epidemiology consultant for the Onchocerciasis Elimination Programme of the Americas (OEPA) and, in 1999, a departmental lecturer at the University of Oxford. Since 2000 she has been based at Imperial College London. Dr. Basáñez is a member of the editorial/advisory board of a number of peer-review international journals in the areas of parasitology, medical entomology, and neglected tropical diseases. Salient committee memberships include the Mectizan Expert Committee (2002–2006), the Programme Coordinating Committee of OEPA (2005–2008), and the World Health Organization/TDR Disease Reference Group on Helminth Infections (<http://www1.imperial.ac.uk/medicine/people/m.basanez/>).

Dr. Simon Brooker

Simon Brooker is reader in tropical epidemiology and disease control at the London School of Hygiene and Tropical Medicine and a Wellcome Trust research fellow, currently based at the Kenya Medical Research Institute–Wellcome Trust Research Programme in Nairobi. Simon's main research focus has been on identifying cost-effective intervention strategies against tropical diseases and how they can be best targeted in geographical areas where they are needed most. His career began with a specific focus on the use of geographical information systems (GIS) and remote sensing (RS) as a tool for mapping the distribution of helminth infections, undertaking some of the first large-scale analyses of the spatial patterns of infection and environmental factors in sub-Saharan Africa. This work led to the creation of the first risk maps of the distribution of helminth infection and demonstrated that GIS/RS can provide an effective methodology for targeting parasite control. In 2000, he founded the *Global Atlas of Helminth Infection*, which aims to develop an open-access global resource of the distribution of helminth infection (<http://www.thiswormyworld.org>). In parallel with his work on helminths, Simon has conducted research on the burden and control of malaria in school children in Africa, including the first studies of intermittent preventive treatment in schools. His research has been funded by various national and international agencies, including the Wellcome Trust. Simon has sequentially been awarded a Prize Studentship (1997–2000), Prize Fellowship (2000–2002), Value in People Award (2003), Advanced Training Fellowship (2004–2007) and currently holds a Research Career Development Fellowship (2007–2012) from the Trust. Simon is a member or technical advisor on a number of WHO committees and consultations; Technical Advisory Board, Partnership for Child Development; Mebendazole Advisory Committee, Children Without Worms; and the Malaria Consortium Africa. He is currently a deputy editor of *PLoS, Neglected Tropical Diseases*. Simon holds a D.Phil. in parasite epidemiology from the University of Oxford and M.Sc. in health economics from City University London.

Professor R. Corrêa-Oliveira

Rodrigo Corrêa-Oliveira is a biologist with a master's degree in biochemistry from the Universidade Federal de Minas Gerais in Brazil and a Ph.D. in immunology from the Johns Hopkins University. He is senior researcher, head of the Laboratory of Cellular and Molecular Immunology and director of the Centro de Pesquisas René Rachou—FIOCRUZ, in Belo Horizonte, Minas Gerais. He is a member of the Brazilian Academy of Sciences and has served in several committees in Brazil and international organizations. He is currently a member of the board of the Special Program for Research and Training in Tropical Diseases—TDR of the World Health Organization and of the Minas Gerais State Research Foundation. His studies are focused on the analysis of the human immune responses to infections with *Schistosoma mansoni*, *Trypanosoma cruzi*, geo-helminths and more recently viral infections. In these diseases, the projects are aimed to understand the role of different immune mechanisms on the development of pathology and also to identify mechanisms that are related to the development of resistance to infection or posttreatment reinfection as well as the role of coinfections on the immune response and disease outcome. His studies on Leishmaniasis are focused on the immune response of dogs with the visceral form of the disease and the understanding of the effect of the vector's saliva on the immune response of the animal. More recently, he has implemented a multidisciplinary program that includes health education, GIS/GPS, spatial statistics, social-economic behaviour, population genetics and health accessibility. During his career, he has published 237 peer-reviewed papers, supervised 33 Ph.D. and 19 master students and has developed a large number of collaborations with several national and international institutions.

Professor R.B. Gasser

Robin Gasser earned his veterinary degree (1984, University of Berne) and Dr. med. vet. (1988, University of Zurich) in Switzerland. He then was awarded his Ph.D. (1990) and D.V.Sc. (2000) in the University of Melbourne, Australia. Robin's main focus has been on developing and employing molecular, genomic and bioinformatic technologies to investigate socio-economically important parasites of human and animals and to develop novel diagnostic methods and intervention strategies. His goal has been to establish advanced technologies and concepts to gain improved insights into the biology of parasites, disease processes and host-parasite interactions and to foster a skills and knowledge base in parasitology and molecular biology. His projects are funded mainly through a range of grants from government and non-government bodies nationally and internationally, and industry partners. To date, his research output consists of 330 articles in international peer-reviewed scientific journals or chapters in books, more than 230 conference proceedings or seminars at a wide range of institutions around the world. Since 1991, Robin has trained, supervised and mentored over 25 postgraduate students, 12 postdoctoral researchers, ten research assistants and 30 visiting scientists from more than 14 countries. Currently, Robin is the editor and editorial board member of some key international scientific journals. He is a DipEVPC, FASM and FASP and has received a number of prestigious awards and honours, including the Bancroft-Mackerras Medal (2000), Fulbright Professorial Scholarship (2008) and the WAAVP-Bayer Excellence in Research Award (2009). <http://research.vet.unimelb.edu.au/gasserlab/index.html>.

Professor N. Hall

Neil Hall is professor of genomics at the University of Liverpool. He has 10 years research experience working in genomics of infectious disease. He completed a Ph.D. in protein engineering in 1996 (also at the University of Liverpool) and then went on to work on plant pathogens at the Institute of Arable Crops Research, Long Ashton. His interest in the field of parasitology started when he became project leader of the *Plasmodium falciparum* genome sequencing project at the Sanger Institute in 2000. Following the publication of the *P. falciparum* genome in (Nature 2002, 419, 527–531; Nature 2002, 419, 498–511), he went on to study the genomes of other parasites such as rodent malarias (Science 2005, 307, 82–86), trypanosomes (Science 2005, 309, 404–409) and *Entamoeba histolytica* (Nature 2005, 433, 865–868). Neil has continued to work on the development of genomic tools to study parasite population structure and evolution, specifically in trypanosomes and *Entamoeba*. After working at the Sanger Institute, he later moved to the bioinformatics group at the Institute for Genomic Research (Maryland, United States of America) where he continued working in comparative genomics, molecular evolution and database development. Neil moved back to Liverpool in 2007 and is now the director of the Liverpool Genome Analysis Centre, which is a national facility in the United Kingdom for next generation sequencing and his wider research interests stretch to the development of new applications of genomics technology. Neil's work is funded by the Biotechnology and Biological Sciences Research Council, the Natural Environment Research Council, the Medical Research Council and The Wellcome Trust. He is also a recipient of a prestigious Royal Society Wolfson Merit Award.

Professor Robert E. Sinden

Bob Sinden is currently emeritus professor of parasite cell biology at Imperial College London and head of Cell Biology of Malaria Parasites at the Jenner Institute, Oxford. During his 40-year research career, he has published more than 250 papers. His team developed techniques to study the molecular cell biology of malaria in a wide range of hosts and vectors. His early studies brought to bear electron microscopic and cell-biological techniques to observe protozoal infections in natural and laboratory hosts. Seminal contributions were on the cellular events and regulation of sexual development, including his discovery of the meiotic divisions of the parasite. He pioneered numerous techniques for the culture of *Plasmodium* and finally in 2002 his laboratory became the first to have cultured all stages of the *P. berghei* life cycle. These methods are now regarded as part of the standard repertoire used by labs throughout the world. The ability to study all stages of the life cycle of a convenient laboratory model (*P. berghei*) *in vitro* and *in vivo* permitted penetrating analysis of the cell and molecular strategies of the parasite (especially when combined with genetic modification of mouse, mosquito and parasite). Fundamental proteomics, cell biology and transgenic approaches have been used to study the structure, function, regulation and immunogenic architecture of the gametes and ookinete in the rodent malarias. These approaches have underpinned the development of novel transmission-blocking strategies including vaccines that kill the parasite in the mosquito midgut. Newly developed laboratory screens are examining the transmission-blocking potential of extant and new antimalarial drugs. Most recently his laboratory has engaged in population studies of *Plasmodium* during its passage through the mosquito vector in an effort to better understand the dynamics of transmission and the impact of transmission-blocking interventions.

Professor D.L. Smith

David Smith is professor of biology and associate director for disease ecology of the Emerging Pathogens Institute at the University of Florida. He is also a founding member and Senior Research Fellow at the Center for Disease Dynamics, Economics and Policy (CDDEP) in Washington, DC. His graduate training was at Princeton University in the Department of Ecology and Evolutionary Biology, where he earned a Ph.D., and he has work experience in the Departments of Epidemiology and Public Health, and Global Health. He is a member of the Malaria Atlas Project (MAP), the Malaria Elimination Group (MEG), the Research and Policy for Infectious Disease Dynamics (RAPIDD) program of the Science and Technology Directorate, Department of Homeland Security, and the Fogarty International Center, National Institutes of Health, and he participated in the modelling section of the collaborative effort to establish a Malaria Eradication Research Agenda (MalERA). His academic interests include evolutionary ecology, and the dynamics, control and bioeconomics of infectious diseases. Professor Smith has authored more than 70 articles in peer-reviewed publications, and numerous book chapters, reports, letters to the editor, and non-technical essays on a range of subjects including hospital-acquired bacterial infections, cholera, flu, rabies, and malaria. Some of his previous research helped to establish the Affordable Medicines Facility for malaria (AMFm) administered through the Global Fund. His current research, funded by a grant from the Bill & Melinda Gates Foundation, is to develop a strategic planning tool for malaria elimination and control using mathematical models. The application of models can help to exploit the information that is present in the large databases, especially the malaria endemicity databases developed by MAP, to develop rational long-term strategies and coordinate regional plans for malaria control and elimination. Models can also contribute to management plans for the evolution of antimalarial drug resistance.