#### LONDON SCHOOL OF HYGIENE & TROPICAL MEDICINE

## MSc Courses in the Laboratory & Clinical Medicine Group



#### Applications are invited for the following full-time MSc courses:

## APPLIED MOLECULAR BIOLOGY OF INFECTIOUS DISEASES

This course is intended for students who wish to obtain a thorough understanding and practical experience of molecular biology as applied to clinical diagnosis, epidemiological investigation or laboratory research in infectious diseases.

#### IMMUNOLOGY OF INFECTIOUS DISEASES

This course provides a thorough grounding in contemporary immunology through lectures, tutorials, private study and by laboratory work.

### INFECTION & HEALTH IN THE TROPICS (formerly Clinical Tropical Medicine)

The aim of this course is to provide medical graduates with a comprehensive training programme that explores current approaches to the understanding of infectious diseases with special emphasis on those conditions common in the tropics and sub-tropics.

#### MEDICAL ENTOMOLOGY

The aim of this course is to present medical entomology in the context of disease transmission and control.

#### MEDICAL MICROBIOLOGY

This course is intended for all students interested in a career in any aspect of medical microbiology or infectious diseases. A wide range of subject choice is available such that the course would suit students intending to pursue further research as well as those who will be working in clinical or diagnostic laboratories.

#### MEDICAL PARASITOLOGY

This course provides advanced training in the biological and medical aspects or parasitic diseases, and on the vectors of infection.

#### VIROLOGY

This course provides a comprehensive coverage of properties, replication and pathogenesis of human viruses and advanced training in virological techniques suitable for those who intend to pursue a career in either research of a clinical microbiology environment.

#### CLINICAL PARASITOLOGY (Part-time only)

This course, which is offered only on a part-time basis, provides comprehensive instruction in aspects of parasitology relevant to clinical and laboratory practice in temperate countries. (One day a week over two years). It is taught on an intercollegiate basis with the Royal Free Hospital Medical School.

Applicants must be graduates in science, medicine or a related subject or, exceptionally, other relevant qualifications and experience. For Infection & Health in the Tropics candidates must be medically qualified. For Clinical Parasitology applicants must hold a full-time appointment in a medical school or institute of a UK university or a hospital or other approved institution and applications are also invited from MLSO's.

Further details may be obtained from the Assistant Registrar (Admissions), London School of Hygiene & Tropical Medicine, Keppel Street, London WC1E 7HT. Telephone: 071 927 2239, Fax: 071 323 0638, telex: 8953474. (please quote C34)

# **Epidemiology and Infection**

#### Aims and Scope

Epidemiology and Infection presents reports of research and original findings in all subjects related to infectious diseases. It gives particular emphasis to the epidemiology, prevention and control of such diseases, but the field covered is broad and includes microbiology, virology, immunology, sanitary bacteriology, food hygiene, statistics and the clinical, diagnostic and social aspects of infectious diseases. Papers cover both the medical and veterinary field and come from scientists worldwide.

#### **Editorial Policy**

Epidemiology and Infection started life as the 'Journal of Hygiene' and is now the longest established journal in the field of microbiology. When the journal started in 1901 a substantial part of medicine was involved with the control and cure of microbial diseases. Hygiene, or the science of health, was an appropriate term for a microbiology journal. Epidemiology and Infection has contained many important and seminal papers on such topics as scarlet fever, typhoid, pathogenic microbes in milk, bacteriological examination of water and the like.

It is still the home for important papers on these topics but also has become the key periodical in which to find the latest reports on recently discovered infections and new technology. In the new title, used since 1987, the word 'Infection' reflects the broadly based nature of the journal and 'Epidemiology' the particular slant of the journal since it was founded. The editors' overriding policy is to publish high quality articles in the shortest possible time (some articles are published in as little as 4 months). The success of this policy is shown by the very high submission rate from authors and the journal's high impact factor and long cited half life (SCI Journal Citation Report).

#### **Subscription Information**

Six issues a year in 2 volumes. Volumes 108 & 109 in 1992. £138; £70 for members of the Society for Infectious Diseases and British Society for the Study of Infection. Airmail £29,50 per year extra. ISSN 0950-2688.

#### Why You Should Subscribe

- · high-quality articles
- · international coverage
- rapid publication
- · regular review articles
- covers wide subject area
- · book reviews
- · high quality & accurate production
- colour illustrations where this enhances understanding
- · no page charges and free offprints for authors
- · wide audience

42II, USA

PAR 104/2

	Invitation to
S	ubscribe!
P	ease enter my subscription to idemiology and Infection Volumes 108 109 in 1992 @   £138   £70 for enters
8	
	Please invoice me
	Please find enclosed a cheque (made
•	ayable to Cambridge University Press and
dı	rawn against a UK bank)
_	Please send by airmail @ £29.50 per
ye	ear extra
;	I have not yet decided please send me a
	ee sample copy
	ame
	ddress
_	
Se	nd this coupon to: Journals Marketing
D	epartment, Cambridge University Press,
FF	REEPOST*, The Edinburgh Building, Cambridge
CE	12 IBR, UK (No postage stamp neccessary if posted in
th	е ик)
Ιn	US, Canada & Mexico, write to Cambridge
	niversity Press, 40 West 20TH Street, New York,

Continued from back cover	
Schallig, H. D. F. H., Sassen, M. J. M. and De Jong-Brink, M. In virelease of the anti-gonadotrophic hormone, schistosomin, from the central nervous system of <i>Lymnaea stagnalis</i> is induced we a methanolic extract of cercariae of <i>Trichobilharzia ocellata</i>	om
Healy, N., Greig, S., Enahoro, H., Roberts, H., Drake, L., Shaw, E. a Ashall, F. Detection of peptidases of <i>Trypanosoma cruzi</i> e	ind
mastigotes using chromogenic and fluorogenic substrates  Korbsrisate, S., Mongkolsuk, S., Haynes, J. R., Wong, Q. and Sirisin  S. Cloning and characterization of ribosomal RNA genes from	
Opisthorchis viverrini	323
Sukhdeo, M. V. K. and Kerr, M. S. Behavioural adaptation of tapeworm <i>Hymenolepis diminuta</i> to its environment	331
Ward, S. M., Allen, J. M. and McKerr, G. Physiology of oblique striated muscle fibres within <i>Grillotia erinaceus</i> metacestos.	
(Cestoda: Trypanorhyncha)	337
Allan, J. C., Craig, P. S., Garcia Noval, J., Mencos, F., Liu, D., War Y., Wen, H., Zhou, P., Stringer, R., Rogan, M. and Zeyhle, Coproantigen detection for immunodiagnosis of echinococco	E.
and taeniasis in dogs and humans	347
Liu, D., Lightowlers, M.W. and Rickard, M.D. Evaluation of monoclonal antibody-based competition ELISA for the diagnosis	
human hydatidosis	357
Ishiwata, K., Oku, Y., Ito, M. and Kamiya, M. Responses to lar Taenia taeniaeformis in mice with severe combined immur	10-
deficiency (scid)  Chan, L., Kan, S. P. and Bundy, D. A. P. The effect of repea chemotherapy on age-related predisposition to Ascaris lumb	
coides and Trichuris trichiura	371

#### Parasitology

**Back volumes.** Vols. 1–71: Inquiries should be addressed to Wm. Dawson & Sons Ltd, Cannon House, Folkestone, Kent. Vols. 72 onwards: quotations for parts still in print may be obtained from Cambridge or the American Branch of Cambridge University Press.

**Copying.** This journal is registered with the Copyright Clearance Center, 27 Congress Street, Salem, Mass, 01970. Organizations in the USA who are also registered with C.C.C. may therefore copy material (beyond the limits permitted by sections 107 and 108 of US copyright law) subject to payment to C.C.C. of the per-copy fee of \$5.00. This consent does not extend to multiple copying for promotional or commercial purposes. Code 0031–1820/92 \$5.00 + .00.

ISI Tear Sheet Service. 3051 Market Street, Philadelphia, Pennsylvania 19104, USA, is authorized to supply single copies of separate articles for private use only.

For all other use, permission should be sought from Cambridge or the American Branch of Cambridge University Press.

Claims for missing issues can only be considered if made immediately after receipt of the subsequent issue.

Advertising. Details of advertising in Parasitology may be obtained from the publisher.

# **Parasitology**

CONTENTS

CONTENTS	AGE
Adler, F. R. and Kretzschmar, M. Aggregation and stability in	AGE
parasite-host models	199
Sugimoto, C., Kawazu, S., Sato, M., Kamio, T. and Fujisaki, K. Preliminary biochemical characterization of 'veil' structure purified from <i>Theileria sergenti-</i> , <i>T. buffeli-</i> and <i>T. orientalis-</i> infected	207
bovine erythrocytes  Bishop, R., Sohanpal, B., Kariuki, D. P., Young, A. S., Nene, V., Baylis, H., Allsopp, B. A., Spooner, P. R., Dolan, T. T. and Morzaria, S. P.  Detection of a carrier state in <i>Theileria parva</i> -infected cattle by the	207
polymerase chain reaction	215
Lyimo, E. O. and Koella, J. C. Relationship between body size of adult Anopheles gambiae s.l. and infection with the malaria parasite	
Plasmodium falciparum	233
Cruz-Reyes, J. A., Spice, W. M., Rehman, T., Gisborne, E. and Ackers, J. P. Ribosomal DNA sequences in the differentiation of patho-	
genic and non-pathogenic isolates of <i>Entamoeba histolytica</i> Trees, A. J., Wahl, G., Kläger, S. and Renz, A. Age-related differences in parasitosis may indicate acquired immunity against microfilariae	239
in cattle naturally infected with Onchocerca ochengi	247
Whittington, I. D. and Kearn, G. C. The eggs and oncomiracidia of Encotyllabe spp. and the relationship between encotyllabines and	252
other capsalid monogeneans  Koskivaara, M. and Valtonen, E. T. Dactylogyrus (Monogenea)	253
communities on the gills of roach in three lakes in Central Finland Koskivaara, M., Valtonen, E. T. and Vuori, KM. Microhabitat distribution and coexistence of <i>Dactylogyrus</i> species (Monogenea)	263
on the gills of roach	273
Tocque, K. and Tinsley, R. C. Ingestion of host blood by the	
monogenean <i>Pseudodiplorchis americanus</i> : a quantitative analysis Théron, A., Pointier, J. P., Morand, S., Imbert-Establet, D. and Borel,	283
G. Long-term dynamics of natural populations of Schistosoma	201
mansoni among Rattus rattus in patchy environment  Ratcliffe, E. C. and Wilson, R. A. The role of mononuclear-cell recruitment to the lungs in the development and expression of	291
immunity to Schistosoma mansoni	299

Continued inside back cover

© Cambridge University Press 1992

The Pitt Building, Trumpington Street, Cambridge CB2 1RP 40 West 20th Street, New York, NY 10011-4211, USA 10 Stamford Road, Oakleigh, Victoria 3166, Australia

Printed in Great Britain by the University Press, Cambridge