



INFECTION, GENETICS AND EVOLUTION

Journal of Molecular Epidemiology and Evolutionary Genetics of Infectious Diseases
(MEEGID)

AUTHOR INFORMATION PACK

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DESCRIPTION

Infectious diseases constitute one of the main challenges to medical science in the coming century. The impressive development of molecular megatechnologies and of bioinformatics have greatly increased our knowledge of the evolution, transmission and pathogenicity of infectious diseases. Research has shown that host susceptibility to many infectious diseases has a genetic basis. Furthermore, much is now known on the molecular epidemiology, evolution and virulence of pathogenic agents, as well as their resistance to drugs, vaccines, and antibiotics. Equally, research on the genetics of disease vectors has greatly improved our understanding of their systematics, has increased our capacity to identify target populations for control or intervention, and has provided detailed information on the mechanisms of insecticide resistance.

However, the genetics and evolutionary biology of hosts, pathogens and vectors have tended to develop as three separate fields of research. This artificial compartmentalisation is of concern due to our growing appreciation of the strong coevolutionary interactions among hosts, pathogens and vectors.

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Michel Tibayrenc, Maladies Infectieuses et Vecteurs Ecologie, Génétique, Evolution et Contrôle (MIVEGEC), Institut de Recherche pour le Développement (IRD), 34394 cedex 5 Montpellier, France
Email: Michel.Tibayrenc[at]ird.fr

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Ignacio González Bravo, Unit of Infection and Cancer, Catalan Institute of Oncology, Avda. Gran Vía de l'Hospitalet 199-203, 08908, L'hospitalet de Llobregat, Barcelona, Spain

Dustin Brisson, Dept. of Biology, University of Pennsylvania, 433 South University Avenue, Philadelphia, Pennsylvania, PA 19104-6018, USA

Daniel Cadar, Collaborating Centre for Arbovirus and Hemorrhagic Fever Reference and Research, Bernhard Nocht Institute for Tropical Medicine, World Health Organization (WHO), Bernhard-Nocht-Strasse 74, 20359, Hamburg, Germany

Keith Crandall, Computational Biology Institute, George Washington University, 45085 University Drive, Ashburn, Virginia, VA 20147-2766, USA

Thierry de Meeus, UMR 177 IRD-CIRAD "INTERTRYP", Institut de Recherche pour le Développement (IRD), Campus International de Baillarguet, 34398, Montpellier Cedex 5, France

Pierre Echaubard, Department of Biology, Laurentian University, Ontario, Canada

Michaela Fakiola, Department of Pathology, University of Cambridge, Tennis Court Road, CB2 1QP, Cambridge, UK

Claire Garros, Dept. de BIOS, UMR Contrôle des Maladies Animales exotiques et émergentes, INRA-CIRAD, Campus international de Baillarguet TA-A15/G, 34398, Montpellicr Cedex 5, France

Fernando González-Candelas, Instituto "Cavanilles" de Biodiversidad y Biología Evolutiva, Depto. de Genética, Universidad de Valencia, C/ Catedrático Jose Beltran, 2, E-46980, Valencia (Paterna), Spain

Edmundo Grisard, Dept. de Microbiologia, Imunologia e Parasitologia, Centro de Ciências Biológicas, Universidade Federal de Santa Catarina, Setor F, Bloco A, Cx. postal 476, SC, 88.040-970, Florianópolis, Brazil

Tomasz Jagielski, Inst. of Microbiology, Fac. of Biology, Medical University of Warsaw, 1, ILJI MIECZNIKOWA Str., 02-096, Warsaw, Poland

Louis Lambrechts, Insect -Virus Interactions Group, Institut Pasteur, 28 rue du Docteur Roux, 75015, Paris, France

Fabio Luciani, UNSW Australia, Sydney, New South Wales, Australia

Igor Mokrousov, Lab. of Molecular Microbiology, St. Petersburg Pasteur Institute, 14, Mira st., 197101, St. Petersburg, Russian Federation

Serge Morand, Inst. des Sciences de l'Evolution, Université Montpellier, Case Courier 064, F-34095, Montpellier, France

Viktor Müller, Inst. of Biology, Eötvös Loránd University, Pázmány P. s. 1/C, 1117, Budapest, Hungary

Dimitrios Paraskevis, National Retrovirus Reference Center, Dept. of Hygiene and Epidemiology, National and Kapodistrian University of Athens, Mikras Asias 75 street (Goudi), , 115 27, Athens, Greece

Martine Peeters, Retrovirus Lab., Institut de Recherche pour le Développement (IRD), Montpellier, France

Marcos Perez-Losada, Computational Biology Institute, Innovation Hall, The George Washington University, 45085 University Drive, Sutie 305, Ashburn, Virginia, 20147, USA

Tung Phan, Dept. of Pathology & Lab. Medicine, School of Medicine, Indiana University, 702 Barnhill Drive, Room 0969, Indianapolis, Indiana, IN 46202-5120, USA

Shoukat Qari*, Office of Public Health Preparedness and Response, Office of Applied Research, Centers for Disease Control and Prevention (CDC), 1600 Clifton Road, MS K-72, Atlanta, GA 30333, Georgia, USA

*Shoukat Qari is serving in his personal capacity. The views expressed are his own and do not necessarily represent the views of the Centers for Disease Control and Prevention or the United States Government.

Stephen M. Rich, University of Massachusetts at Amherst

Benjamin Rosenthal, US Dept. of Agriculture, Animal Parasitic Diseases Lab., Henry A. Wallace-Beltsville Agricultural Res.Cntr., BARC-East Bldg. 1180, Beltsville, Maryland, MD-20705, USA

Matthew Scotch, Center for Environmental Security, the Biodesign Institute and Security & Defense Systems Initiative, Arizona State University, Tempe, Arizona, USA

Marie-Anne Shaw, School of Biology, University of Leeds, Woodhouse Lane, LS2 9JT, Leeds, UK

Manuela Sironi, Bioinformatics Scientific Institute IRRCCS E. Medea, Via Don L.Monza, 23842, Bosisio Parini (LC), Italy

Shuo Su, College of Veterinary Medicine, Nanjing Agricultural University, Tongwei Road, Xuanwu District, Nanjing, Jiangsu Province, China

Loubna Tazi, School of Medicine, Dept. of Medical Microbiology & Immunology, University of California, Davis, USA

Rasmi Thomas, US Military HIV Research Program (MHRP), Walter Reed Army Institute of Research, Bldg 503, Silver Spring, Maryland, MD 20910, USA

Thierry Wirth, ISYEB, UMR-CNRS 7205, Museum National d'Histoire Naturelle, 16 rue Buffon, , 75231, Paris cedex 05, France

Xu Xiaojing, Medical College of Georgia, Georgia Prevention Institute, 1120 15Th Street, Augusta, Georgia, 30912, USA

Jianpeng Xu, Joint Genome Institute, Lawrence Berkeley National Laboratory, 2800 Mitchell Drive, Walnut Creek, California, CA 94598, USA

Yong-Gang Yao, Kunming Institute of Zoology, Chinese Academy of Sciences (CAS), 32 Jiao Chang Dong Road, Kunming, 650223, Kunming, China

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INTRODUCTION

Infectious diseases constitute one of the main challenges to medical science in the coming century. The impressive development of molecular megatechnologies and of bioinformatics have greatly increased our knowledge of the evolution, transmission and pathogenicity of infectious diseases. Research has shown that host susceptibility to many infectious diseases has a genetic basis. Furthermore, much is now known on the molecular epidemiology, evolution and virulence of pathogenic agents, as well as their resistance to drugs, vaccines, and antibiotics. Equally, research on the genetics of disease vectors has greatly improved our understanding of their systematics, has increased our capacity to identify target populations for control or intervention, and has provided detailed information on the mechanisms of insecticide resistance.

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