



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.

Infection, Genetics and Evolution and its companion congress **MEEGID** (for **Molecular Epidemiology** and **Evolutionary Genetics** of Infectious Diseases) are the main forum acting for the cross-fertilization between **evolutionary science** and biomedical research on infectious diseases.

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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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