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EDITORIAL

Foreword

D. J. Weatherall

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The partial completion of the human genome project in 2002 was accompanied by predictions that this remarkable achievement would transform medical practice in the near future. While it is now clear that many of these claims were over exaggerated, particularly with the respect to the timescale involved, over the last 5 years there have been genuine advances in the field of molecular medicine.

The poor countries of the world are still suffering from the effects of malnutrition, inadequate health care systems, and the scourges of communicable disease. The richer countries, on the other hand, have to deal with the spiralling costs of caring for the chronic diseases of middle and old age, cancer, vascular disease, dementia, and many more. And many of the poorer countries that are going through an epidemiological transition towards better living standards and the partial control of infection are experiencing a rapid rise in the diseases of Western society while, at the same time, still suffering from the ravages of many communicable diseases.

Currently, the application of genomic technology for better healthcare is most advanced in the case of diagnosis and control of monogenic disease. However, many promising applications are stemming from genomics for the better control of infectious disease, including the identification of new pathogens, the diagnosis of disorders in which organisms are difficult to grow or identify by standard techniques, the identification of drug resistant organisms, vector control, and new approaches for the development of drug targets and vaccines. Genomic medicine is also making major progress towards better methods for the diagnosis and management of many different forms of cancer. Its application to other common diseases, particularly those in which there is a major environmental component, heart disease, stroke and diabetes for example, has been much slower, although there have been some remarkable successes very recently in identifying susceptibility genes for these conditions.

Particularly in view of the multi-layered pathology of human disease it has become clear that the full benefits of genomics for human health will only come to fruition by the close interaction of clinical epidemiology and population genetics together with a revitalisation of the clinical research required to dissect interactions between the genome and environment that are responsible for the extremely complex and changing phenotypes of most human diseases.

A major reason for introducing *Genomic Medicine* into what is undoubtedly turning into an over-crowded medical publishing scene is to provide a home for work that reflects this multi-disciplinary approach and, in particular, that takes a more global view of the undoubted possibilities of the genomic approach to medical practice, not in the least for diseases that affect the poorer countries of the world.

D. J. Weatherall (✉)
Institute of Molecular Medicine, John Radcliffe Hospital,
Oxford OX3 7LJ, UK
e-mail: liz.rose@imm.ox.ac.uk