

Will genetics ever have the promised impact on medical practice?

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Since the discovery of gene sequencing in the late 1970s, it was predicted that genetics would revolutionise medicine and provide answers to the causes of many of our common killers. But has genetic research delivered its promise? Experts debate the issue in the British Medical Journal today.

London GP, James Le Fanu argues that the influence of modern genetics on everyday medical practice "remains scarcely detectable."

Nearly 10 years have elapsed since the completion of the first draft of the human genome project, he writes. Although there have been substantial achievements and fascinating insights, the prevention and treatment of [genetic](#) disorders remains as elusive as ever.

He suggests that [genetic research](#) "has forcibly drawn to our attention our ignorance about the most elementary aspects of gene function," and it is therefore "highly improbable that the future of medicine might lie in understanding disease at the most fundamental reductionist level of the gene and the proteins for which they code."

This takes us to the end of the alley, he concludes. "There is no way out, and the sooner we recognise it the better because the current dominance of [medical genetics](#) threatens to bury the true spirit of intellectual inquiry under an avalanche of undigested (and indigestible) facts."

But Professor David Weatherall from the Institute of Molecular

Medicine at the University of Oxford disagrees.

He explains that mutations for hundreds of single gene (monogenic) diseases have now been identified and, "although gene therapy for their correction has proved difficult, sufficient progress has been made to suggest that this approach will be possible in the future."

Spectacular advances have also followed the application of molecular biology to communicable diseases and cancer, he adds.

"These examples of the medical applications of [molecular genetics](#), all of which are still progressing in many different directions, certainly do not suggest that modern genetics has reached a blind alley," he writes.

He concludes: "The remarkable advances that are occurring in evolutionary and developmental biology, and the highly original approaches to tackling the problems of biological complexity ... show that viewing the young discipline of genetic research as a blind alley would be short sighted."

Provided by British Medical Journal

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