In the news

THE POWER OF GENOMICS REVEALED

In the largest ever study of its kind, a consortium of more than 50 UK-based research groups has pinpointed genetic variations that underlie seven common diseases — rheumatoid arthritis, type 1 and type 2 diabetes, Crohn's disease, bipolar disorder, hypertension and coronary heart disease. Several of the key findings, published in *Nature* (7 June 2007), are replicated in two related independent papers in *Nature Genetics* (7 June 2007) that offer further insights into Crohn's disease and type 1 diabetes. Professor Peter Donnelly, of the University of Oxford, who chaired the consortium, said: "…our study should enable scientists to understand better how disease occurs, which people are most at risk and, in time, produce more effective, more personalized treatments." (*The Guardian*, 7 June 2007)

Researchers of the consortium screened 50,000 markers across the genomes of 2,000 patients with each of the seven diseases, and compared them with 3,000 control samples from healthy individuals, and identified 24 genetic risk factors. Importantly, half of these were in areas of the genome not previously thought to be associated with these diseases. Mark Walport, director of the Wellcome Trust, which helped to fund the 2-year, GBP£9 million study, said: "This research shows that it is possible to analyse human variation in health and disease on an enormous scale." (*The Times*, 7 June 2007)

Among the most interesting findings was the association of the gene *PTPN2* with both Crohn's disease and type 1 diabetes, suggesting that these disorders share similar biological pathways (*Telegraph*, 7 June 2007). An association of Crohn's disease with genes involved in autophagy (a process of clearing unwanted material from within cells) was also uncovered; John Todd of the University of Cambridge said this could be key to explaining the role gut bacteria have in this condition (*Reuters*, 6 June 2007).

Lucy Bird

DOI:
10.1038/nri2127