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Grant awarded £75,000 (2 years)

Identification of a susceptibility gene on chromosome 3 for Crohn's disease.

Progress towards finding genes that influence susceptibility to IBD, or influence the behaviour of the disease once it has occurred, has been very fast. Of the 23 pairs of chromosomes that we all have, 12 are thought to contain at least one gene of relevance to IBD. The gene on chromosome 16 has already been identified (it is known as NOD2 or CARD15) and we know that it is associated with small intestinal disease in 20-28% of patients in England, France, Germany and North America, in 8-12% in Ireland, Scotland and Scandinavia, and not at all in Chinese, Korean and Japanese patients.

Thus, although mutations in NOD2/CARD15 are clearly important for Crohn's disease and a region on chromosome 3 in those patients who do not have NOD2/CARD15 mutations. This strongly indicates the presence of another gene relevant to Crohn's disease in this region a suggestion that finds support from other studies reported from Pittsburgh.

This project involves, analysing this region on chromosome 3 in detail in the hope that the precise gene can be identified. All the known genes in this region will be identified and then common mutations (>5%) will be determined. 400 patients with Crohn's disease and 400 healthy controls will then be typed for these mutations, a strategy that was successful in identifying the NOD2/CARD15 gene.