

# *re:* Phenome Scan Project



Bristol University's Avon Longitudinal Study of Parents and Children (ALSPAC) is a unique study which enrolled 14,000 mothers during pregnancy in 1991-2 and has followed the children's development ever since. By extracting DNA direct from the blood samples of 10,000 children and 10,000 mothers, two large DNA banks have been established.

Analysis of this DNA database will provide a clearer picture of the combinations of genetic and environmental variations which underlie common health problems. Individual genes may contribute to several different characteristics, or phenomes, so it is possible that genetic variation can have both beneficial and harmful effects. For example, it is now well understood that schizophrenia has a genetic component, but studies of schizophrenics' families show them to be exceptionally creative. If a drug was developed to modify the gene that contributed to schizophrenia, that creative flair might also be lost.

The Phenome Scan project is designed to assess relationships between specific genes and a vast array of phenotypes of children and adults. These will include markers of physical and psychological disease and disorder. The fact that the individuals were not selected for any reason other than the year in which they were born, provides a means of determining the protective as well as the deleterious effects of genetic variation. A detailed understanding of this will help to identify preventive treatments which can be targeted at those who will benefit most from intervention.

Because ALSPAC is publicly funded, all results of the phenome scans will be available to the research community within nine months of publication in a peer-review journal, or receipt of the results by the commissioning body. ■

*[www.ich.bris.ac.uk/ALSPAC.html](http://www.ich.bris.ac.uk/ALSPAC.html)*