

Researchers shed light on genetic factors behind UK's biggest killer

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Researchers investigating the biochemical characteristics behind several everyday diseases have discovered a new chromosomal region to be strongly associated with the bad cholesterol, low density lipoprotein, (LDL). High levels of LDL are considered a major risk factor for the development of coronary heart disease -- the UK's biggest killer.

The study, published today (10 January, 2008) in the *American Journal of Human Genetics*, reveals the biological mechanism for the previous association of this region with coronary heart disease, and could pave the way towards developing new therapies for the disease which each year claims the lives of one in four men, and one in six women.

Led by Professor Patricia Munroe, Dr Chris Wallace and Professor Mark Caulfield, of the William Harvey Research Institute at Barts and the London School of Medicine and Dentistry, researchers worked on the hypothesis that genetic variation may influence the inheritance of biochemical traits, which in turn may serve as risk factors for common cardiovascular diseases or associated complications.

They analysed 25 commonly assessed biochemical variables from concurrent serum and urine samples taken from hypertensive individuals involved in the MRC British Genetics of Hypertension (BRIGHT) study. For lipid traits, a meta-analysis was performed with data from the Diabetes Genetics Initiative at the BROAD Institute.

The study indicates that common genetic variation influences

biochemical parameters which are measured in everyday clinical care.

Professor Patricia Munroe said: “Our study found new genes for serum LDL, the cholesterol which furs arteries, and serum urate, which can cause gout. We believe our findings are of significant clinical importance as they are strongly associated with cardiovascular disease; they also represent excellent targets for new medicines.?”

Source: Queen Mary, University of London

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