

## Articles

## LDL-cholesterol concentrations: a genome-wide association study

Correspondence to:  
Dr Manjinder S Sandhu,  
Department of Public Health and  
Primary Care, Strangeways  
Research Laboratory, University  
of Cambridge, Cambridge  
CB1 8RN, UK  
[manj.sandhu@srl.cam.ac.uk](mailto:manj.sandhu@srl.cam.ac.uk)

|            | Study 1 (EPIC-Norfolk<br>subcohort) n=2269 |                      | Study 2 (EPIC-Norfolk<br>obese set) n=1009 |                      | Study 3 (1958 British<br>birth cohort) n=1375 |                      | Study 4 (CoLaus)<br>n=5367 |                       | Study 5 (GEMS study)<br>n=1665 |                      |
|------------|--|----------------------|--|----------------------|---|----------------------|----------------------------|-----------------------|--------------------------------|----------------------|
|            | $\beta$ coeff (SE)                         | p value              | $\beta$ coeff (SE)                         | p value              | $\beta$ coeff (SE)                            | p value              | $\beta$ coeff (SE)         | p value               | $\beta$ coeff (SE)             | p value              |
| rs4420638  | 0.24 (0.04)                                | $1.9 \times 10^{-9}$ | 0.14 (0.06)                                | 0.02                 | 0.25 (0.04)                                   | $2.8 \times 10^{-9}$ | 0.05 (0.01)                | $6.2 \times 10^{-12}$ | 0.04 (0.01)                    | $5.6 \times 10^{-3}$ |
| rs599839   | -0.15 (0.04)                               | $5.8 \times 10^{-5}$ | -0.23 (0.06)                               | $7.6 \times 10^{-5}$ | -0.14 (0.04)                                  | $4.3 \times 10^{-4}$ | -0.04 (0.01)               | $1.6 \times 10^{-7}$  | -0.06 (0.01)                   | $2.0 \times 10^{-5}$ |
| rs4970834  | -0.13 (0.04)                               | $1.1 \times 10^{-3}$ | -0.18 (0.06)                               | $5.5 \times 10^{-3}$ | -0.11 (0.04)                                  | 0.01                 | -0.04 (0.01)               | $1.9 \times 10^{-6}$  | -0.04 (0.01)                   | $2.8 \times 10^{-3}$ |
| rs562338   | -0.17 (0.04)                               | $6.0 \times 10^{-6}$ | -0.11 (0.06)                               | 0.07                 | -0.18 (0.05)                                  | $1.1 \times 10^{-4}$ | -0.03 (0.01)               | $2.7 \times 10^{-6}$  | -0.02 (0.01)                   | 0.18                 |
| rs7575840  | 0.15 (0.03)                                | $6.3 \times 10^{-6}$ | 0.15 (0.05)                                | $2.4 \times 10^{-3}$ | 0.04 (0.04)                                   | 0.26                 | 0.03 (0.01)                | $1.9 \times 10^{-6}$  | 0.02 (0.01)                    | 0.13                 |
| rs478442   | -0.16 (0.04)                               | $2.1 \times 10^{-5}$ | -0.07 (0.06)                               | 0.25                 | -0.16 (0.04)                                  | $3.6 \times 10^{-4}$ | -0.03 (0.01)               | $2.7 \times 10^{-5}$  | -0.02 (0.01)                   | 0.06                 |
| rs4591370  | -0.17 (0.04)                               | $7.7 \times 10^{-6}$ | -0.06 (0.06)                               | 0.28                 | -0.16 (0.04)                                  | $4.2 \times 10^{-4}$ | -0.03 (0.01)               | $3.2 \times 10^{-5}$  | -0.02 (0.01)                   | 0.06                 |
| rs4560142  | -0.16 (0.04)                               | $1.6 \times 10^{-5}$ | -0.06 (0.06)                               | 0.27                 | -0.16 (0.04)                                  | $4.2 \times 10^{-4}$ | -0.03 (0.01)               | $3.5 \times 10^{-5}$  | -0.03 (0.01)                   | 0.05                 |
| rs576203   | -0.16 (0.04)                               | $1.2 \times 10^{-5}$ | -0.07 (0.06)                               | 0.25                 | -0.16 (0.04)                                  | $3.5 \times 10^{-4}$ | -0.03 (0.01)               | $3.5 \times 10^{-5}$  | -0.02 (0.01)                   | 0.06                 |
| rs506585   | -0.16 (0.04)                               | $1.7 \times 10^{-5}$ | -0.06 (0.06)                               | 0.31                 | -0.16 (0.04)                                  | $3.5 \times 10^{-4}$ | -0.03 (0.01)               | $4.2 \times 10^{-5}$  | -0.03 (0.01)                   | 0.05                 |
| rs488507   | -0.14 (0.04)                               | $1.3 \times 10^{-4}$ | -0.07 (0.06)                               | 0.25                 | -0.16 (0.04)                                  | $3.3 \times 10^{-4}$ | -0.03 (0.01)               | $3.4 \times 10^{-5}$  | -0.02 (0.01)                   | 0.07                 |
| rs538928   | -0.16 (0.04)                               | $5.0 \times 10^{-5}$ | -0.01 (0.06)                               | 0.92                 | -0.16 (0.04)                                  | $3.5 \times 10^{-4}$ | -0.03 (0.01)               | $3.6 \times 10^{-5}$  | -0.02 (0.01)                   | 0.05                 |
| rs10402271 | 0.04 (0.03)                                | 0.17                 | 0.11 (0.05)                                | 0.02                 | 0.12 (0.04)                                   | $7.5 \times 10^{-4}$ | 0.02 (0.01)                | $5.2 \times 10^{-4}$  | 0.04 (0.01)                    | $8.3 \times 10^{-4}$ |
| rs693      | -0.12 (0.03)                               | $1.3 \times 10^{-4}$ | -0.07 (0.05)                               | 0.15                 | -0.06 (0.03)                                  | 0.06                 | -0.03 (0.01)               | $1.0 \times 10^{-5}$  | -0.02 (0.01)                   | 0.16                 |

**Webtable 3:** Associations between Affymetrix SNPs with a combined p value of  $<1.0 \times 10^{-7}$  and circulating concentrations of LDL cholesterol in independent study populations