**S4 Fig. Association and conditional plots.** Unconditional and conditional association analyses for rs174570 and rs80356779 in the *FADS2* and *CPT1A* loci, respectively, with A) palmitoleic acid (16:1 ω-7), B) stearic acid (18:0), C) oleic acid (18:1 ω-9), D) linoleic acid (*cis-cis*-18:2 ω-6), E) gamma-linolenic acid (18:3 ω-6), F) arachidic acid (20:0), G) 11-eicosenoic acid (20:1 ω-9), H) dihomo-gamma-linolenic acid (20:3 ω-6), I) arachidonic acid (20:4 ω-6), J) behenic acid (22:0), K) erucic acid (22:1 ω-9), L) adrenic acid (22:4 ω-6), M) docosapentaenoic acid (22:5 ω-3), N) lignoceric acid (24:0), and O) nervonic acid (24:1 ω-9).The association results of the unconditional analysis are colored according to the LD, which is calculated for the candidate SNP in the region. Green dots represent the results of the conditional analysis, and the circles denote the SNPs conditioned on. The p-values are based on imputation data.

A

Palmitoleic acid (16:1 ω-7) conditioned on rs174570

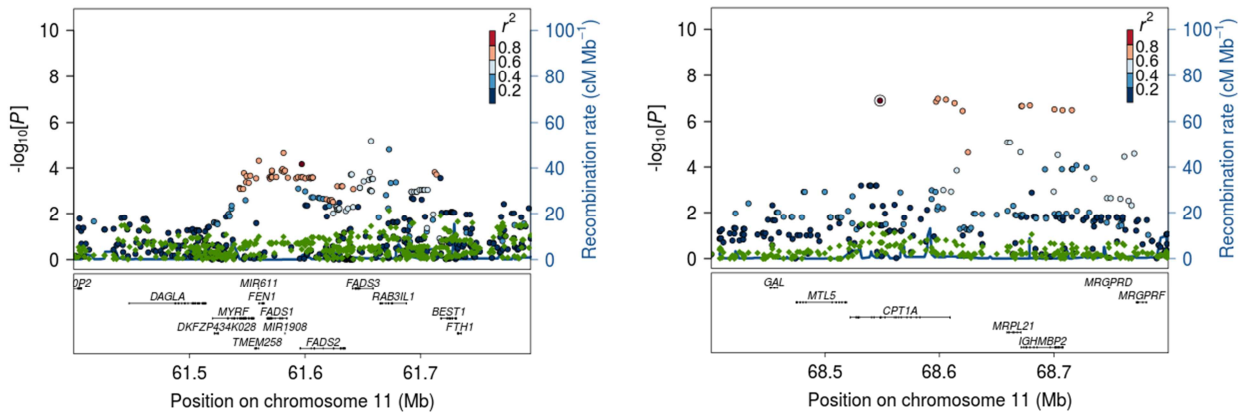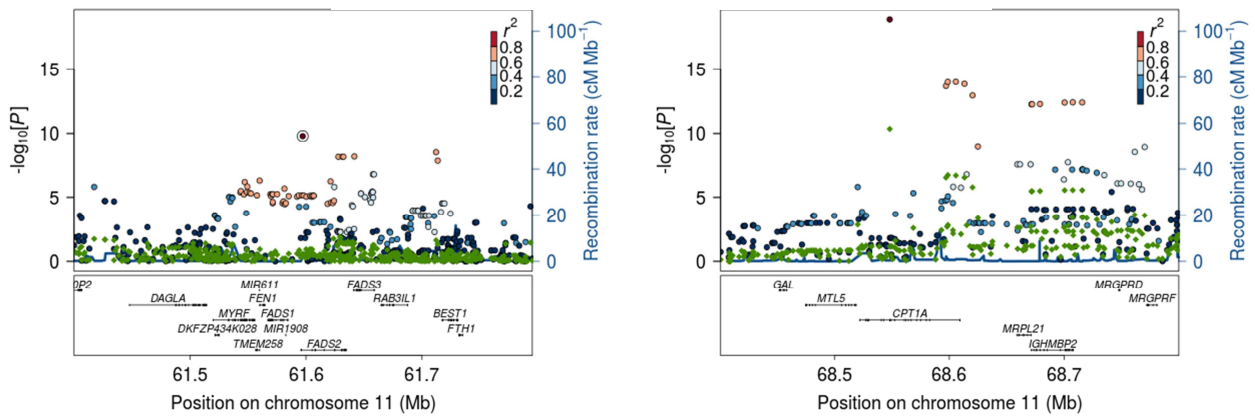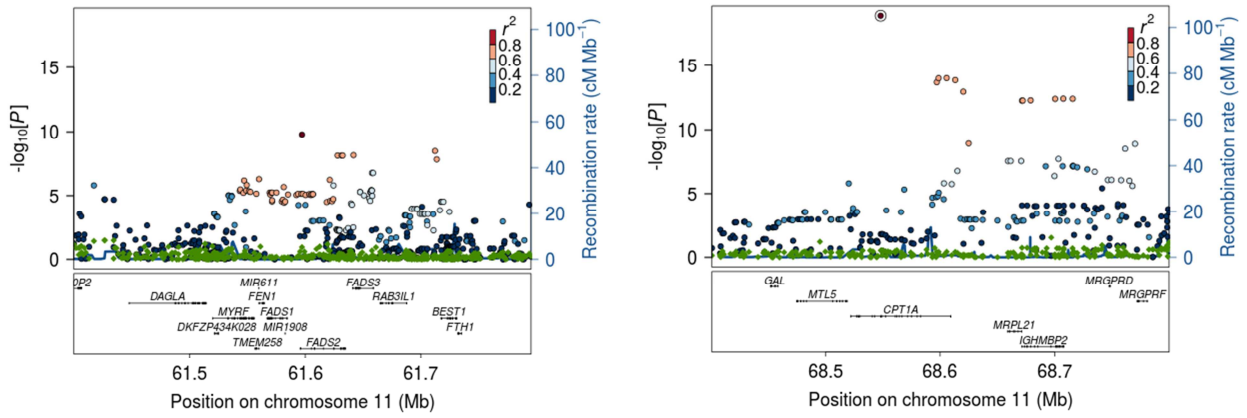Palmitoleic acid (16:1 ω-7) conditioned on rs80356779

B
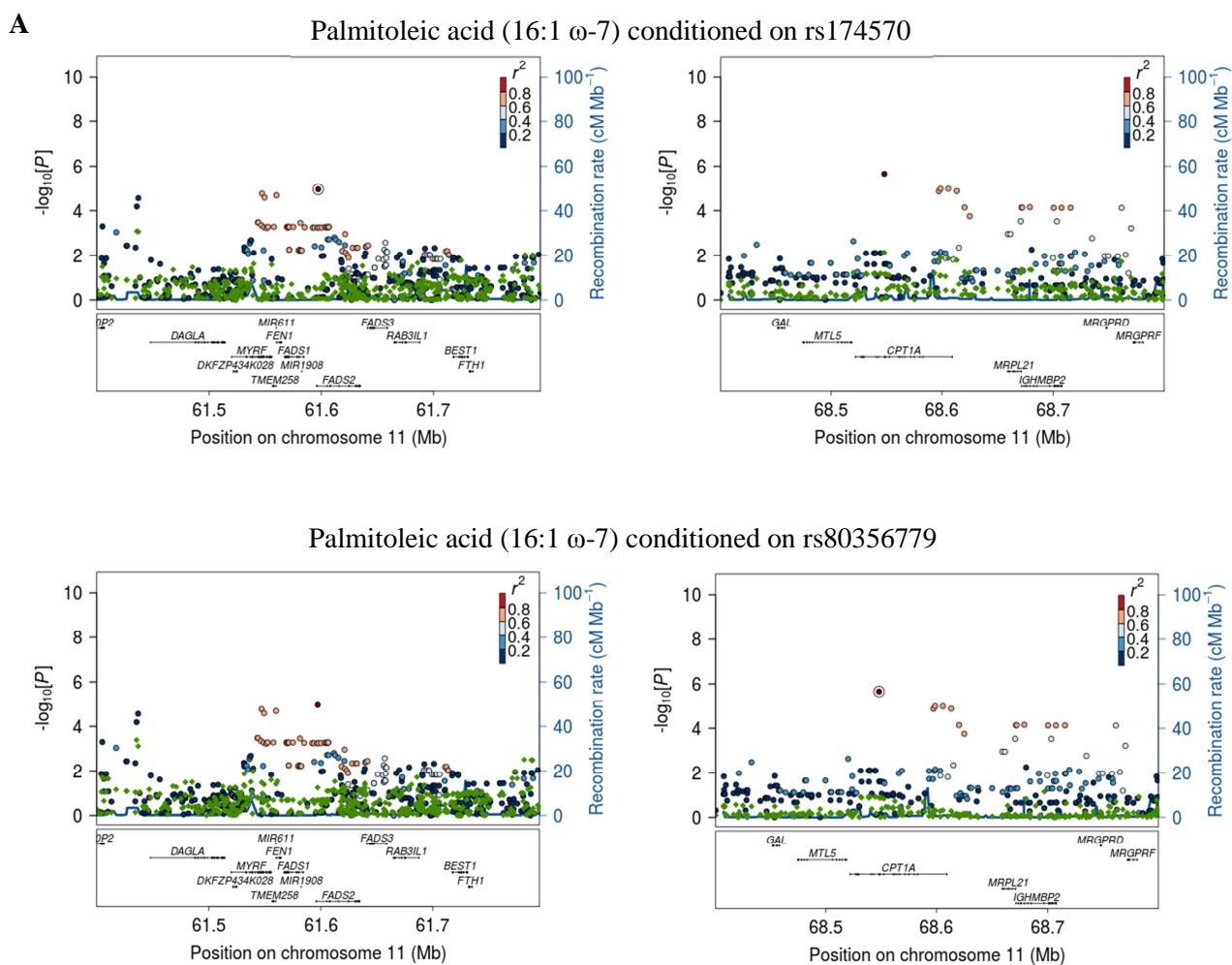
Stearic acid (18:0) conditioned on rs174570
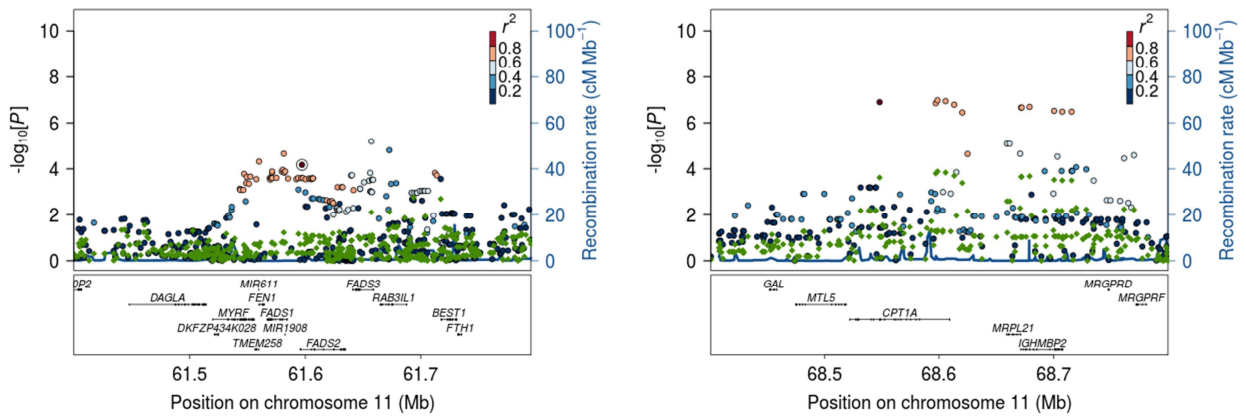
Stearic acid (18:0) conditioned on rs80356779
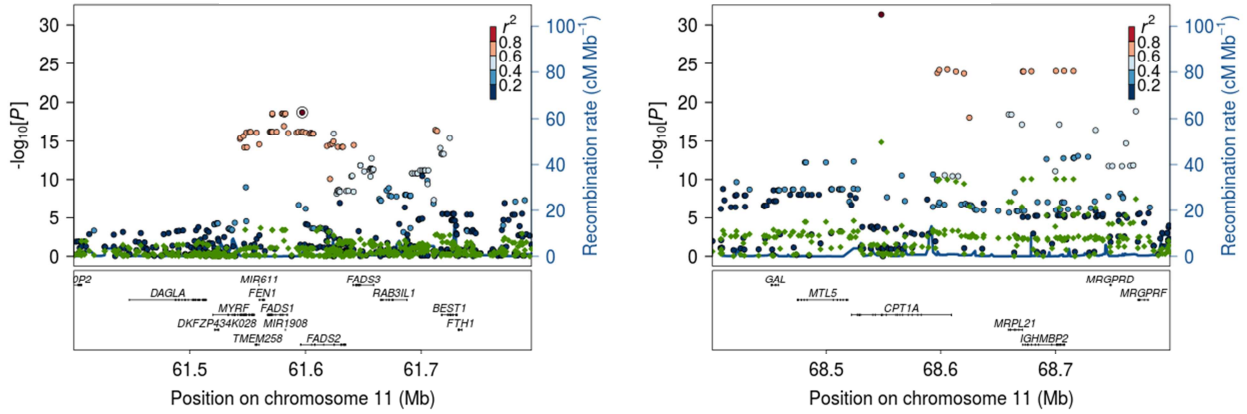

C

Oleic acid (18:1 ω-9) conditioned on rs174570
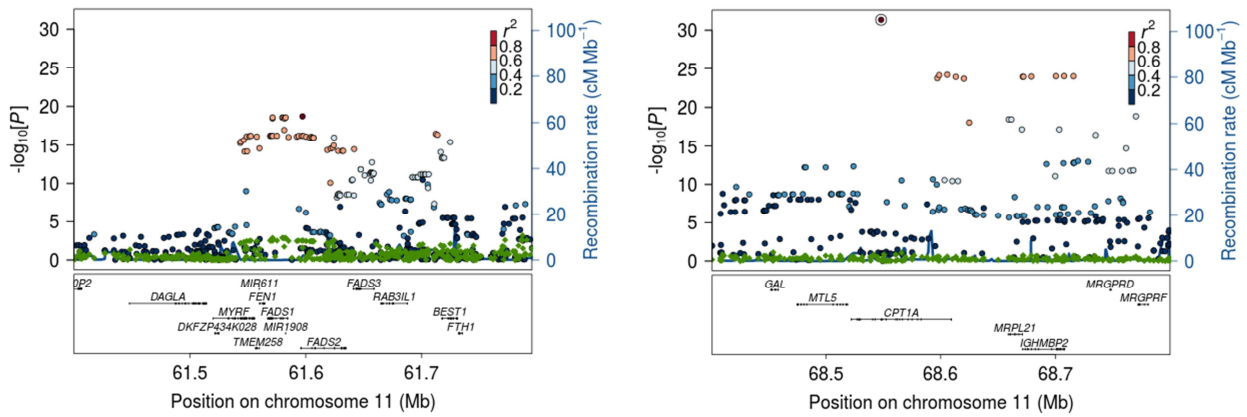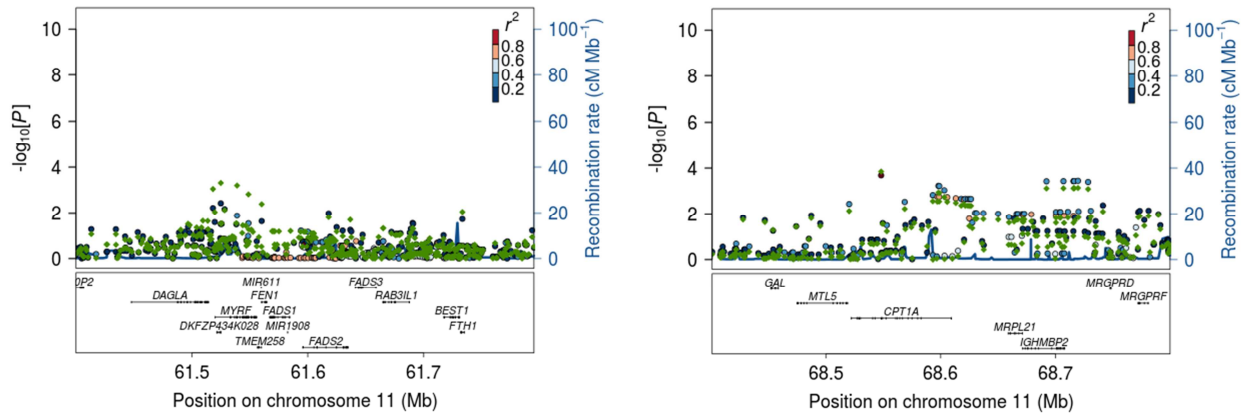
Oleic acid (18:1 ω-9) conditioned on rs80356779

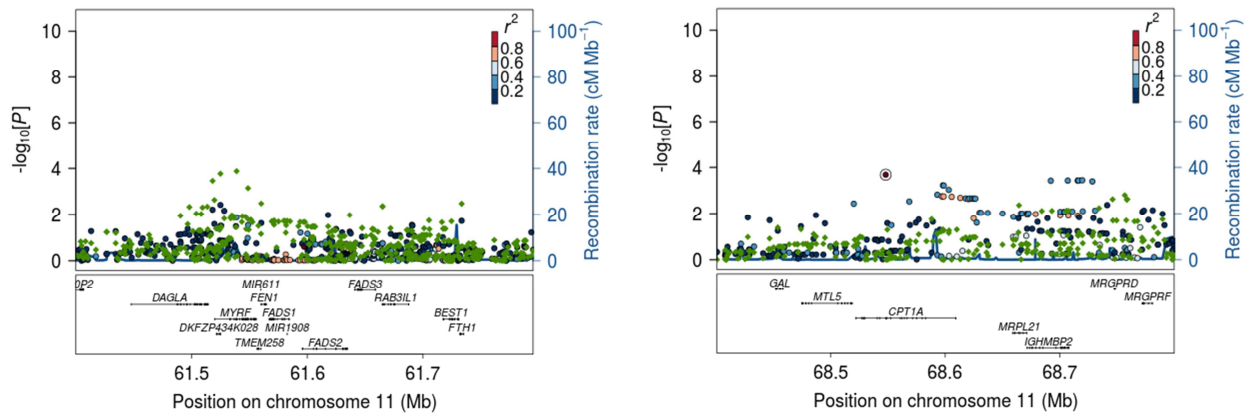**D** Linoleic acid (*cis-cis*-18:2 ω-6) conditioned on rs174570

Linoleic acid (*cis-cis*-18:2 ω-6) conditioned on rs80356779

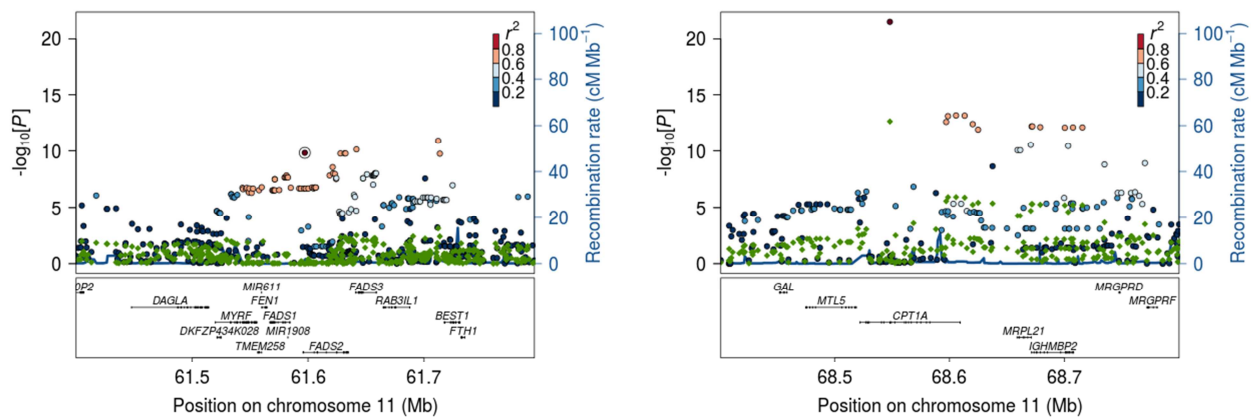**E** Gamma-linolenic acid (18:3 ω-6) conditioned on rs174570

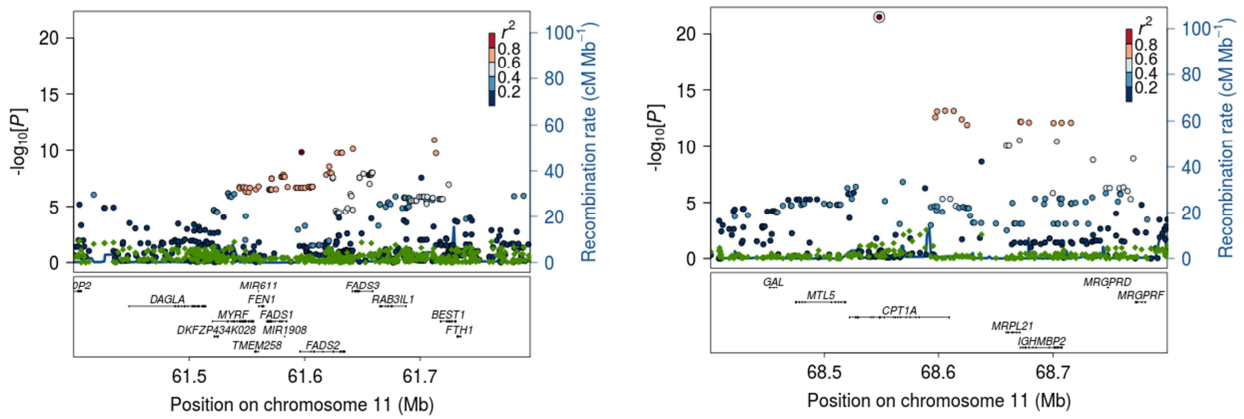Gamma-linolenic acid (18:3 ω-6) conditioned on rs80356779
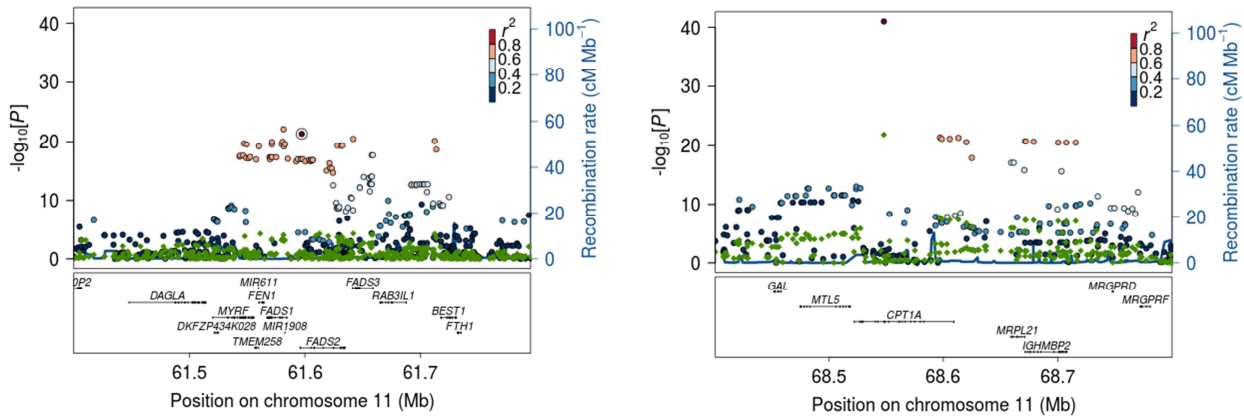
F Arachidic acid (20:0) conditioned on rs174570
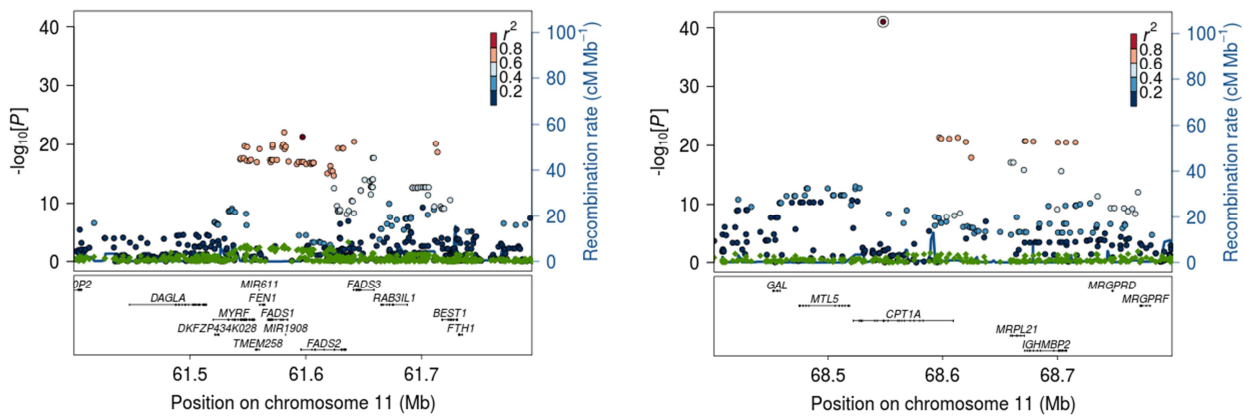
Arachidic acid (20:0) conditioned on rs80356779

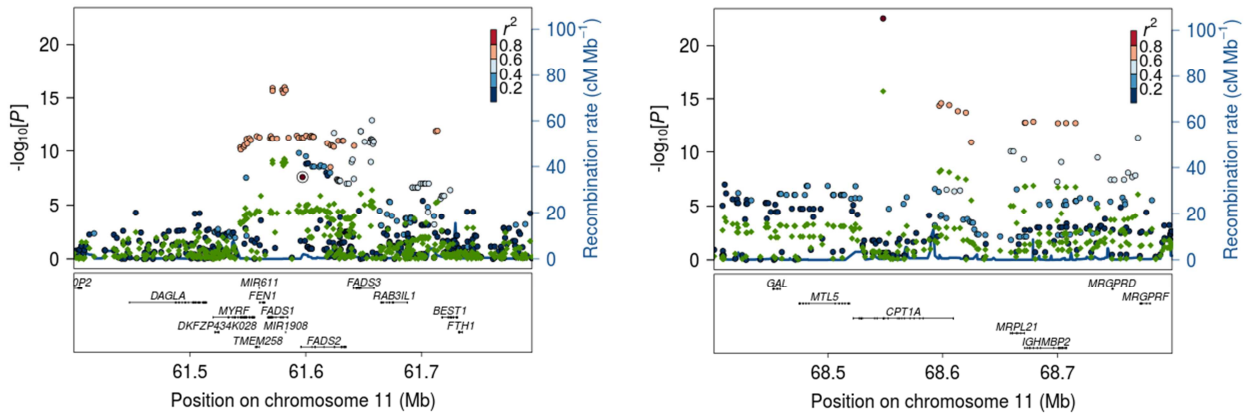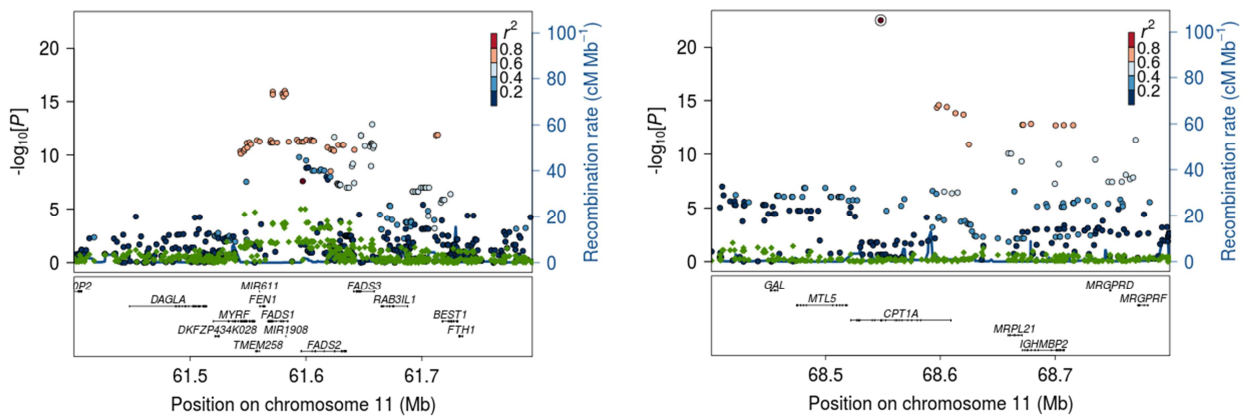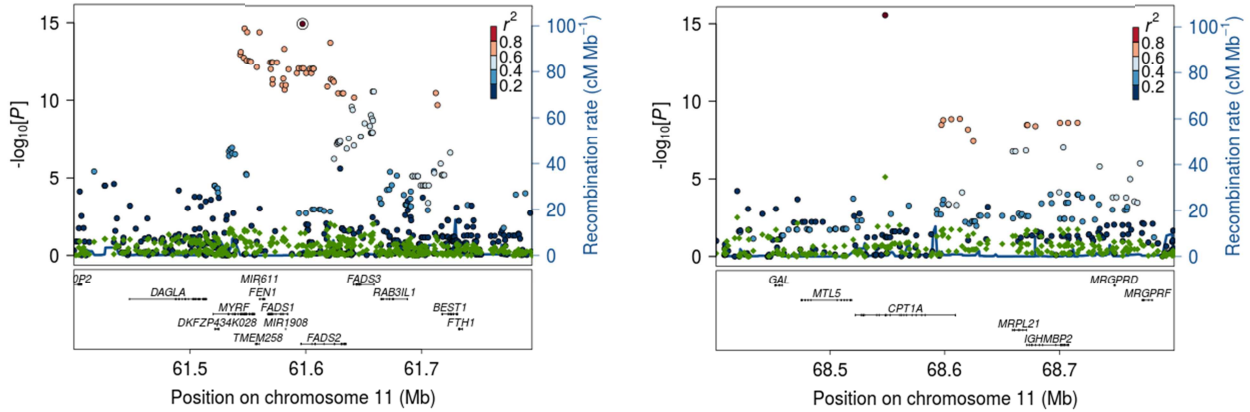## G 11-eicosenoic acid (20:1 ω-9) conditioned on rs174570

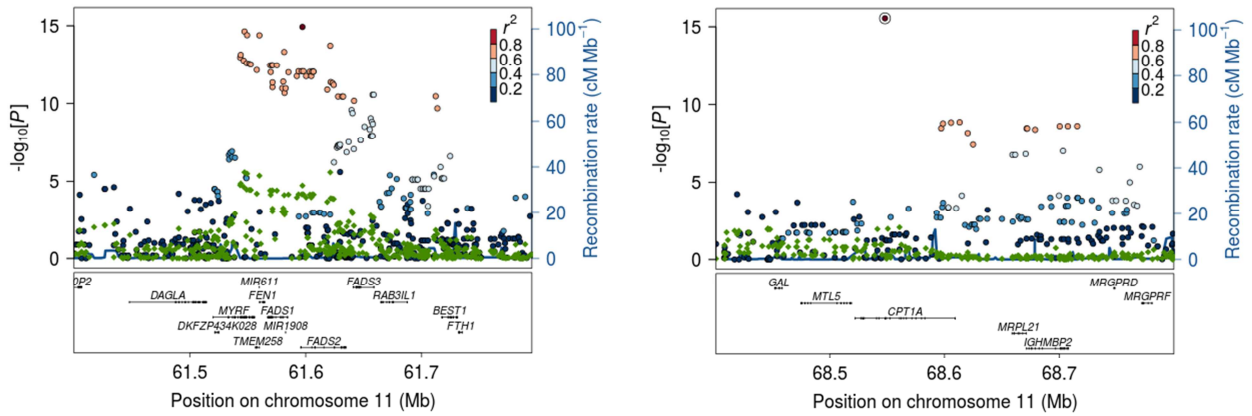## 11-eicosenoic acid (20:1 ω-9) conditioned on rs80356779
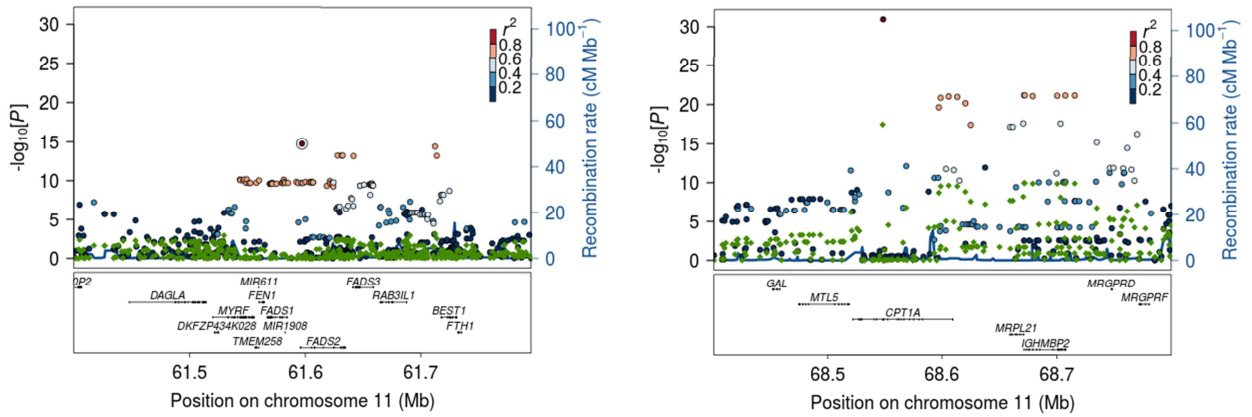
H

Dihomo-gamma-linolenic acid (20:3 ω-6) conditioned on rs174570

Dihomo-gamma-linolenic acid (20:3 ω-6) conditioned on rs80356779

I

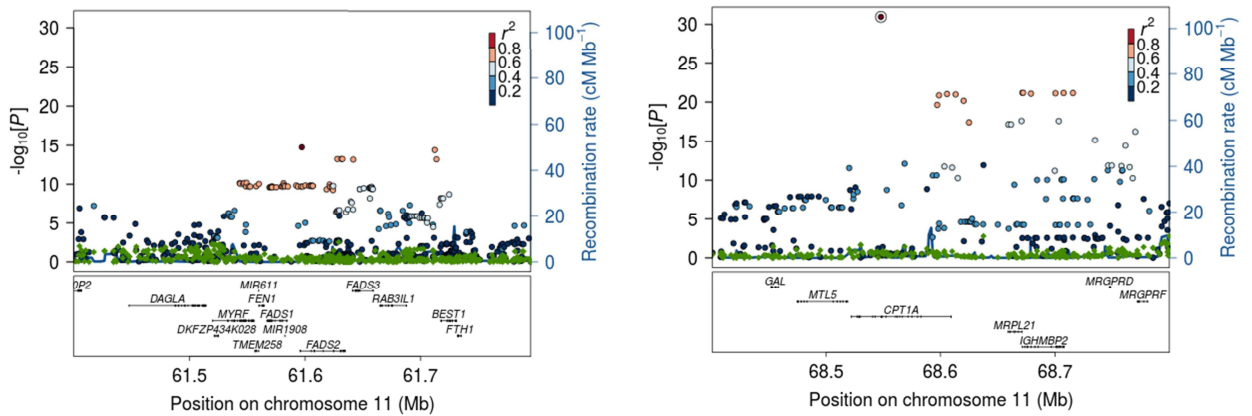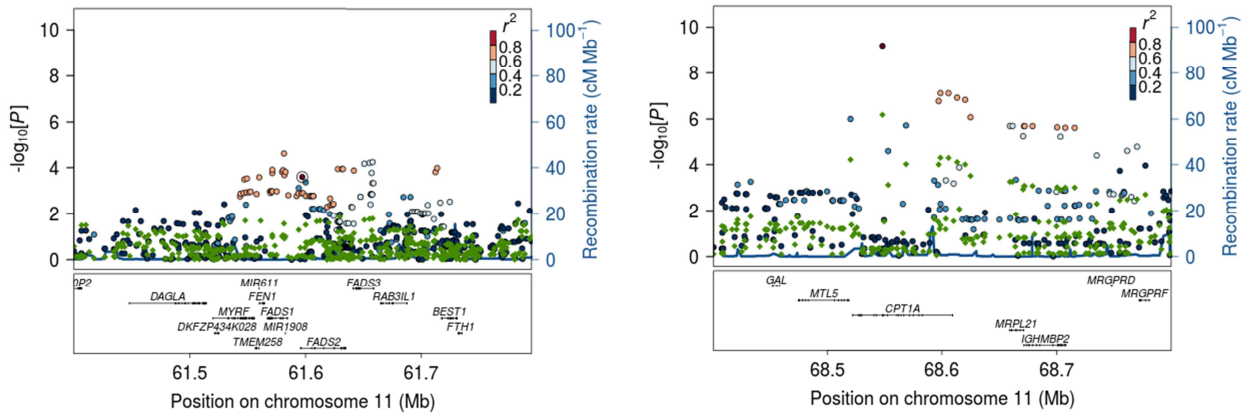Arachidonic acid (20:4 ω-6) conditioned on rs174570
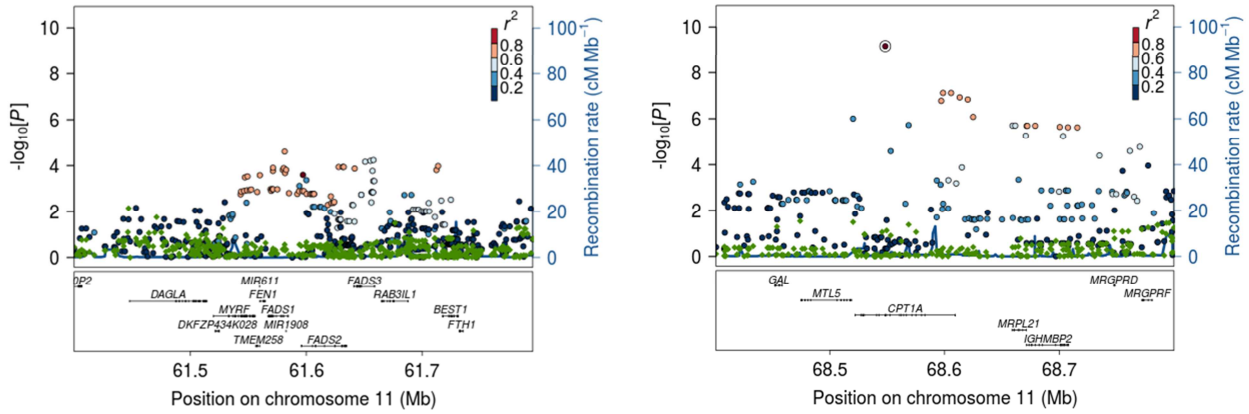
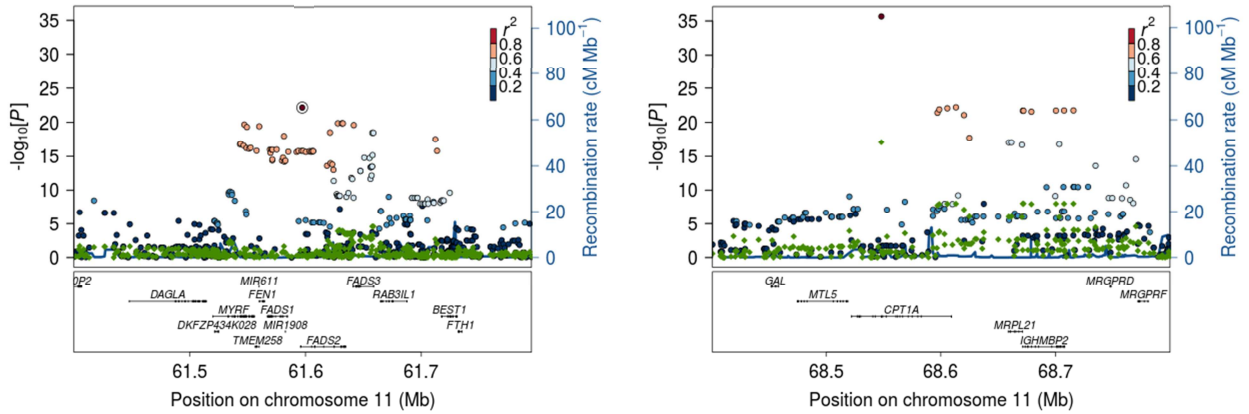Arachidonic acid (20:4 ω-6) conditioned on rs80356779

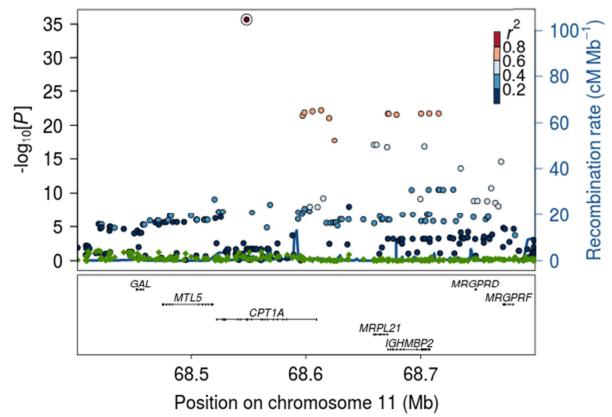**J** Behenic acid (22:0) conditioned on rs174570

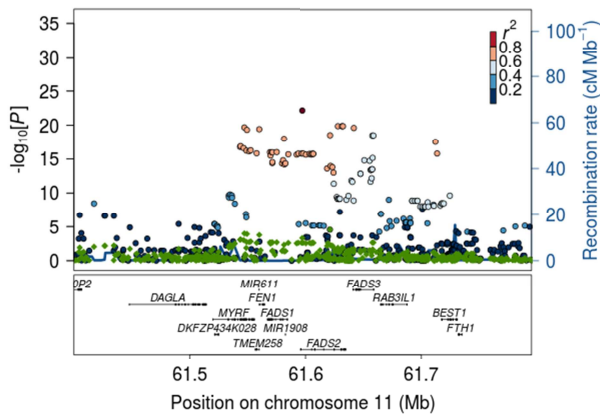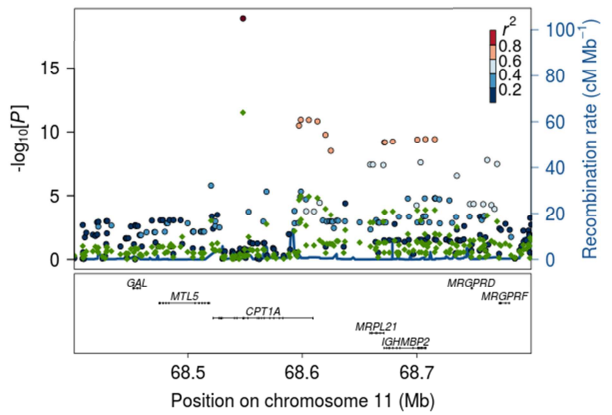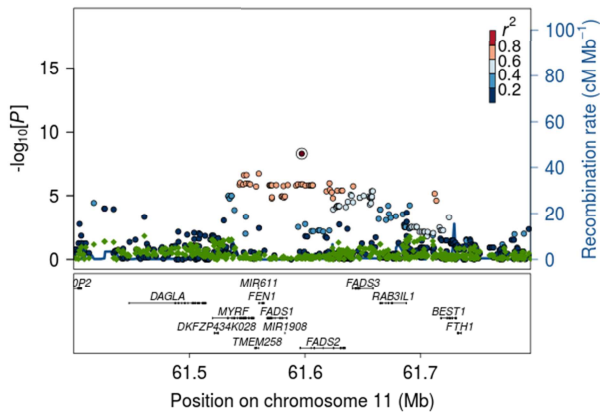Behenic acid (22:0) conditioned on rs80356779

K   Erucic acid (22:1 ω-9) conditioned on rs174570

Erucic acid (22:1 ω-9) conditioned on rs80356779

L   Adrenic acid (22:4 ω-6) conditioned on rs174570
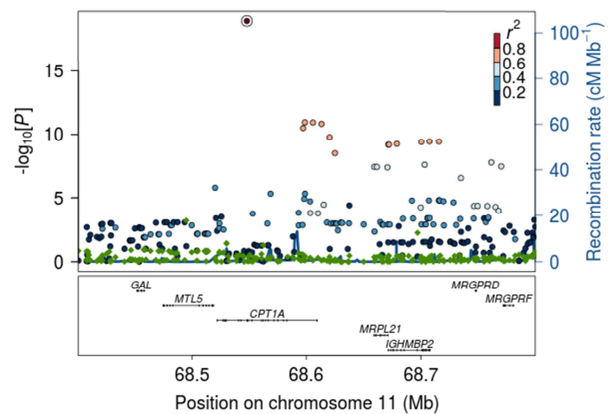
Adrenic acid (22:4 ω-6) conditioned on rs80356779

M
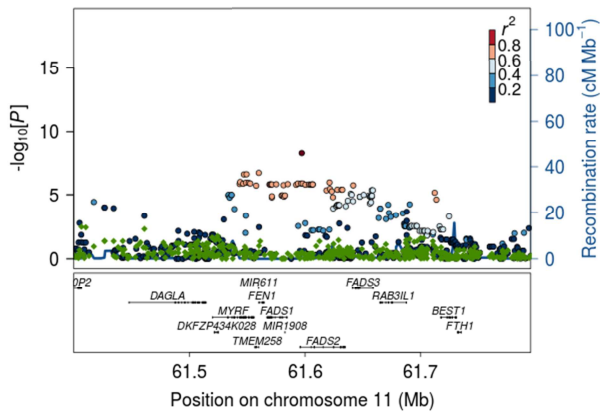
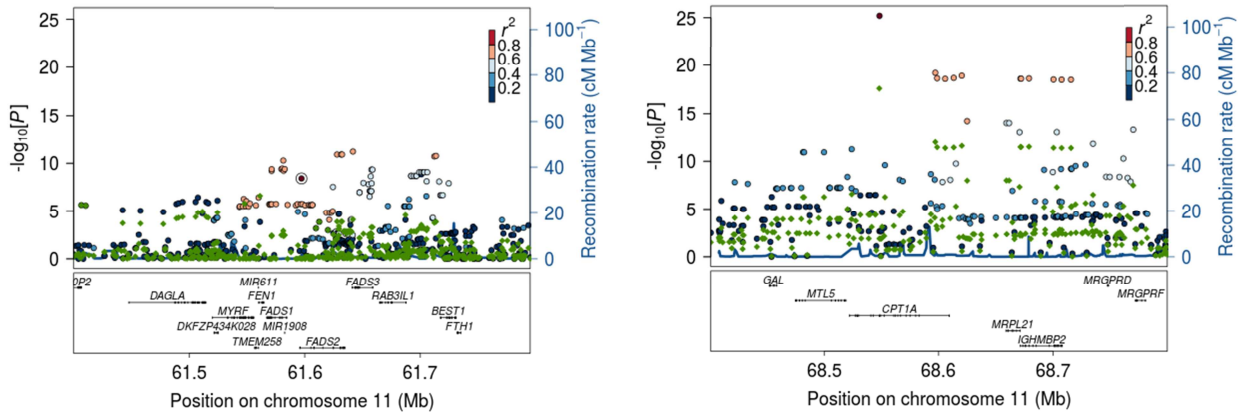Docosapentaenoic acid (22:5 ω-3) conditioned on rs174570

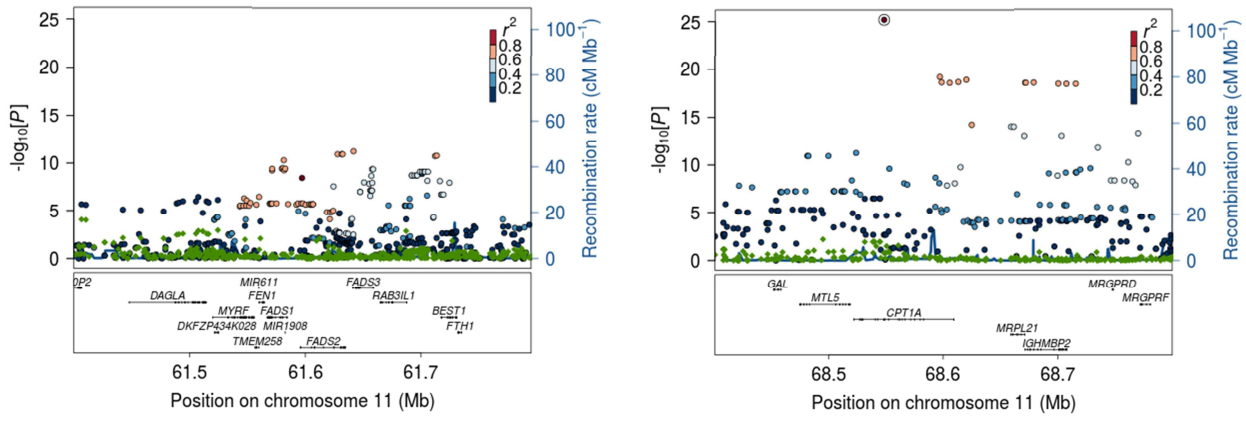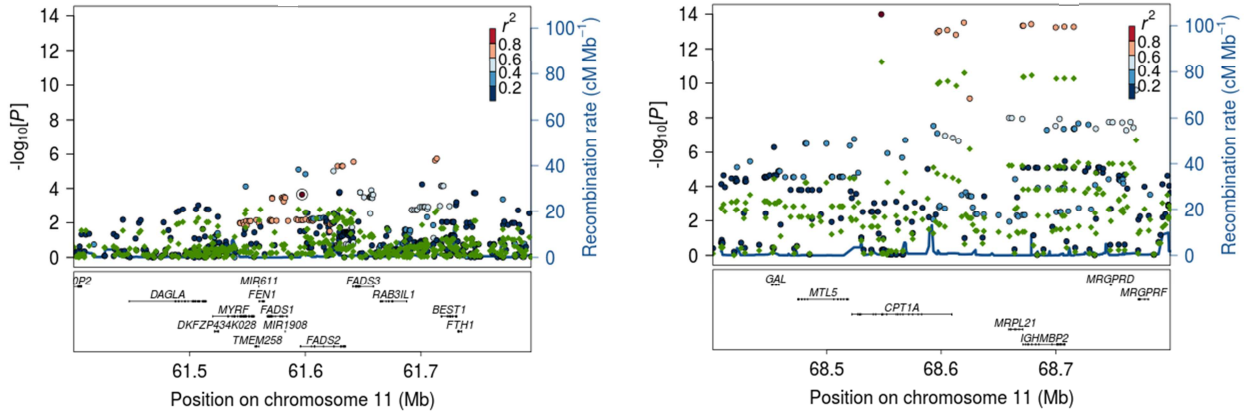Docosapentaenoic acid (22:5 ω-3) conditioned on rs80356779

N

Lignoceric acid (24:0) conditioned on rs174570

Lignoceric acid (24:0) conditioned on rs80356779

O

Nervonic acid (24:1 ω-9) conditioned on rs174570

Nervonic acid (24:1 ω-9) conditioned on rs80356779