Supplement Material.

Supplemental Table I. Correlations of the cholesterol synthesis and absorption markers with Glucose and Insulin in NRL and FCH patients.

	NLR		FCH	
	Glucose	Insulin	Glucose	Insulin
Squalene	0.060	-0.031	-0.152	-0.049
Lathosterol	**0.261***	**0.217†**	**0.456***	0.112
Desmosterol	**0.269***	**0.239†**	**0.382***	0.187
Campesterol	-0.001	**-0.150‡**	0.087	-0.145
Sitosterol	0.026	**-0.225†**	0.008	**-0.241‡**
Cholestanol	0.010	-0.132	-0.067	0.070

Values represent Spearman Rank correlation coefficients. *p<0.001, †p<0.01 and ‡p<0.05.

Supplemental Table II. Correlations of the cholesterol synthesis and absorption markers with apoB, triglycerides and LDL-C in all subjects (n=343) and by gender.

	ApoB	Triglycerides	LDL-C
Squalene			
Total	0.001	-0.010	0.038
Men	-0.003	-0.151	0.126
Women	-0.038	0.046	-0.042
Lathosterol			
Total	**0.577***	**0.534***	**0.385***
Men	**0.484***	**0.514***	**0.209‡**
Women	**0.610***	**0.498***	**0.505***
Desmosterol			
Total	**0.452***	**0.383***	**0.407***
Men	**0.236†**	**0.236†**	**0.231†**
Women	**0.550***	**0.430***	**0.530***
Campesterol			
Total	**0.270***	0.010	**0.248***
Men	**0.326***	-0.033	**0.276***
Women	**0.201†**	-0.005	**0.230†**
Sitosterol			
Total	**0.275***	-0.038	**0.267***
Men	**0.393***	0.000	**0.334***
Women	**0.172‡**	-0.098	**0.212†**
Cholestanol			
Total	**0.153†**	-0.040	**0.192***
Men	**0.212†**	-0.055	**0.265†**
Women	0.066	-0.086	0.127

Values represent Spearman Rank correlation coefficients. *p<0.001, †p<0.01 and ‡p<0.05.

Supplemental Table III. Key enzymes in the cholesterol metabolism pathway of which the genes posses a USF1 binding site

Gene	Chromosome	Protein	Metabolic Function
MVK	12q24	mevalonate kinase	Converts Mevalonic acid into mevalonate 5-phosphate.
PMVK	1q22	phosphomevalonate kinase	Converts mevalonate 5-phosphate into mevalonate 5-diphosphate.
SC5DL	11q23.3	sterol-C5-desaturase-like	Converts of lathosterol into 7-dehydrocholesterol.
DHCR24	1p33-p31.1	24-dehydrocholesterol reductase (also known as Seladin-1)	Catalyzes the reduction of the delta-24 double bond of sterol intermediates during cholesterol biosynthesis.