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Supplemental Data

A Weighted False Discovery Rate Control Procedure Reveals Alleles at *FOXA2* that Influence Fasting Glucose Levels

Chao Xing, Jonathan C. Cohen, and Eric Boerwinkle

Table S1. Frequency Distribution of SNPs[a] from the Affymetrix Genome-wide Human SNP 6.0 Stratified by MAF in the ARIC Data and the Affymetrix Experimental Data

MAF	ARIC		Affymetrix		Consistency[b]	
	EA	AA	CEU	YRI	EA-CEU	AA-YRI
$(0,0.05)$	24.5%	11.7%	24.3%	16.3%	87.0%	53.7%
$[0.05,0.10)$	10.7%	14.9%	10.7%	13.3%		
$[0.10,0.20)$	18.8%	24.8%	18.7%	23.0%		
$[0.20,0.30)$	16.4%	19.0%	16.4%	18.0%	93.3%	86.9%
$[0.30,0.40)$	15.2%	15.6%	14.9%	15.0%		
$[0.40,0.50]$	14.4%	14.0%	14.8%	14.2%		

[a]SNPs passing the quality control: 814,004 SNPs in the EAs and 818,899 SNPs in the AAs.

[b]The consistency is calculated as the proportion (EA $\cap$ CEU) / (EA $\cup$ CEU) or (AA $\cap$ YRI) / (AA $\cup$ YRI) in a category of SNPs.

Table S2. Frequency Distribution of Nonsynonymous SNPs[a] from the Affymetrix Genome-wide Human SNP 6.0 Stratified by MAF in the ARIC Data and the Affymetrix Experimental Data

MAF	ARIC		Affymetrix	
	EA	AA	CEU	YRI
$(0,0.05)$	35.1%	26.2%	35.2%	29.3%
$[0.05,0.10)$	12.2%	16.0%	11.7%	14.7%
$[0.10,0.20)$	17.2%	21.8%	17.3%	21.1%
$[0.20,0.30)$	13.7%	14.4%	13.9%	13.5%
$[0.30,0.40)$	11.5%	11.3%	11.5%	11.1%
$[0.40,0.50]$	10.2%	10.3%	9.9%	9.8%

[a]SNPs passing the quality control: 4,130 SNPs in the EAs and 4,208 SNPs in the AAs. They were annotated as nsSNPs if resulting in nonsense, missense, and frameshift mutations according to the dbSNP database.

Table S3. A Complete List of SNPs Attaining the Level of Genome-wide Significance in the Genome-wide Scan of Fasting Glucose Levels in the EA Population of the ARIC Study

SNP	Region	MAF	Rank	*p*-value				Effect per minor allele mean±standard error (mg/dl)
				Raw	Bonferroni	BH	WBH	
rs10830963	11q21	0.28	1	3.3×10^{-19}	2.7×10^{-13}	3.8×10^{-12}	3.0×10^{-10}	1.46 ± 0.16
rs552976	2q24.3	0.35	2	3.3×10^{-16}	2.7×10^{-10}	1.6×10^{-9}	1.4×10^{-7}	-1.15 ± 0.14
rs853789	2q24.3	0.35	3	4.0×10^{-16}	3.3×10^{-10}	1.6×10^{-9}	1.4×10^{-7}	-1.18 ± 0.15
rs560887	2q24.3	0.30	4	1.3×10^{-15}	1.0×10^{-9}	3.6×10^{-9}	3.2×10^{-7}	-1.19 ± 0.15
rs563694	2q24.3	0.35	5	1.9×10^{-15}	1.5×10^{-9}	4.3×10^{-9}	3.9×10^{-7}	-1.13 ± 0.15
rs508506	2q24.3	0.34	6	1.1×10^{-14}	8.8×10^{-9}	2.1×10^{-8}	1.9×10^{-6}	-1.12 ± 0.15
rs11523890	11q21	0.34	7	1.7×10^{-12}	1.3×10^{-6}	2.7×10^{-6}	7.8×10^{-5}	1.04 ± 0.15
rs2908289	7p13	0.17	8	2.6×10^{-12}	2.1×10^{-6}	3.8×10^{-6}	7.8×10^{-5}	1.37 ± 0.20
rs10830962	11q21	0.40	9	2.6×10^{-11}	2.1×10^{-5}	3.3×10^{-5}	7.8×10^{-5}	0.94 ± 0.14
rs1799884	7p13	0.17	10	3.4×10^{-11}	2.8×10^{-5}	3.8×10^{-5}	7.8×10^{-5}	1.25 ± 0.19
rs12792753	11q21	0.36	11	3.6×10^{-11}	2.9×10^{-5}	3.8×10^{-5}	7.8×10^{-5}	0.97 ± 0.15
rs2908282	7p13	0.17	12	9.4×10^{-11}	7.7×10^{-5}	9.1×10^{-5}	7.8×10^{-5}	1.22 ± 0.19
rs1442017	13q21.32	0.0018	13	1.3×10^{-10}	1.1×10^{-4}	1.2×10^{-4}	7.8×10^{-5}	-36.6 ± 8.46
rs853773	2q24.3	0.48	14	1.2×10^{-9}	9.6×10^{-4}	9.7×10^{-4}	6.1×10^{-4}	-0.85 ± 0.14
rs853784	2q24.3	0.47	15	1.8×10^{-9}	1.5×10^{-3}	1.3×10^{-3}	6.1×10^{-4}	-0.82 ± 0.14
rs4611171	11q21	0.48	16	1.9×10^{-9}	1.5×10^{-3}	1.3×10^{-3}	6.1×10^{-4}	-0.82 ± 0.14
rs3847554	11q21	0.42	17	2.3×10^{-9}	1.8×10^{-3}	1.5×10^{-3}	6.1×10^{-4}	0.86 ± 0.14
rs853779	2q24.3	0.47	18	3.3×10^{-9}	2.7×10^{-3}	2.1×10^{-3}	6.1×10^{-4}	-0.82 ± 0.14
rs853778	2q24.3	0.47	19	3.5×10^{-9}	2.9×10^{-3}	2.1×10^{-3}	6.1×10^{-4}	-0.82 ± 0.14
rs853776	2q24.3	0.47	20	3.8×10^{-9}	3.1×10^{-3}	2.2×10^{-3}	6.1×10^{-4}	-0.81 ± 0.14
rs2685805	2q24.3	0.47	21	4.0×10^{-9}	3.2×10^{-3}	2.2×10^{-3}	6.1×10^{-4}	-0.81 ± 0.14
rs2685813	2q24.3	0.46	22	8.0×10^{-9}	6.5×10^{-3}	3.7×10^{-3}	6.8×10^{-4}	-0.79 ± 0.14
rs567074	2q24.3	0.46	23	8.2×10^{-9}	6.7×10^{-3}	3.7×10^{-3}	7.0×10^{-4}	-0.79 ± 0.14
rs10765576	11q21	0.44	24	8.2×10^{-9}	6.7×10^{-3}	3.7×10^{-3}	7.0×10^{-4}	-0.80 ± 0.14
rs2685812	2q24.3	0.46	25	1.2×10^{-8}	1.0×10^{-2}	5.3×10^{-3}	1.0×10^{-3}	-0.78 ± 0.14
rs853772	2q24.3	0.48	26	1.4×10^{-8}	1.1×10^{-2}	5.6×10^{-3}	1.1×10^{-3}	-0.78 ± 0.14

rs853780	2q24.3	0.47	27	1.7×10^{-8}	1.4×10^{-2}	6.7×10^{-3}	1.4×10^{-3}	-0.77 ± 0.14
rs2300584	7p13	0.22	28	2.4×10^{-8}	1.9×10^{-2}	9.1×10^{-3}	2.0×10^{-3}	0.90 ± 0.17
rs565412	2q24.3	0.47	29	3.0×10^{-8}	2.5×10^{-2}	1.1×10^{-2}	2.6×10^{-3}	-0.75 ± 0.14
rs472614	2q24.3	0.47	30	9.1×10^{-8}	7.4×10^{-2}	2.2×10^{-2}	5.2×10^{-3}	-0.73 ± 0.14
rs6048209	20p11.21	0.042	31	1.4×10^{-7}	1.2×10^{-1}	7.0×10^{-2}	1.2×10^{-2}	-1.64 ± 0.34
rs11020107	11q21	0.33	32	2.9×10^{-7}	2.3×10^{-1}	9.7×10^{-2}	2.4×10^{-2}	0.76 ± 0.15
rs532779	2q24.3	0.29	33	3.2×10^{-7}	2.6×10^{-1}	1.1×10^{-1}	2.7×10^{-2}	-0.75 ± 0.15
rs780094	2p23.3	0.40	34	3.8×10^{-7}	3.1×10^{-1}	1.2×10^{-1}	3.2×10^{-2}	-0.77 ± 0.14
rs1928529	6p12.3	0.28	35	4.4×10^{-7}	3.6×10^{-1}	1.3×10^{-1}	3.7×10^{-2}	-0.76 ± 0.15
rs6816503	4q31.23	0.072	36	4.4×10^{-7}	3.6×10^{-1}	1.3×10^{-1}	3.7×10^{-2}	-1.38 ± 0.27

Table S4. MAF of SNPs at 20p11.21 Associated with Fasting Glucose Levels with *p*-Value $\leq 1.0 \times 10^{-4}$ in the EA Population of the ARIC Study

	ARIC		Affymetrix	
SNP	EA	AA	CEU	YRI
rs6036140	0.045	0.37	0.033	0.44
rs6036142	0.045	0.32	0.033	0.39
rs6082742	0.055	0.45	0.033	0.24
rs6036144	0.045	0.17	0.025	0.25
rs945982	0.063	0.41	0.042	0.28
rs6048183	0.049	0.096	0.042	0.13
rs2277762	0.052	0.098	0.042	0.13
rs6113722	0.047	0.16	0.033	0.20
rs1203907	0.050	0.50	0.033	0.34
rs6048206	0.047	0.33	0.033	0.43
rs1055080	0.045	0.41	0.033	0.23
rs1209523	0.043	0.37	0.025	0.43
rs6048209	0.042	0.39	0.025	0.46