Supplementary Table S1: Previously reported metabolic and reproductive associations with selected candidate SNPs from core circadian regulating genes.

Gene/Gene name/ SNP	Functional consequence	Relevant Metabolic and Reproductive Associations	References
CLOCK **Clock Circadian Regulator**			
rs3749474	3' UTR	weight loss, obesity, BMI, infertility	(Garaulet et al., 2009, 2010; Loria-Kohen et al., 2016; Shen et al., 2015b)
rs4580704	intron variant	metabolic syndrome, obesity, overweight, BMI, type-2 diabetes, coronary heart disease related dyslipidemia, non-alcoholic fatty liver disease	(Bandín et al., 2013; Corella et al., 2016; Garaulet et al., 2009, 2010, 2011; Gomez-Delgado et al., 2015: Sookoian et al., 2007, 2008)
rs1464490	intron variant	obesity	(Corella et al., 2016; Garaulet et al., 2010)
rs6843722	intron variant	obesity	(Sookoian et al., 2007, 2008; Valladares et al., 2015)
rs6850524	intron variant	metabolic syndrome, obesity, idiopathic recurrent spontaneous abortion, infertility	(Hodžić et al., 2013, 2018; Sookoian et al., 2008, 2010; Ye et al., 2016)
rs4864548	non-coding transcript exon variant	metabolic syndrome, obesity, type-2 diabetes	(Krishnan et al., 2017; Scott et al., 2008; Sookoian et al., 2008, 2010; Uemura et al., 2016)
rs1801260	3' UTR	insulin metabolism, metabolic syndrome, fatty acids, obesity, LDL cholesterol	(Bandín et al., 2013; Galbete et al., 2012; Garaulet et al., 2009, 2010, 2011, 2012; Garcia-Rios et al., 2014; Scott et al., 2008; Shen et al., 2015b; Tsuzaki et al., 2010; Uemura et al., 2016)
ARNTL **Aryl Hydrocarbon Receptor Nuclear Translocator Like**			
rs2278749	intron variant	infertility	(Kovanen et al., 2010)
rs6486121	intron variant	type-2 diabetes, hypertension, HDL cholesterol	(Klarin et al., 2018; Woon et al., 2007)

rs7950226	intron variant	type-2 diabetes, gestational diabetes mellitus, hypertension, metabolic syndrome	(Kelly et al., 2012; Pappa et al., 2013; Woon et al., 2007)
rs11022775	intron variant	gestational diabetes mellitus, type-2 diabetes	(Kelly et al., 2012; Pappa et al., 2013; Woon et al., 2007)
PER1			
Period Circadian regulator 1			
rs2585405	missense variant	reproductive complications	(Chu et al., 2008)
rs3027178	synonymous variant	hepatocellular carcinoma	(Zhang et al., 2014)
PER2			
Period Circadian regulator 2			
rs2304672	5' UTR	plasma fatty acid composition, obesity	(Garaulet et al., 2010; Garcia-Rios et al., 2012)
rs56013859	intron variant	fasting blood glucose	(Englund et al., 2009)
rs7602358	intron variant	type-2 diabetes	(Kelly et al., 2012)
PER3			
Period Circadian regulator 3			
rs228669	synonymous variant	hepatocellular carcinoma	(Zhang et al., 2014)
rs2640908	synonymous variant	hepatocellular carcinoma	(Zhang et al., 2014; Zhao et al., 2012)
CRY1			
Cryptochrome Circadian regulator 3			
rs2287161	regulatory region variant	insulin resistance	(Dashti et al., 2014)
rs3809236	5' UTR	hepatocellular carcinoma	(Zhang et al., 2014)
rs12315175	intron variant	type-2 diabetes	(Kelly et al., 2012)
CRY2			
Cryptochrome Circadian regulator 2			
rs2292912	non coding transcript exon variant	type-2 diabetes	(Kelly et al., 2012)

rs11605924	intron variant	type-2 diabetes, fasting glucose glucose metabolism, HDL cholesterol	(Barker et al., 2011; Dashti et al., 2015; Dupuis et al., 2010; Hu et al., 2010; Langlois et al., 2016; Manning et al., 2012; Mirzaei et al., 2014; Renström et al., 2015)
NPAS2			
Neuronal PAS domain Protein 2			
rs2305160	missense variant	reproductive complications	(Yuan et al., 2014; Kovanen et al., 2010; Chu et al., 2008)
rs11541353	missense variant	hypertension	(Englund et al., 2009)

Supplementary Table S2: Previously reported metabolic and reproductive associations with selected candidate SNPs for circadian-related and lipid-related genes.

Gene/Gene name/ SNPs	Functional consequence	Relevant Metabolic and Reproductive Associations	References
SIRT1 **Sirtuin 1**			
rs12413112	intron variant	BMI	(Clark et al., 2012)
rs3758391	intergenic variant	type- 2 diabetes	(Cruz et al., 2010)
rs2273773	synonymous variant	BMI, hypertension, total cholesterol, hyperglycemia, obesity	(Berg et al., 2009; Kilic et al., 2014; Shimoyama et al., 2011, 2012; Zhong et al., 2015b)
rs10997860	intron variant	reproductive complications, placental abruption	(Workalemahu et al., 2013)
CELSR2-PSRC1-SORT1 **gene cluster Cadherin, EGF LAG Seven-pass G-type Receptor 2, Proline and Serine rich coiled-coil 1, Sortilin 1**			
rs646776	regulatory region variant	LDL cholesterol, HDL cholesterol, C-reactive protein, blood protein levels, coronary artery disease	(Arvind et al., 2014; Aulchenko et al., 2009; Chasman et al., 2008; Consortium, 2011; Devaney et al., 2011; Dumitrescu et al., 2011; Gigante et al., 2012; Grallert et al., 2012; Guo et al., 2015a; He et al., 2017; Hubacek et al., 2017; Jansen et al., 2014; Kanai et al., 2018; Kathiresan et al., 2008; Keebler et al., 2010; Keebler Mary E. et al., 2009; Lanktree et al., 2009; Ligthart et al., 2016; Lu et al., 2010; Muendlein et al., 2009; Murray et al., 2009; Qi et al., 2011a, 2011b; Reilly et al., 2011; Saleheen et al., 2010; Sandhu et al., 2008; Shirts et al., 2011; Suhre et al., 2017; Sun et al., 2018; Surakka et al., 2015; Walia et al., 2014; Wallace et al., 2008; Zhou et al., 2015)

rs599839	regulatory region variant	LDL cholesterol, fasting glucose, coronary artery disease, total cholesterol, triglycerides	(Abe et al., 2015; Angelakopoulou et al., 2012; Breitling et al., 2015; Cho et al., 2009; Coronary Artery Disease Consortium et al., 2009; Ellis et al., 2011; Fujimaki et al., 2015; Gigante et al., 2012; Grallert et al., 2012; Guo et al., 2015a; He et al., 2017; Kathiresan et al., 2008; Kleber et al., 2010; Linsel-Nitschke et al., 2010; Ma et al., 2010; Ogawa et al., 2010; Roslin et al., 2009; Samani et al., 2008; Sandhu et al., 2008; Schunkert et al., 2011; Spracklen et al., 2017; Wallace et al., 2008; Wang et al., 2011a; Willer et al., 2008; Zhou et al., 2011, 2015)
POMC			
Proopiomelanocortin			
rs28932472	missense variant	LDL cholesterol, blood pressure	(Queiroz et al., 2015)
PPARA			
Peroxisome Proliferator Activated Receptor Alpha			
rs1800206	missense variant	type-2 diabetes, obesity, LDL cholesterol, dyslipidemia, hypertriglyceridemia	(Alsaleh et al., 2011; Andrulionytė et al., 2007; Bouchard-Mercier et al., 2011; Costa-Urrutia et al., 2017; Dong et al., 2015; Fan et al., 2015; Gu et al., 2015)
PPARG			
Peroxisome Proliferator Activated Receptor Gamma			
rs7638903	intron variant	type-2 diabetes,	(Claussnitzer et al., 2014)
rs1801282	missense variant	type-2 diabetes, BMI, insulin resistance, total cholesterol, triglycerides, obesity, hypertension, metabolic syndrome, coronary artery disease	(Bego et al., 2011; Ben Ali et al., 2009; Bordoni et al., 2017; Bystrova et al., 2017; Chan et al., 2013; Dedoussis et al., 2009; DIAbetes Genetics Replication And Meta-analysis (DIAGRAM) Consortium et al., 2014; Ding et al., 2012; Estivalet et al., 2011; Gaulton et al., 2008; Gouda et al., 2010; Hindy et

			al., 2016; Hoffmann et al., 2018; Hsiao and Lin, 2015; Huang et al., 2016; Kilpeläinen et al., 2008; Li et al., 2015; Manning et al., 2012; Morris et al., 2012; Namvaran et al., 2011; Phani et al., 2016; Queiroz et al., 2015; Regieli et al., 2009; Sanghera et al., 2008, 2010; Saxena et al., 2007; Scott et al., 2007; Shi et al., 2012; Stancáková et al., 2009; Tan et al., 2014; Tellechea et al., 2009; Trombetta et al., 2013; Wang et al., 2015b; Wang and Liu, 2012; Wu et al., 2016; Zeggini et al., 2007; Zhao et al., 2017; Zhu et al., 2017a)
PPARGC1A **Peroxisome Proliferator Activated Receptor Gamma Coactivator 1-alpha**			
rs12640088	intron variant	type- 2 diabetes	(Villegas et al., 2014)
rs8192678	missense variant	type-2 diabetes, Non-alcoholic steatohepatitis, insulin resistance, BMI	(Deeb and Brunzell, 2009; Franks et al., 2014; Lin et al., 2013; Povel et al., 2010; Queiroz et al., 2015; Tai et al., 2016; Zhu et al., 2017a)
rs251464	intron variant	BMI, type-2 diabetes	(Villegas et al., 2014)
VDR **Vitamin D Receptor**			
rs17383291	intergenic variant	colorectal cancer	(Poynter et al., 2010)
rs2228570	start lost	BMI, insulin resistance, type-2 diabetes, triglycerides, HDL cholesterol, hypertension	(Jia et al., 2015; Koroglu et al., 2014; Li et al., 2014; Safar et al., 2018; Zhong et al., 2015a)
FOXO1 **Forkhead Box O1**			
rs10507486	intron variant	carotid atherosclerosis, type-2 diabetes	(Kedenko et al., 2014; Sookoian et al.,

			2009b)
rs2297627	intron variant	carotid atherosclerosis	(Kedenko et al., 2014; Muller et al., 2015; Müssig et al., 2009)
MTNR1B **Melatonin Receptor 1B**			
rs10830963	intron variant	gestational diabetes mellitus, type-2 diabetes, fasting glucose, hemoglobin A1C, insulin resistance, birth weight, obesity-related traits	(Barker et al., 2011; Beaumont et al., 2018; Chambers et al., 2009; Comuzzie et al., 2012; de Luis et al., 2018; DIAbetes Genetics Replication And Meta-analysis (DIAGRAM) Consortium et al., 2014; Dupuis et al., 2010; Evangelou et al., 2018; Garaulet et al., 2015; Goni et al., 2014; Holzapfel et al., 2011; Horikoshi et al., 2016; Hu et al., 2010; Huopio et al., 2013; Ingelsson et al., 2010; Kanai et al., 2018; Keaton et al., 2018; Kettunen et al., 2012; Kong et al., 2015; Kwak et al., 2012; Lane et al., 2016; Langenberg et al., 2009; Liao et al., 2012; Liu et al., 2010; Loomis et al., 2018; Lu et al., 2017; Mao et al., 2012; Morris et al., 2012; Nettleton et al., 2007; Ohshige et al., 2011; Palmer et al., 2015; Prokopenko et al., 2009, 2014; Qi et al., 2017; Rasmussen-Torvik et al., 2010; Rasmussen-Torvik et al., 2012; Reinehr et al., 2011; Ren et al., 2014; Renström et al., 2011, 2015; Rönn et al., 2009; Salman et al., 2015; Simonis-Bik et al., 2010; Sparsø et al., 2009; Staiger et al., 2008; Stuebe et al., 2014; Tam et al., 2010; Tarnowski et al., 2017; Wang et al., 2011b; Wheeler et al., 2017; Wood et al., 2017; Wu et al., 2016; Wu and Pankow, 2018; Xue et al., 2018; Zhang et al., 2014b; Zhao et al., 2014, 2017;

			Zheng et al., 2015)
LEPR **Leptin Receptor**			
rs1137101	missense variant	triglycerides, gestational diabetes mellitus, fasting glucose, BMI, cardiovascular disease, preterm birth, type-2 diabetes, plasma lipids	(Anghebem-Oliveira et al., 2017; Ben Ali et al., 2009; Furusawa et al., 2010; Gregoor et al., 2009; Kasim et al., 2016; Mahmoudi et al., 2016; Manriquez et al., 2018; Queiroz et al., 2015; Rojano-Rodriguez et al., 2016; Salem et al., 2016; Tabassum et al., 2012; Urbanek et al., 2012; Wu and Sun, 2017; Yang et al., 2016; Zayani et al., 2017)
HMGCR **3-Hydroxy-3-Methylglutaryl-CoA Reductase**			(Bream et al., 2013; Steffen et al., 2007)
rs2303152	intron variant	preterm delivery	
rs12654264	intron variant	HDL cholesterol, LDL cholesterol, triglycerides, fasting blood glucose	(Kathiresan et al., 2008; Keebler Mary E. et al., 2009; Kim et al., 2011)
DHCR24 24- **Dehydrocholesterol Reductase**			
rs2274941	non coding transcript exon variant	prematurity	(Steffen et al., 2007)
DHCR7 ***7*-Dehydrocholesterol Reductase**			
rs1630498	intron variant	low birth weight, prematurity	(Bream et al., 2013; Steffen et al., 2007)
rs2002064	intron variant	birth weight	(Steffen et al., 2007)
PCSK9 **Proprotein Convertase**			

Subtilisin/Kexin Type 9			
rs11591147	missense variant	LDL cholesterol, total cholesterol, cardiovascular disease, fasting glucose, type-2 diabetes	(Chasman et al., 2012; Feng et al., 2017a; Guella et al., 2010; Guo et al., 2016; Kathiresan et al., 2007, 2008; Kettunen et al., 2012, 2016; Klarin et al., 2018; Nagy et al., 2017; Nelson et al., 2017; Pott et al., 2018; Qiu et al., 2017; Rasmussen-Torvik et al., 2012; Schmidt et al., 2017; Smith et al., 2010; Southam et al., 2017; Spracklen et al., 2017; Surakka et al., 2015; Tsai et al., 2015; van der Harst and Verweij, 2018)
CETP **Cholesteryl Ester Transfer Protein**			
rs1800775	regulatory region variant	HDL cholesterol, LDL cholesterol, total cholesterol, triglycerides, coronary artery disease, metabolic syndrome, dyslipidemia	(Andaleon et al., 2018; Barbosa et al., 2012; Boes et al., 2009; Chasman et al., 2009; Ganesan et al., 2016; Guo et al., 2015b; Hamrefors et al., 2010; Hebbar et al., 2017; Hou et al., 2017; Hu et al., 2016; Kathiresan et al., 2007, 2008; Kenny et al., 2011; Ma et al., 2010; Murray et al., 2009; Nie et al., 2017; Ridker et al., 2009; Ronald et al., 2009; Sabatti et al., 2009; Saxena et al., 2007, 200; Shin et al., 2014; Wakil et al., 2016; Webb et al., 2017; Winkler et al., 2015; Wu et al., 2013)
LCAT **Lecithin-Cholesterol Acyltransferase**			
rs1109166	3’ UTR	gestational age, HDL cholesterol	(Spracklen et al., 2017; Steffen et al., 2007)
LIPC **Lipase C, Hepatic type**			
rs6083	missense variant	gestational age, preterm prelabor rapture of	(Romero et al., 2010; Steffen et al., 2007;

		membranes, HDL cholesterol	Yang et al., 2010)
rs1800588	intron variant	total cholesterol, HDL cholesterol, triglyceride levels, LDL cholesterol, cardiovascular disease, hypertriglyceridemia	(Ahmad et al., 2011; Ayyappa et al., 2013; Fan et al., 2009; Guardiola et al., 2015; Hamrefors et al., 2010; Hodoglugil et al., 2010; Kanai et al., 2018; Kathiresan et al., 2008; Liu et al., 2011; Lu et al., 2008, 2016a; Nie et al., 2017; Ríos-González et al., 2014; Rudkowska et al., 2013; Sabatti et al., 2009; Spracklen et al., 2017; Villard et al., 2013; White et al., 2015; Yang et al., 2010)
LIPG			
Lipase G, endothelial type			
rs2156552	intergenic variant	HDL cholesterol, ischemic stroke	(Carty Cara L. et al., 2012; Gaulton et al., 2008; Jeemon et al., 2011; Kathiresan et al., 2008; Keebler Mary E. et al., 2009; Khetarpal et al., 2011; Klarin et al., 2018; Ma et al., 2010; Murray et al., 2009; Spracklen et al., 2017; Waterworth et al., 2010)
LPL			
Lipoprotein Lipase			
rs328	stop variant	HDL cholesterol, triglycerides, blood pressure, coronary heart disease	(Ayyappa et al., 2017; Chen et al., 2009; De Castro-Orós Isabel et al., 2014; Drenos et al., 2009; Dumitrescu et al., 2011; Emamian et al., 2015; Garcia-Rios et al., 2011; Guardiola et al., 2015; Jeemon et al., 2011; Kathiresan et al., 2007, 2008; Keebler Mary E. et al., 2009; Kurano et al., 2016; Larifla et al., 2016; Legry et al., 2011; Murray et al., 2009; Pirim et al., 2015; Ronald et al., 2009; Sabatti et al., 2009; Sagoo et al., 2008; Shahid et al., 2017; Tan et al., 2012; Tang et al., 2010; Webster et al., 2009;

			White et al., 2015; Yeo et al., 2017; Yue et al., 2017; Zhou et al., 2013)
ABCA1 **ATP Binding Cassette Subfamily A Member 1**			
rs2066716	missense variant	prematurity, gestational age, birth weight	(Steffen et al., 2007)
rs3890182	intron variant	HDL cholesterol, overweight, obesity	(Jeemon et al., 2011; Kathiresan et al., 2008; Kong et al., 2015; Sabatti et al., 2009; Waterworth et al., 2010; Yao et al., 2016a, 2016b)
rs4149313	missense variant	gestational age	(Steffen et al., 2007)
LDLR **Low Density Lipoprotein Receptor**			
rs6511720	intron variant	LDL cholesterol, total cholesterol, coronary artery disease, hypertension	(Chasman et al., 2008, 2009; Consortium, 2011; Ding and Kullo, 2009; Elbers et al., 2012; Feng et al., 2017b; Grallert et al., 2012; Gupta et al., 2010; Inouye et al., 2012; Kathiresan et al., 2008, 2009; Keebler Mary E. et al., 2009; Lettre et al., 2011; Linsel-Nitschke et al., 2010; Middelberg et al., 2011; Nelson et al., 2017; Rafiq et al., 2012; Ronald et al., 2009; Shetty Priya B. et al., 2015; Teslovich et al., 2010; van der Harst and Verweij, 2018; Willer et al., 2008; Ye et al., 2014)
APOB **Apolipoprotein B**			
rs693	synonymous variant	LDL cholesterol, HDL cholesterol, triglycerides, total cholesterol, ischemic stroke, coronary heart disease	(Au et al., 2017; Aulchenko et al., 2009; Chen et al., 2016; Haas Blake E. et al., 2011; Hamrefors et al., 2010; Hubacek et al., 2017; Kathiresan et al., 2008; Murray et al., 2009; Niu et al., 2017; Park et al., 2011; Rodrigues et al., 2013; Sabatti et al., 2009; Sandhu et al., 2008; Saxena et

			al., 2007; Shirts et al., 2011; Takeuchi et al., 2012; Walker et al., 2011; Xiao et al., 2017)
APOA1 **Apolipoprotein A1**			
rs28927680	3' UTR	triglycerides, total cholesterol	(Jeemon et al., 2011; Kathiresan et al., 2008; Sabatti et al., 2009)
rs5070	intron variant	prematurity, HDL cholesterol	(Rudkowska et al., 2013; Steffen et al., 2007)
APOE **Apolipoprotein**			
rs405509	regulatory region variant	prematurity, gestational age, birth weight, serum fasting insulin, overweight	(Clark et al., 2009; Edwards et al., 2011; Komurcu-Bayrak et al., 2011; Steffen et al., 2007)
rs7412	missense variant	gestational age, LDL cholesterol, total cholesterol, HDL cholesterol, coronary artery disease, premature coronary artery disease, dyslipidemia, type-2 diabetes	(Alharbi et al., 2014; Ansari et al., 2017; Barbosa et al., 2012; Cahua-Pablo et al., 2016; Chasman et al., 2012; Futema et al., 2015; Hanh et al., 2016; Mazzotti et al., 2014; Ripatti et al., 2016; Smith et al., 2010; Smolková et al., 2015; Steffen et al., 2007; Surakka et al., 2015; Takeuchi et al., 2012; Tejedor et al., 2014; van der Harst and Verweij, 2018; Wu et al., 2013; Zhu et al., 2017b)
APOC1 **Apolipoprotein C1**			
rs4420638	intergenic variant	LDL cholesterol, HDL cholesterol, total cholesterol, triglycerides, coronary artery disease, c-reactive protein, BMI, type-2 diabetes	(Adeyemo et al., 2012; Aslibekyan et al., 2012; Burkhardt et al., 2008; Burkhardt Ralph et al., 2008; Chung et al., 2014; Dehghan Abbas et al., 2011; Deshmukh et al., 2012; Elliott et al., 2009; Hubacek et al., 2017; Kathiresan et al., 2008; Keller et al., 2013; Kenny et al., 2011; Kim et al., 2017b; Li et al., 2017; Ligthart et al., 2016; Liu et al., 2011; Lu et al., 2016b; Middelberg et al., 2011;

			Mohlke et al., 2008; Nikpay et al., 2015; Okada et al., 2011; Park et al., 2011; Sandhu et al., 2008; Saxena et al., 2007; Shirali et al., 2016, 201; Shirts et al., 2011; Spracklen et al., 2017; Teslovich et al., 2010; Varga et al., 2014; Wallace et al., 2008; Waterworth et al., 2010; Willer et al., 2013; Winkler et al., 2015; Zhao et al., 2017)
PNPLA3 **Patatin Like Phospholipase Domain Containing 3**			
rs738409	missense variant	non-alcoholic fatty liver disease pathogenesis, total cholesterol, triglycerides, insulin resistance BMI, gestational diabetes, metabolic syndrome	(Akuta et al., 2016; Alam et al., 2017; Ali et al., 2016; Atkinson et al., 2017; Basantani et al., 2011; Bhatt et al., 2013; Bo et al., 2015; Buch et al., 2015; Burza et al., 2014; Cai et al., 2011; Chalasani et al., 2010; Chamorro et al., 2014; Chan et al., 2017; Cox et al., 2011; Falleti et al., 2016; Fan et al., 2016; Flores et al., 2016; Gao et al., 2017; Goran et al., 2010; Graff et al., 2013; Guichelaar et al., 2013; Guyot et al., 2013; Hassan et al., 2013; Hernaez et al., 2013; Hotta et al., 2010; Huang et al., 2015a, 3, 2017, 3; Jiménez-Sousa et al., 2016; Johansson et al., 2008; Kantartzis et al., 2009; Kawaguchi et al., 2012; Kim et al., 2018, 3; Kitamoto et al., 2015; Klarin et al., 2018; Kotronen et al., 2009; Kovac and Rozman, 2015; Krawczyk et al., 2011, 2017; Kupcinskas et al., 2017; Lee et al., 2014; Lin et al., 2011, 2014; Liu et al., 2014a; Mancina et al., 2016; Mangge et al., 2015; Miyaaki et al., 2018; Mondul et al., 2015; Moritou et al., 2013; Oniki

			et al., 2015; Pan et al., 2015; Petta et al., 2012, 2016; Pirazzi et al., 2012; Pontoriero et al., 2015; Rausch et al., 2016; Romeo et al., 2008, 2010a, 2010b; Rüeger et al., 2015; Salameh et al., 2016; Santoro et al., 2010; Sato et al., 2014; Scheiner et al., 2015; Seko et al., 2018; Sevastianova et al., 2011; Shang et al., 2015; Shen et al., 2014, 2015a; Singal et al., 2014; Smagris et al., 2015; Sookoian et al., 2009a; Sookoian and Pirola, 2016; Speliotes et al., 2010, 2011; Stickel et al., 2011; Stojkovic et al., 2014; Tai et al., 2015; Takeuchi et al., 2013; Tang et al., 2015; Trepo et al., 2012; Trépo et al., 2011a, 2011b, 2014; Ueyama et al., 2016; Uygun et al., 2017; Valenti et al., 2010a, 2010b, 2012; Verrijken et al., 2013; Vespasiani-Gentilucci et al., 2016; Viganò et al., 2013; Viitasalo et al., 2015; Wagenknecht et al., 2011; Wang et al., 2016; Xia et al., 2016; Xu et al., 2015; Yasui et al., 2015; Zain et al., 2012; Zhang et al., 2014a, 2015)
TM6SF2 **Transmembrane 6 Superfamily Member 2**			
rs58542926	missense variant	non-alcoholic fatty liver disease pathogenesis, triglycerides, lipid abnormalities, total cholesterol	(Boonvisut et al., 2016; Chen et al., 2015, 2; Dongiovanni et al., 2015; Ehrhardt et al., 2017; Eslam et al., 2016; Falleti et al., 2016; Goffredo et al., 2016; Kanai et al., 2018; Kanth et al., 2016; Kim et al., 2017a; Liu et al., 2014b; Petta et al., 2016; Pirola and Sookoian, 2015; Sookoian et al., 2015, 2016; Surakka et al., 2015; Tang et al., 2015; Wang et al.,

			2016)
NCAN **Neurocan** rs16996148	intergenic variant	LDL cholesterol, HDL cholesterol, triglycerides, coronary heart disease	(Kathiresan et al., 2008; Willer et al., 2008)
TRIB1 **G-Protein-Coupled Receptor-Induced Gene 2 Protein** rs17321515	intron variant	LDL cholesterol, HDL cholesterol, triglycerides, coronary heart disease	(Aung et al., 2011; Dastani et al., 2012; Hegele et al., 2009; Huang et al., 2016; Kathiresan et al., 2008; Keebler Mary E. et al., 2009; Mohlke et al., 2008; Ollila et al., 2012; Park et al., 2011; Wang et al., 2015a; Willer et al., 2008; Zhou et al., 2011, 2013)
ANGPTL3 **Angiopoietin Like 3** rs12130333	intergenic variant	hypertriglyceridemia, triglycerides	(Hegele et al., 2009; Kathiresan et al., 2008; Wang et al., 2008)
IGF2 **Insulin like growth factor 2** rs74050124	3' UTR	pregnancy complications	(Queiroz et al., 2015, 2)

*rs74050124 and rs680 are in LD

Supplementary Table S3: p-values for the association between 2nd trimester lipid levels and SNPs in lipid and circadian genes.

SNPs	**Core circadian regulating genes**	**CHOL**	**HDL**	**LDL**	**TG**
rs3749474	*CLOCK*	0.86	5.37×10^{-2}	0.79	8.70×10^{-4}
rs4580704	*CLOCK*	0.31	1.93×10^{-3}	0.63	1.02×10^{-2}
rs1464490	*CLOCK*	0.85	4.94×10^{-2}	0.75	9.72×10^{-4}
rs6843722	*CLOCK*	0.73	8.07×10^{-3}	0.83	4.43×10^{-4}
rs6850524	*CLOCK*	0.44	2.27×10^{-4}	0.54	2.05×10^{-3}
rs4864548	*CLOCK*	0.89	4.14×10^{-2}	0.73	8.93×10^{-4}
rs1801260	*CLOCK*	0.42	0.40	9.28×10^{-2}	0.92
rs2278749	*ARNTL*	0.67	3.56×10^{-3}	0.82	1.50×10^{-3}
rs6486121	*ARNTL*	6.21×10^{-3}	0.93	6.42×10^{-3}	0.50
rs7950226	*ARNTL*	0.62	6.88×10^{-3}	0.85	0.21
rs11022775	*ARNTL*	0.56	0.25	0.30	6.35×10^{-2}
rs2585405	*PER1*	2.31×10^{-2}	0.80	1.06×10^{-2}	0.76
rs3027178	*PER1*	0.17	0.42	0.14	2.97×10^{-3}
rs2304672	*PER2*	0.65	0.45	0.69	0.99
rs56013859	*PER2*	0.11	6.04×10^{-2}	2.20×10^{-2}	5.08×10^{-2}
rs7602358	*PER3*	2.51×10^{-2}	1.72×10^{-3}	0.18	0.12

rs228669	*PER3*	0.50	0.19	0.81	1.24×10^{-6}
rs2640908	*PER3*	3.77×10^{-4}	0.28	1.78×10^{-4}	0.64
rs2287161	*CRY1*	0.53	0.95	0.81	0.95
rs3809236	*CRY1*	0.69	0.52	0.52	3.56×10^{-2}
rs12315175	*CRY1*	9.28×10^{-2}	0.38	0.41	0.15
rs2292912	*CRY2*	4.84×10^{-2}	0.85	3.92×10^{-3}	0.25
rs11605924	*CRY2*	N/A	N/A	N/A	N/A
rs2305160	*NPAS2*	0.21	0.23	0.11	5.46×10^{-2}
rs11541353	*NPAS2*	0.84	0.30	0.22	4.03×10^{-2}
SNPs	**Circadian-related and lipid-related genes**	**CHOL**	**HDL**	**LDL**	**TG**
rs12413112	*SIRT1*	0.79	6.17×10^{-2}	0.96	5.25×10^{-3}
rs3758391	*SIRT1*	1.83×10^{-2}	0.39	7.73×10^{-3}	3.84×10^{-2}
rs2273773	*SIRT1*	7.22×10^{-2}	0.78	5.10×10^{-2}	0.40
rs10997860	*SIRT1*	N/A	N/A	N/A	N/A
rs646776	*CELSR2-PSRC1-SORT1*	2.35×10^{-5}	5.35×10^{-4}	5.10×10^{-11}	0.19
rs599839	*CELSR2-PSRC1-SORT1*	2.83×10^{-5}	7.10×10^{-4}	1.16×10^{-10}	5.38×10^{-2}
rs28932472	*POMC*	0.13	0.38	0.65	0.39
rs1800206	*PPARA*	0.28	0.49	0.61	4.35×10^{-3}

rs7638903	*PPARG*	0.92	0.16	0.88	0.29
rs1801282	*PPARG*	0.95	0.60	0.94	0.45
rs12640088	*PPARGC1A*	0.39	0.31	0.16	1.10×10^{-2}
rs8192678	*PPARGC1A*	0.78	0.12	0.35	0.82
rs251464	*PPARGC1B*	0.24	0.95	3.30×10^{-2}	4.40×10^{-2}
rs17383291	*VDR*	0.45	0.21	0.56	4.17×10^{-2}
rs2228570	*VDR*	0.58	2.87×10^{-2}	0.44	4.66×10^{-2}
rs10507486	*FOXO1*	0.55	0.47	0.25	0.15
rs2297627	*FOXO1*	0.27	0.87	0.16	0.10
rs10830963	*MTNR1B*	0.69	0.86	0.76	0.56
rs1137101	*LEPR*	0.10	0.39	0.44	0.70
rs2303152	*HMGCR*	0.56	0.20	0.24	0.51
rs12654264	*HMGCR*	N/A	N/A	N/A	N/A
rs2274941	*DHCR24*	N/A	N/A	N/A	N/A
rs1630498	*DHCR7*	0.73	0.92	0.60	0.57
rs2002064	*DHCR7*	0.86	0.92	0.65	0.68
rs11591147	*PCSK9*	0.47	0.27	0.98	0.75
rs1800775	*CETP*	0.10	0.12	0.54	4.27×10^{-2}

rs1109166	*LCAT*	0.99	3.15×10^{-2}	0.85	0.28
rs6083	*LIPC*	8.86×10^{-2}	0.74	2.75×10^{-2}	0.80
rs1800588	*LIPC*	0.22	5.57×10^{-2}	7.63×10^{-3}	2.16×10^{-4}
rs2156552	*LIPG*	0.25	0.63	0.34	0.12
rs328	*LPL*	6.65×10^{-3}	5.52×10^{-2}	1.13×10^{-2}	1.33×10^{-3}
rs2066716	*ABCA1*	0.13	0.996	0.16	1.81×10^{-4}
rs3890182	*ABCA1*	0.69	0.73	0.32	1.63×10^{-2}
rs4149313	*ABCA1*	0.18	0.42	2.74×10^{-3}	0.49
rs6511720	*LDLR*	0.92	0.55	0.92	0.35
rs693	*APOB*	8.46×10^{-2}	0.83	3.70×10^{-3}	0.70
rs28927680	*APOA1*	0.44	0.13	0.18	6.66×10^{-3}
rs5070	*APOA1*	0.35	0.92	4.83×10^{-2}	1.24×10^{-3}
rs405509	*APOE*	3.39×10^{-3}	6.94×10^{-2}	1.63×10^{-3}	0.31
rs7412	*APOE*	2.81×10^{-6}	6.35×10^{-5}	$< 1.0 \times 10^{-12}$	0.10
rs4420638	*APOC1*	0.14	0.52	9.52×10^{-3}	0.23
rs738409	*PNPLA3*	0.33	9.81×10^{-5}	0.54	3.56×10^{-6}
rs58542926	*TM6SF2*	0.12	0.89	4.22×10^{-2}	0.89
rs16996148	*NCAN*	0.76	0.49	0.81	0.38

rs17321515	*TRIB1*	0.55	6.69×10^{-3}	0.89	0.26
rs12130333	*ANGPTL3*	0.71	0.18	0.33	9.71×10^{-2}
rs74050124	*IGF2*	0.91	3.38×10^{-2}	0.91	4.73×10^{-2}

All data presented are unadjusted and represent the p-value for the association between each individual lipid (as the outcome) with a single candidate SNP.

Supplementary Table S4: Minor allele frequencies for candidate SNPs and differences in frequency by race.

			Minor Allele Frequency				
	SNPs	**Minor Allele**	**Overall**	**Hispanic**	**White Non-Hispanic**	**Asian**	**p-value**
ABCA1	rs2066716	A	0.17	0.16	0.18	0.18	0.57
ABCA1	rs3890182	A	0.09	0.10	0.08	0.11	0.41
ABCA1	rs4149313	G	0.26	0.25	0.30	0.18	0.003
ANGPTL3	rs12130333	T	0.20	0.19	0.19	0.23	0.40
APOA1	rs28927680	G	0.10	0.09	0.11	0.09	0.35
APOA1	rs5070	A	0.47	0.47	0.49	0.44	0.45
APOB	rs693	T	0.38	0.38	0.37	0.40	0.76
APOC1	rs4420638	G	0.13	0.14	0.13	0.10	0.34
APOE	rs405509	C	0.47	0.46	0.46	0.47	0.96
APOE	rs7412	T	0.05	0.04	0.06	0.04	0.24
ARNTL	rs2278749	A	0.22	0.25	0.18	0.22	0.02
ARNTL	rs6486121	T*	0.49	0.49	0.49	0.47	0.59
ARNTL	rs7950226	G*	0.47	0.45	0.50	0.49	0.08
ARNTL	rs11022775	T	0.11	0.10	0.12	0.10	0.53
CELSR2-PSRC1-SORT1	rs646776	G	0.19	0.18	0.18	0.22	0.31
CELSR2-PSRC1-SORT1	rs599839	T	0.21	0.20	0.21	0.25	0.34
CETP	rs1800775	C	0.47	0.45	0.48	0.46	0.68
CLOCK	rs3749474	T	0.45	0.47	0.43	0.43	0.18
CLOCK	rs4580704	G	0.31	0.31	0.33	0.32	0.58
CLOCK	rs1464490	C	0.45	0.47	0.43	0.43	0.18
CLOCK	rs6843722	C	0.43	0.44	0.41	0.41	0.30
CLOCK	rs6850524	C	0.36	0.35	0.39	0.38	0.34

CLOCK	rs4864548	A	0.45	0.47	0.42	0.43	0.15
CLOCK	rs1801260	C	0.21	0.21	0.22	0.23	0.73
CRY1	rs3809236	T	0.12	0.12	0.11	0.13	0.73
CRY1	rs12315175	C	0.19	0.21	0.18	0.16	0.22
CRY1	rs2287161	C	0.45	0.44	0.47	0.42	0.26
CRY2	rs2292912	C	0.34	0.33	0.36	0.30	0.25
DHCR7	rs1630498	G	0.24	0.25	0.23	0.25	0.81
DHCR7	rs2002064	C	0.25	0.25	0.24	0.25	0.85
FOXO1	rs10507486	T	0.21	0.21	0.20	0.23	0.54
FOXO1	rs2297627	C	0.43	0.44	0.43	0.38	0.30
HMGCR	rs2303152	T	0.07	0.07	0.07	0.12	0.03
IGF2	rs74050124	A	0.01	0.01	0.01	0.01	0.86
LCAT	rs1109166	G	0.18	0.18	0.17	0.19	0.73
LDLR	rs6511720	T	0.09	0.09	0.09	0.11	0.59
LEPR	rs1137101	A*	0.48	0.47	0.47	0.44	0.06
LIPC	rs6083	A*	0.49	0.50	0.45	0.44	0.02
LIPC	rs1800588	T	0.40	0.40	0.42	0.36	0.26
LIPG	rs2156552	A	0.12	0.11	0.13	0.12	0.33
LPL	rs328	G	0.09	0.09	0.09	0.07	0.68
MTNR1B	rs10830963	G	0.31	0.32	0.30	0.30	0.59
NCAN	rs16996148	T	0.08	0.07	0.09	0.09	0.18
NPAS2	rs2305160	T	0.27	0.26	0.27	0.30	0.49
NPAS2	rs11541353	A	0.11	0.11	0.11	0.11	0.98
PCSK9	rs11591147	T	0.007	0.005	0.008	0.01	0.67
PER1	rs2585405	C	0.19	0.20	0.19	0.15	0.32
PER1	rs3027178	C	0.39	0.38	0.42	0.35	0.20
PER2	rs2304672	C	0.05	0.05	0.05	0.07	0.29

PER2	rs56013859	C	0.14	0.14	0.13	0.16	0.62
PER2	rs7602358	G	0.18	0.17	0.19	0.21	0.22
PER3	rs228669	A	0.21	0.21	0.23	0.11	0.003
PER3	rs2640908	T	0.22	0.22	0.24	0.20	0.57
PNPLA3	rs738409	G	0.37	0.38	0.33	0.40	0.08
POMC	rs28932472	C	0.21	0.22	0.20	0.20	0.48
PPARA	rs1800206	G	0.04	0.05	0.04	0.03	0.40
PPARG	rs1801282	G	0.10	0.11	0.09	0.08	0.35
PPARG	rs7638903	A	0.10	0.11	0.09	0.09	0.29
PPARGC1A	rs8192678	A	0.31	0.32	0.31	0.34	0.75
PPARGC1A	rs12640088	C	0.10	0.10	0.10	0.09	0.78
PPARGC1B	rs251464	C	0.36	0.36	0.36	0.40	0.52
SIRT1	rs12413112	A	0.16	0.16	0.16	0.16	0.99
SIRT1	rs3758391	T*	0.50	0.49	0.49	0.49	0.89
SIRT1	rs2273773	C	0.14	0.14	0.14	0.12	0.67
TM6SF2	rs58542926	T	0.06	0.05	0.07	0.06	0.39
TRIB1	rs17321515	G	0.44	0.43	0.47	0.43	0.23
VDR	rs17383291	G	0.43	0.42	0.43	0.43	0.91
VDR	rs2228570	A	0.44	0.45	0.44	0.34	0.02

*Minor allele for rs6486121 in White-Not Hispanic is C; Minor allele for rs7950226 in White-Not Hispanic is A; Minor allele for rs11605924 in Hispanic is A; Minor allele for rs3758391 in Hispanic is C; Minor allele for rs10997860 in White-Not Hispanic is T; Minor allele for rs1137101 in Asian is G; Minor allele for rs6083 in Asian is G.
MAF, minor allele frequency as calculated from the study population.
P-value represents the chi-square test for differences in MAF by race.

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