

Supplementary Table 1 : Disease classes curated from disease/trait terms in the NHGRI GWAS catalog. Disease indicated by (*) are additional ones curated by us while the remainders are from Maurano et al, 2012.

Aging	Autoimmune disease	Cardiovascular	Cancer
Alzheimers-AB1-42	Allergic rhinitis	Abdominal aortic aneurysm	Acute lymphoblastic leukemia (childhood)
Age-related macular degeneration	Ankylosing spondylitis	Amyloid A Levels	Basal cell carcinoma
Aging-cognition	Arthritis (juvenile idiopathic)	Aortic root size	Bladder cancer
Aging traits-age at death	Asthma	Aortic stiffness	Breast cancer
Aging traits-age free from disease	Asthma (childhood onset)	Atrial fibrillation	Chronic lymphocytic leukemia
Aging traits-age at death	Asthma (toluene diisocyanate-induced)	Atrial fibrillation/atrial flutter	Chronic myeloid leukemia
Alzheimer's disease	Behcet's disease	Atrioventricular conduction	Colorectal cancer
Alzheimers disease	Celiac disease	Beta thalassemia/hemoglobin E disease	Endometrial cancer
Alzheimers disease late onset	Celiac disease and Rheumatoid arthritis	Blood pressure	Esophageal cancer
Alzheimers disease	Crohn's disease	Cardiac hypertrophy	Esophageal cancer and gastric cancer
Amyotrophic lateral sclerosis	Crohn's disease and celiac disease	Crohn's structure and function	Follicular lymphoma
Alzheimers disease	Crohn's disease and sarcoidosis (combined)	Cardiovascular disease risk factors	Gastric cancer
Alzheimers Entorhinal cortical thickness	Eosinophilic esophagitis (pediatric)	Carotid atherosclerosis in HIV infection	Glioma
Essential tremor	Graves' disease	Carotid intima media thickness	Glioma (high-grade)
Fuch's corneal dystrophy	IgA nephropathy	Coronary artery calcification	Hepatocellular carcinoma
Hippocampal atrophy	IgE grass sensitization	Coronary heart disease	Hodgkin's lymphoma
Hirschsprung's disease	Immunoglobulin A	Coronary restenosis	Ileal carcinoids
Knee osteoarthritis	Inflammatory bowel disease	Coronary spasm	Large B-cell lymphoma
Longevity	Inflammatory bowel disease (early onset)	Diastolic blood pressure	Lung adenocarcinoma
Age at menarche	Kawasaki disease	Dilated cardiomyopathy	Lung cancer
Age at menarche	Multiple sclerosis	Echocardiographic traits	Melanoma
Menopause	Multiple sclerosis (age of onset)	Electrocardiographic conduction measures	Multiple myeloma
Morbidity-free survival	Multiple sclerosis (severity)	Electrocardiographic traits	Nasopharyngeal carcinoma
Alzheimers Entorhinal cortical thickness	Multiple sclerosis--Brain Glutamate Levels	Endothelial function traits	Neuroblastoma
Osteoarthritis	Neonatal lupus	Heart failure	Neuroblastoma (high-risk)
Osteonecrosis of the jaw	Primary biliary cirrhosis	Heart rate variability traits	Non-small cell lung cancer
Osteoporosis	Primary sclerosing cholangitis	Hypertension	Ovarian cancer
Paget's disease	Psoriasis	Intracranial aneurysm	Pancreatic cancer
Parkinson's disease	Psoriatic arthritis	Ischemic stroke	Prostate cancer
Parkinsons disease age of onset	Rheumatoid arthritis	Left ventricular mass	Renal cell carcinoma
Parkinson's disease	Stevens-Johnson syndrome and toxic epidermal necrolysis (SJS)	Major CVD	Small-cell lung cancer
Progressive supranuclear palsy	Systemic lupus erythematosus	Mortality among heart failure patients	Testicular cancer
Alzheimers P-tau181p	Systemic sclerosis	Moyamoya disease	Testicular germ cell cancer
Alzheimers Total ventricular volume	Ulcerative colitis	Myocardial infarction	Thyroid cancer
Alzheimers T-tau	Anti-cyclic Citrullinated Peptide Antibody*	Myocardial infarction (early onset)	Upper aerodigestive tract cancers
Arterial stiffness*	Radiographic parameters	Obesity and blood pressure	Urinary bladder cancer
Diabetes	Bone mineral density	Peripheral artery disease	Testicular germ cell tumor
Creutzfeldt-Jakob disease (variant)	Bone mineral density (hip)	PR interval	Ewing sarcoma*
Diabetes (gestational)	Bone mineral density (spine)	QT interval	Breast cancer (survival)*
Diabetes (incident)	Osteoporosis-related phenotypes	Resting heart rate	Gallbladder cancer*
Diabetic nephropathy	Wrist bone mass*	Retinal vascular caliber	Glioblastoma*
Diabetic retinopathy	Cortical structure*	RR interval (heart rate)	Nodular sclerosis Hodgkin lymphoma*
Metabolic syndrome	Facial morphology*	Stroke	Prostate cancer (gene x gene interaction)*
Type 1 diabetes	Parasitic and bacterial disease	Subclinical atherosclerosis traits (other)	
Type 1 diabetes autoantibodies	Dengue shock syndrome	Sudden cardiac arrest	
Type 2 diabetes	Leprosy	Systolic blood pressure	
Type 2 diabetes and other traits	Malaria	Thoracic aortic aneurysms and dissections	
	Meningococcal disease	Tonometry	
	Tuberculosis	Venous thromboembolism	
		Ventricular conduction	
		Hypertension (young onset)*	

Drug_metabolism	Hematological parameters	Miscellaneous	Miscellaneous
Acenocoumarol maintenance dosage	Hematocrit	Alopecia areata	Vaccine-related adverse events
Activated partial thromboplastin time	Hematological and biochemical traits	Atopic dermatitis	Vitiligo
Adverse response to aromatase inhibitors	Hematological parameters	Atopy	Gaucher disease severity*
Adverse response to carbamazepine	Hematology traits	Cleft lip	Glaucoma (exfoliation)*
Antipsychotic-induced QTc interval prolongation	Hemoglobin	Corneal astigmatism	Infantile hypertrophic pyloric stenosis*
Bleomycin sensitivity	Hemostatic factors and hematological phenotypes	Corneal structure	Non-obstructive azoospermia*
Caffeine consumption	Inflammatory biomarkers	Creutzfeldt-Jakob disease	Orofacial clefts*
Coffee consumption	Mean corpuscular hemoglobin	Cutaneous nevi	Thyrotoxic hypokalemic periodic paralysis*
Drug-induced liver injury (amoxicillin-clavulanate)	Mean corpuscular volume	Cystic fibrosis severity	Kidney, lung, liver diseases
Drug-induced liver injury (flucloxacillin)	Mean platelet volume	Dental caries	Biliary atresia
Epirubicin-induced leukopenia	Monocyte early outgrowth colony forming units	Dialysis-related mortality	Chronic kidney disease
HIV-1 viral setpoint	Neutrophil count	Duodenal ulcer	Chronic kidney disease and serum creatinine levels
Nevirapine-induced rash	Other erythrocyte phenotypes	Dupuytren's disease	Chronic obstructive pulmonary disease
Reasoning	Platelet aggregation	Endometriosis	Emphysema-related traits
Response to acetaminophen (hepatotoxicity)	Platelet counts	Erectile dysfunction and prostate cancer treatment	End-stage renal disease
Response to antidepressant treatment	Red blood cell traits	Exercise (leisure time)	End-stage renal disease (non-diabetic)
Response to antidepressants	White blood cell count	Exercise treadmill test traits	Idiopathic pulmonary fibrosis
Response to antineoplastic agents	White blood cell types	Femoral neck bone geometry	Interstitial lung disease
Response to antipsychotic therapy (extrapyramidal)	Viral Diseases	Glaucoma	Nephropathy
Response to antipsychotic treatment	AIDS	Glaucoma (primary open-angle)	Nephropathy (idiopathic membranous)
Response to cerivastatin	AIDS progression	Hypospadias	Nephrotic syndrome (acquired)
Response to citalopram treatment	Chronic Hepatitis C infection	IFN-related cytopenia	Non-alcoholic fatty liver disease histology (AST)
Response to clopidogrel therapy	Cytomegalovirus antibody response	Keloid	Non-alcoholic fatty liver disease histology (lobular)
Response to hepatitis C treatment	Hepatitis B	Male infertility	Non-alcoholic fatty liver disease histology (other)
Response to iloperidone treatment (QT prolongation)	Hepatitis B vaccine response	Mammographic density	Pulmonary function
Response to interferon beta therapy	HIV-1 control	Meningioma	Renal function and chronic kidney disease
Response to metformin	HIV-1 replication	Myeloproliferative neoplasms	Urinary albumin excretion
Response to platinum-based agents	HIV-1 susceptibility	Myopia (pathological)	Gallstones*
Response to platinum-based chemotherapy in non-small cell lung cancer	HPV seropositivity	Nonsyndromic cleft lip with or without cleft palate	Glomerulosclerosis*
Response to statin therapy		Otosclerosis	Kidney stones*
Response to TNF antagonist treatment		Periodontitis	Lipid levels in hepatitis C treatment*
Response to treatment for acute lymphoblastic leukemia		Polycystic ovary syndrome	Lumiracoxib-related liver injury*
Warfarin maintenance dose		Radiation response	Nephrolithiasis*
Adverse response to lamotrigine and phenytoin*		Recombination rate (females)	Nonalcoholic fatty liver disease*
Response to diuretic therapy*		Recombination rate (males)	
Response to gemcitabine in pancreatic cancer*		Refractive error	
Response to tamoxifen in breast cancer*		Scoliosis	
Ribavirin-induced anemia*		Self-rated health	
Treatment response for severe sepsis*		Telomere length	
		Thyroid volume	
		Uterine fibroids	

Neurological behavioral		Quantitative traits	
Alcohol dependence	Information processing speed	Adiposity	Primary tooth development (time to first tooth eruption)
Alcohol and nicotine co-dependence	Major depressive disorder	Anthropometric traits	Quantitative traits
Alcohol consumption	Major depressive disorder (broad)	Biomedical quantitative traits	Red vs. non-red hair color
Alcoholism (12-month weekly alcohol consumption)	Migraine	Birth weight	Renal sinus fat
Alcoholism (alcohol dependence factor score)	Narcolepsy	Black vs. blond hair color	Skin pigmentation
Alcoholism (heaviness of drinking)	Neuranatomic and neurocognitive phenotypes	Black vs. red hair color	Skin sensitivity to sun
Anorexia nervosa	Neuroticism	Blond vs. brown hair color	Tanning
Asperger disorder	Nicotine dependence	Blue vs. brown eyes	Vertical cup-disc ratio
Attention deficit hyperactivity disorder	Pain	Blue vs. green eyes	Waist circumference
Attention deficit hyperactivity disorder (time to onset)	Panic disorder	Body mass (lean)	Waist circumference and related phenotypes
Attention deficit hyperactivity disorder motor component	Partial epilepsies	Body mass in chronic obstructive pulmonary disease	Waist-hip ratio
Attention deficit hyperactivity disorder symptoms	Personality dimensions	Body mass index	Weight
Autism	Restless legs syndrome	Burning and freckling	Brachial circumference
Bipolar disorder	Schizophrenia	Central corneal thickness	Optic disc size (disc)
Bipolar disorder (age of onset and psychomotor symptoms)	Sleep duration	Corneal curvature	Red vs non-red hair color
bipolar disorder and depression (combined)	Sleepiness	Digit length ratio	Hippocampal volume*
Bipolar disorder and major depressive disorder	Smoking behavior	Eye color	Intracranial volume*
Bipolar disorder and schizophrenia	Speech perception in dyslexia	Eye color traits	Haptoglobin levels*
Brain imaging	Suicidal ideation	Freckles	5-HTT brain serotonin transporter levels*
Brain imaging in schizophrenia (interaction)	Suicide attempts in bipolar disorder	Freckling	Ankle-brachial index *
Brain lesion load	Tardive dyskinesia	Hair color	Anticoagulant levels*
Brain structure	Volumetric brain MRI	Hair morphology	Body mass index and cholesterol
Caudate nucleus volume	White matter hyperintensity burden	Head circumference (infant)	Cardiac repolarization*
Cognitive function	Working memory	Height	CD4:CD8 lymphocyte ratio*
Cognitive performance	Smoking cessation	Hip bone size	Coagulation factor levels*
Cognitive test performance	Alcoholism (alcohol use disorder factor score)*	Hip geometry	Lymphocyte counts*
Common traits (Other)	Attention deficit hyperactivity disorder and conduct disorder*	Iris characteristics	Ovarian reserve*
Conduct disorder (case status)	Bitter taste response*	Iris color	Pulmonary function decline*
Conduct disorder (interaction)	Cannabis dependence*	Lipid traits	White matter integrity*
Conduct disorder (symptom count)	Intelligence*	Male-pattern baldness	
Cortical thickness	Major mood disorders*	Mean forced vital capacity from 2 exams	
Depression and alcohol dependence	Prion diseases*	Normalized brain volume	
Depression--quantitative trait	Schizophrenia (treatment refractory) *	Obesity	
Drinking behavior	Sexual dysfunction (female)*	Obesity (early onset extreme)	
Epilepsy	Sexual dysfunction (SSRI/SNRI-related)*	Obesity (extreme)	
Event-related brain oscillations	Substance dependence*	Obesity and osteoporosis	
Functional MRI	Temperament-related traits*	Obesity-related traits	
Handedness in dyslexia		Optic disc parameters	
Hearing impairment		Optic disc size (cup)	
Hoarding		Optic disc size (rim)	
Hyperactive-impulsive symptoms		Permanent tooth development	
Inattentive symptoms		Primary tooth development (number of teeth)	

Serum metabolites

Adiponectin levels	Insulin resistance/response	Soluble E-selectin levels
Angiotensin-converting enzyme activity	Insulin-like growth factors	Soluble ICAM-1
Aspartate aminotransferase	Interleukin-18 levels	Soluble leptin receptor levels
Bilirubin levels	Iron levels	Soluble levels of adhesion molecules
Biochemical measures	Iron status biomarkers	Sphingolipid levels
Butyrylcholinesterase levels	LDL cholesterol	Testosterone levels
C4b binding protein levels	Lipid metabolism phenotypes	Thyroid stimulating hormone
Calcium levels	Lipoprotein-associated phospholipase A2 activity and mass	Total Cholesterol
Chemerin levels	Liver enzyme levels	Triglycerides
Circulating cell-free DNA	Liver enzyme levels (alanine transaminase)	Triglycerides-Blood Pressure (TG-BP)
C-reactive protein	Liver enzyme levels (alkaline phosphatase)	Two-hour glucose challenge
Creatinine levels	Liver enzyme levels (gamma-glutamyl transferase)	Urate levels
Cystatin C	Lp (a) levels	Uric acid levels
D-dimer levels	Magnesium levels	Urinary metabolites
Dehydroepiandrosterone sulphate levels	Matrix metalloproteinase levels	Vascular endothelial growth factor levels
Diabetes related insulin traits	Metabolic syndrome (bivariate traits)	Vitamin B12 levels
E-selectin levels	Metabolic traits	Vitamin D insufficiency
Factor VII	Metabolite levels	Vitamin D levels
Fasting glucose-related traits	Natriuretic peptide levels	Vitamin E levels
Fasting insulin-related traits	N-glycan levels	vWF and FVIII levels
Fasting plasma glucose	Phospholipid levels (plasma)	Waist Circumference - Triglycerides (WC-TG)
Fibrinogen	Phosphorus levels	YKL-40 levels
Folate pathway vitamin levels	Platelet function and related traits	Phytosterol levels
Gamma glutamyl transferase levels	Premature ovarian failure	Carotenoid and tocopherol levels
Gamma glutamyl transpeptidase	Progranulin levels	
HDL cholesterol	Proinsulin levels	
HDL Cholesterol - Triglycerides (HDL-C-TG)	Prostate-specific antigen levels	
Hepcidin levels	Protein C levels	
Homocysteine levels	Protein quantitative trait loci	
Hypertriglyceridemia	Response to statin therapy (LDL-C)	
Hypothyroidism	Retinol levels	
IgE levels	Select biomarker traits	