

**SUPPLEMENTARY DATA SET
FOR MANUSCRIPT**

**CD36-DEFICIENT CONGENIC STRAINS SHOW IMPROVED GLUCOSE
TOLERANCE AND DISTINCT SHIFTS IN METABOLIC AND TRANSCRIPTOMIC
PROFILES**

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Supplementary Data Set. List of significantly differentially expressed transcripts between PD and PD.SHR4a (FDR = 0.1). Negative fold change indicates decreased expression in PD.SHR4a compared to PD and vice versa.

Fold Change	ID	Gene Symbol	Entrez Gene Name
-13.525	NM_024362	<i>ARNTL</i>	aryl hydrocarbon receptor nuclear translocator-like
-11.695	NM_031561	<i>CD36</i>	CD36 fatty acid translocase
-9.976	NM_022392	<i>INSIG1</i>	insulin induced gene 1
-9.616	NM_001024272	<i>Phf11</i>	PHD finger protein 11
-7.029	NM_020072	<i>ACPP</i>	acid phosphatase, prostate
-6.949	NM_001013175	<i>Apol3</i>	apolipoprotein L, 3 steroid-5-alpha-reductase, alpha polypeptide 1 (3-oxo-5 alpha-steroid delta 4-dehydrogenase alpha 1)
-6.679	NM_017070	<i>SRD5A1</i>	solute carrier family 34 (sodium phosphate), member 2
-6.067	NM_053380	<i>SLC34A2</i>	leukotriene C4 synthase
-5.679	NM_053639	<i>LTC4S</i>	
-5.295	NM_001003706	<i>1100001G20Rik</i>	RIKEN cDNA 1100001G20 gene
-4.733	NM_053727	<i>NFIL3</i>	nuclear factor, interleukin 3 regulated proteasome (prosome, macropain) subunit, beta type, 8 (large multifunctional peptidase 7)
-3.114	NM_080767	<i>PSMB8</i>	
-2.851	NM_001009283	<i>C19orf46</i>	chromosome 19 open reading frame 46
-2.729	NM_053570	<i>CXADR</i>	coxsackie virus and adenovirus receptor capping protein (actin filament), gelsolin-like
-2.654	NM_001013086	<i>CAPG</i>	sigma non-opioid intracellular receptor 1
-2.577	NM_030996	<i>SIGMARI</i>	hepcidin antimicrobial peptide
-2.543	NM_053469	<i>HAMP</i>	caspace 1, apoptosis-related cysteine peptidase (interleukin 1, beta, convertase)
-2.536	NM_012762	<i>CASP1</i>	
-2.477	NM_176074	<i>C6</i>	complement component 6
-2.316	NM_001014023	<i>TRIM5</i>	tripartite motif-containing 5
-2.310	NM_012515	<i>TSPO</i>	translocator protein (18kDa)
-2.301	NM_012907	<i>APOBEC1</i>	apolipoprotein B mRNA editing enzyme, catalytic polypeptide 1
-2.231	NM_198134	<i>BST2</i>	bone marrow stromal cell antigen 2
-2.153	NM_001008374	<i>PGRMC2</i>	progesterone receptor membrane component 2
-2.130	NM_198755	<i>VWA5A</i>	von Willebrand factor A domain containing 5A

-2.010	NM_001001504	<i>GTF2IRD1</i>	GTF2I repeat domain containing 1
-1.996	NM_012823	<i>ANXA3</i>	annexin A3
-1.968	NM_001012075	<i>TSPYL4</i>	TSPY-like 4
-1.905	NM_172322	<i>PYCARD</i>	PYD and CARD domain containing protein tyrosine phosphatase, non-receptor type 2
-1.883	NM_053990	<i>PTPN2</i>	embigin
-1.852	NM_053719	<i>EMB</i>	presenilin 2 (Alzheimer disease 4)
-1.828	NM_031087	<i>PSEN2</i>	notch 2
-1.826	NM_024358	<i>NOTCH2</i>	clock homolog (mouse)
-1.816	NM_021856	<i>CLOCK</i>	
-1.781	NM_001011999	<i>A730098P11Rik</i>	RIKEN cDNA A730098P11 gene T-cell immunoglobulin and mucin domain containing 2
-1.739	NM_001013855	<i>Timd2</i>	CD200 receptor 1
-1.737	NM_023953	<i>CD200R1</i>	adenosine deaminase
-1.678	NM_130399	<i>ADA</i>	CD2-associated protein
-1.677	NM_181475	<i>CD2AP</i>	syntaxin 2
-1.673	NM_012748	<i>STX2</i>	protein tyrosine phosphatase, receptor type, S
-1.651	NM_019140	<i>PTPRS</i>	
-1.638	NM_001004242	<i>ARHGAP8</i>	Rho GTPase activating protein 8 SMT3 suppressor of mif two 3 homolog 3 (<i>S. cerevisiae</i>)
-1.567	NM_001024295	<i>SUMO3</i>	mitogen-activated protein kinase 6
-1.561	NM_031622	<i>MAPK6</i>	creatine kinase, brain
-1.534	NM_012529	<i>CKB</i>	complement component 9
-1.513	NM_057146	<i>C9</i>	attractin
-1.494	NM_031351	<i>ATRN</i>	myosin, heavy chain 9, non-muscle non-metastatic cells 2, protein (NM23B)
-1.484	NM_013194	<i>MYH9</i>	expressed in complement component 1, s subcomponent
-1.476	NM_031833	<i>NME2</i>	parkinson protein 2, E3 ubiquitin protein ligase (parkin)
-1.472	NM_138900	<i>C1S</i>	complement factor H
-1.470	NM_020093	<i>PARK2</i>	GM2 ganglioside activator
-1.465	NM_130409	<i>CFH</i>	SAFB-like, transcription modulator
-1.462	NM_172335	<i>GM2A</i>	calmodulin 1
-1.462	BC092633	<i>SLTM</i>	
-1.455	NM_031969	<i>Calm1</i>	
-1.441	NM_001004251	<i>C2orf47</i>	chromosome 2 open reading frame 47
-1.436	NM_001024998	<i>TXNDC15</i>	thioredoxin domain containing 15
-1.435	NM_001007646	<i>FKBP9</i>	FK506 binding protein 9, 63 kDa
-1.424	NM_138917	<i>FBXO6</i>	F-box protein 6
-1.424	XM_001075782		

-1.412	NM_138549	<i>TECR</i>	trans-2,3-enoyl-CoA reductase
-1.410	NM_212509	<i>NFKBIL1</i>	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor-like 1
-1.396	NM_001013118	<i>ABI3</i>	ABI family, member 3
-1.394	NM_012578	<i>H1F0</i>	H1 histone family, member 0
-1.371	NM_012516	<i>C4BPA</i>	complement component 4 binding protein, alpha
-1.356	NM_133307	<i>PRKCD</i>	protein kinase C, delta
-1.354	NM_001009478	<i>SAA4</i>	serum amyloid A4, constitutive
-1.342	NM_001013884	<i>UIMC1</i>	ubiquitin interaction motif containing 1
-1.290	NM_001008933	<i>VNIR1</i>	vomeronal 1 receptor 1
-1.289	NM_024162	<i>FABP3</i>	fatty acid binding protein 3, muscle and heart (mammary-derived growth inhibitor)
-1.289	NM_212517	<i>NDUFA11</i>	NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 11, 14.7kDa
-1.282	NM_145098	<i>NRP1</i>	neuropilin 1
-1.281	NM_012532	<i>CP</i>	ceruloplasmin (ferroxidase)
-1.269	NM_181379	<i>PPP2R5B</i>	protein phosphatase 2, regulatory subunit B', beta
-1.268	NM_133396	<i>TESK2</i>	testis-specific kinase 2
-1.265	AF315467	<i>ANUBL1</i>	AN1, ubiquitin-like, homolog (Xenopus laevis)
-1.245	NM_176080	<i>BC021785</i>	cDNA sequence BC021785
-1.238	NM_019296	<i>CDK1</i>	cyclin-dependent kinase 1
-1.233	NM_139105	<i>RNH1</i>	ribonuclease/angiogenin inhibitor 1
-1.219	NM_021774	<i>FHIT</i>	fragile histidine triad gene
-1.211	NM_212544	<i>PRR3</i>	proline rich 3
-1.209	NM_212466	<i>CFB</i>	complement factor B
-1.186	NM_017170	<i>APCS</i>	amyloid P component, serum
-1.170	NM_012639	<i>RAF1</i>	v-raf-1 murine leukemia viral oncogene homolog 1
-1.156	NM_053671	<i>TMF1</i>	TATA element modulatory factor 1
-1.152	NM_052803	<i>ATP7A</i>	ATPase, Cu ⁺⁺ transporting, alpha polypeptide
-1.089	NM_016994	<i>C3</i>	complement component 3
-1.076	NM_153627	<i>PROP1</i>	PROP paired-like homeobox 1
-1.068	NM_001000533	<i>Olfir1406</i>	olfactory receptor 1406
1.143	NM_022279	<i>MRE11A</i>	MRE11 meiotic recombination 11 homolog A (S. cerevisiae)
1.144	NM_031595	<i>PSMC3</i>	proteasome (prosome, macropain) 26S subunit, ATPase, 3
1.172	NM_022684	<i>BID</i>	BH3 interacting domain death agonist
1.186	NM_031589	<i>SLC37A4</i>	solute carrier family 37 (glucose-6-phosphate transporter), member 4

1.195	NM_133418	<i>SLC25A10</i>	solute carrier family 25 (mitochondrial carrier; dicarboxylate transporter), member 10
1.201	NM_053768	<i>UOX</i>	urate oxidase, pseudogene
1.204	NM_001008368	<i>SIRT2</i>	sirtuin 2
1.210	AF540911	<i>JAK1</i>	Janus kinase 1
1.235	NM_012973	<i>KCNE1</i>	potassium voltage-gated channel, Isk-related family, member 1
1.241	NM_022301	<i>PI4KA</i>	phosphatidylinositol 4-kinase, catalytic, alpha
1.256	NM_001008766	<i>CIAO1</i>	cytosolic iron-sulfur protein assembly 1
1.265	NM_001000808	<i>Olfir912</i>	olfactory receptor 912
1.272	NM_170788	<i>ERC1</i>	ELKS/RAB6-interacting/CAST family member 1
1.297	NM_001009385	<i>Apon</i>	apolipoprotein N
1.305	NM_001009639	<i>TPPP3</i>	tubulin polymerization-promoting protein family member 3
1.314	NM_153308	<i>GRINA</i>	glutamate receptor, ionotropic, N-methyl D-aspartate-associated protein 1 (glutamate binding)
1.316	NM_001004247	<i>UBL7</i>	ubiquitin-like 7 (bone marrow stromal cell-derived)
1.319	NM_022869	<i>NOLC1</i>	nucleolar and coiled-body phosphoprotein 1
1.321	NM_199099	<i>IMPDH2</i>	IMP (inosine 5'-monophosphate) dehydrogenase 2
1.327	XM_001070418		
1.337	NM_001012175	<i>ZFAND3</i>	zinc finger, AN1-type domain 3
1.359	NM_001008360	<i>C16orf5</i>	chromosome 16 open reading frame 5
1.362	NM_017358	<i>CDON</i>	Cdon homolog (mouse)
1.362	NM_001009622	<i>SAR1B</i>	SAR1 homolog B (<i>S. cerevisiae</i>)
1.378	NM_001014158	<i>ZNF761</i>	zinc finger protein 761
1.404	NM_181823	<i>RHOT2</i>	ras homolog gene family, member T2
1.408	NM_031543	<i>CYP2E1</i>	cytochrome P450, family 2, subfamily E, polypeptide 1
1.426	NM_001004207	<i>DHPS</i>	deoxyhypusine synthase

1.428	NM_080477	<i>PFKFB2</i>	6-phosphofructo-2-kinase/fructose-2,6-biphosphatase 2
1.444	XM_226159		
1.448	NM_012891	<i>ACADVL</i>	acyl-CoA dehydrogenase, very long chain
1.454	NM_017340	<i>ACOX1</i>	acyl-CoA oxidase 1, palmitoyl
1.467	NM_001012013	<i>ACBD4</i>	acyl-CoA binding domain containing 4
1.478	NM_019130	<i>INS</i>	insulin
1.485	NM_001013124	<i>UNG</i>	uracil-DNA glycosylase
1.492	NM_001014146	<i>C7orf10</i>	chromosome 7 open reading frame 10
1.503	NM_001011941	<i>CDC37L1</i>	cell division cycle 37 homolog (S. cerevisiae)-like 1
1.519	NM_001000286	<i>Olr447</i>	olfactory receptor 447
1.545	NM_031769	<i>PDXK</i>	pyridoxal (pyridoxine, vitamin B6) kinase
1.576	NM_001014089	<i>TBCEL</i>	tubulin folding cofactor E-like

1.580	NM_001009673	<i>FASTKD2</i>	FAST kinase domains 2
1.587	NM_134353	<i>PABPC1</i>	poly(A) binding protein, cytoplasmic 1
1.594	NM_031614	<i>TXNRD1</i>	thioredoxin reductase 1
1.615	NM_134330	<i>Keg1</i>	kidney expressed gene 1 phosphoribosylglycinamide formyltransferase, phosphoribosylglycinamide synthetase, phosphoribosylaminoimidazole synthetase
1.619	BC087644	<i>GART</i>	synthetase
1.631	XM_001053329	<i>TDRKH</i>	tudor and KH domain containing
1.633	NM_139108	<i>COMMD5</i>	COMM domain containing 5
1.635	NM_053904	<i>OPLAH</i>	5-oxoprolinase (ATP-hydrolysing)
1.649	NM_001001515	<i>LMO7</i>	LIM domain 7
1.696	NM_138840	<i>TGOLN2</i>	trans-golgi network protein 2
1.698	NM_130747	<i>ACOT12</i>	acyl-CoA thioesterase 12
1.720	NM_020540	<i>Gstm3</i>	glutathione S-transferase, mu 3
1.725	NM_001035001	<i>TMEM69</i>	transmembrane protein 69
1.759	NM_012959	<i>GFRA1</i>	GDNF family receptor alpha 1

1.773	NM_012947	<i>EEF2K</i>	eukaryotic elongation factor-2 kinase degenerative spermatocyte homolog 1,
1.782	NM_053323	<i>DEGS1</i>	lipid desaturase (Drosophila)
1.844	NM_001014020	<i>TARSL2</i>	threonyl-tRNA synthetase-like 2 dehydrogenase/reductase (SDR family)
1.845	NM_153315	<i>DHRS4</i>	member 4 steroid sulfatase (microsomal), isozyme
1.953	NM_012661	<i>STS</i>	S
1.956	NM_031553	<i>NFYB</i>	nuclear transcription factor Y, beta matrix metalloproteinase 12
1.989	NM_053963	<i>MMP12</i>	(macrophage elastase)
1.992	NM_001013190	<i>RAD23A</i>	RAD23 homolog A (<i>S. cerevisiae</i>) patatin-like phospholipase domain
2.052	XM_578102	<i>PNPLA7</i>	containing 7 homocysteine-inducible, endoplasmic reticulum stress-inducible, ubiquitin-like
2.061	NM_053523	<i>HERPUD1</i>	domain member 1
2.266	NM_001024292	<i>C9orf95</i>	chromosome 9 open reading frame 95

			ATP-binding cassette, sub-family D
2.270	NM_033352	<i>ABCD2</i>	(ALD), member 2
			histo-blood group ABO system
2.442	AY228143	<i>Abo2</i>	transferase 2
			inositol 1,4,5-triphosphate receptor, type
2.444	NM_001007235	<i>ITPR1</i>	1
			<i>Rattus norvegicus</i> transmembrane
2.464	---	<i>Tmem8</i>	protein 48
2.596	NM_133586	<i>Ces2b/Ces2c</i>	carboxylesterase 2C
			ATP-binding cassette, sub-family B
2.618	NM_133401	<i>ABCB1</i>	(MDR/TAP), member 1
2.797	NM_031317	<i>PDGFC</i>	platelet derived growth factor C
			cytochrome P450, family 2, subfamily J,
3.566	NM_023025	<i>CYP2J2</i>	polypeptide 2
			glucosaminyl (N-acetyl) transferase 2, I-
4.007	NM_001001511	<i>GCNT2</i>	branching enzyme (I blood group)
			aldehyde dehydrogenase 1 family,
4.568	NM_022407	<i>ALDH1A1</i>	member A1
4.595	NM_031678	<i>PER2</i>	period homolog 2 (<i>Drosophila</i>)
4.789	NM_031576	<i>POR</i>	P450 (cytochrome) oxidoreductase
			nuclear receptor subfamily 1, group I,
5.735	NM_022941	<i>NR1I3</i>	member 3
6.463	NM_023978	<i>PER3</i>	period homolog 3 (<i>Drosophila</i>)
			insulin-like growth factor binding
6.530	NM_013122	<i>IGFBP2</i>	protein 2, 36kDa
			ATP-binding cassette, sub-family G
11.190	NM_053754	<i>ABCG5</i>	(WHITE), member 5

11.499	NM_022635	<i>NAT8</i>	N-acetyltransferase 8 (GCN5-related, putative)
17.727	NM_012551	<i>EGR1</i>	early growth response 1