

**Supplementary Table 1.** Differential Protein Expression in PD. Label-free discovery proteomic was used to compare age 11 plasma samples from children with an outcome of PD at age 18 with age matched healthy controls (n=75). Sixty proteins were identified as significantly differentially expressed between cases and controls (ANCOVA, P<0.05), following adjustment for gender and BMI as covariates. The gene name, protein name, accession, ANCOVA adjusted p-value, fold change (FC) in disorder, and FDR values are listed for the 181 proteins profiled which are sorted by FDR.

Protein IDs	Protein names	Gene names	P-value Study_A	FC in PD	FDR
P01023	Alpha-2-macroglobulin	A2M	2.35E-05	-1.357158662	0.002452739
P22105	Tenascin-X	TNXB	6.78E-05	1.601455999	0.003010023
P01871	Ig mu chain C region	IGHM	8.93E-05	-1.493641497	0.003100233
P05452	Tetranectin	CLEC3B	0.000238537	1.212187463	0.00552715
P06276	Cholinesterase	BCHE	0.000288674	1.21666067	0.006016202
P06396	Gelsolin	GSN	0.001184331	1.130285152	0.013741065
Q16610	Extracellular matrix	ECM1	0.001568137	1.226788056	0.015289745
P01344	Insulin-like growth factor	IGF2	0.001850386	1.261531498	0.016146281
P20851	C4b-binding protein	C4BPB	0.001968112	-1.312726267	0.016452583
Q01459	Di-N-acetylchitobiosaminidase	CTBS	0.002116574	1.232655342	0.016804037
P05543	Thyroxine-binding globulin	SERPINA7	0.002123058	1.170032058	0.016818582
P19320	Vascular cell adhesion molecule-1	VCAM1	0.00224966	1.335374525	0.017090344
P51884	Lumican	LUM	0.002278966	1.190666535	0.017150105
P80108	Phosphatidylinositol-3-OH kinase class I	GPLD1	0.002346146	1.419719297	0.017282941
Q14520	Hyaluronan-binding protein	HABP2	0.00253835	1.168744992	0.017633778
P01860	Ig gamma-3 chain C region	IGHG3	0.002874794	-1.271699434	0.018546284
P49908	Selenoprotein P	SEPP1	0.003146451	1.210902508	0.019193243
P08603	Complement factor H	CFH	0.003414262	1.131441615	0.019765573
P36955	Pigment epithelium-derived factor	SERPINF1	0.003757244	1.128492794	0.020478654
Q28107	Coagulation factor V	F5	0.004067608	1.265869257	0.021055629
P00740	Coagulation factor I	F9	0.004334224	1.132273	0.021506866
P17936	Insulin-like growth factor binding protein-3	IGFBP3	0.007644758	1.172841072	0.032388279
P00748	Coagulation factor X	F12	0.007824123	1.192912488	0.032887687
P00746	Complement factor D	CFD	0.008444673	1.3528744	0.034556546
P05156	Complement factor C1	CFI	0.01000394	1.116502772	0.038384337
P13473	Lysosome-associated membrane protein 2	LAMP2	0.011818701	1.187366493	0.042278849
Q9NQ79	Cartilage acidic protein 1	CRTAC1	0.012282688	1.234001136	0.043191407
Q15113	Procollagen C-endopeptidase	PCOLCE	0.012858287	1.188936412	0.044281235
P43652	Afamin	AFM	0.014449995	1.123182306	0.047073157
P00747	Plasminogen; Plasminogen activator inhibitor-1	PLG	0.014808888	1.138178862	0.047661475
P12111	Collagen alpha-3(VI)	COL6A3	0.015123384	1.347915835	0.048165492
P10643	Complement component C7	C7	0.015253718	1.142610485	0.048371296
P02652	Apolipoprotein A-II	APOA2	0.015768185	-1.348607823	0.04916664
Q6YHK3	CD109 antigen	CD109	0.016302896	1.230950957	0.049965576
P63261	Actin, cytoplasmic 2	ACTG1	0.018428441	1.233446863	0.052893098
P08571	Monocyte chemoattractant protein 1	CD14	0.018648336	1.136801315	0.053174876
P03952	Plasma kallikrein; Plasminogen activator inhibitor-1	KLKB1	0.019913521	1.114899733	0.054727224
P01042	Kininogen-1; Kininogen	KNG1	0.021034485	1.10538579	0.056011644
P12259	Coagulation factor V	F5	0.021375886	1.139897032	0.056387118
P08697	Alpha-2-antiplasmin	SERPINF2	0.024325249	1.08556435	0.059359685
P09871	Complement C1s subunit	C1S	0.024366318	1.116628231	0.059397936
P00734	Prothrombin; Activated partial thromboplastin time reagent	F2	0.024740545	1.118890702	0.059742847
P06727	Apolipoprotein A-IV	APOA4	0.025696266	1.126123234	0.06059494
A0A075B6R1	Ig kappa chain V-II	IGKV2D-40	0.025902708	-1.197827064	0.060773775

Q9Y5Y7	Lymphatic vessel en LYVE1	0.026443479	1.237467097	0.061233787
P00488	Coagulation factor $\gamma$ F13A1	0.027407334	1.140692279	0.062086047
P05109	Protein S100-A8;Prc S100A8	0.030888404	1.236001328	0.065695246
P15144	Aminopeptidase N ANPEP	0.0309186	1.216601275	0.065724624
P04004	Vitronectin;Vitronec VTN	0.031818888	1.09696493	0.066586457
P04003	C4b-binding protein C4BPA	0.034467678	-1.166388626	0.068973447
P02749	Beta-2-glycoprotein APOH	0.035328247	1.129619853	0.069704633
P13671	Complement compc C6	0.036921822	1.100037012	0.071005866
P00736	Complement C1r su C1R	0.036973675	1.129197618	0.071047102
P10909	Clusterin;Clusterin t CLU	0.037047254	1.092045189	0.071105499
P49747	Cartilage oligomeric COMP	0.038053607	1.265083703	0.071890747
P22792	Carboxypeptidase NCPN2	0.039032542	1.112846437	0.072631307
Q15848	Adiponectin ADIPOQ	0.041918376	1.282973847	0.076309891
O75882	Attractin ATRN	0.045675287	1.094340508	0.080866377
Q6EMK4	Vasorin VASN	0.047805918	1.145119941	0.083340993
Q99969	Retinoic acid recept RARRES2	0.048852426	1.152447014	0.084528878
B9A064	Immunoglobulin lan IGLL5	0.0506578	-1.192085837	0.086536941
Q15582	Transforming growt TGFBI	0.057806133	1.239540463	0.095039108
P08185	Corticosteroid-bindi SERPINA6	0.059739231	1.095566171	0.097229706
P07195	L-lactate dehydroge LDHB	0.061424158	1.164721629	0.099103454
P02774	Vitamin D-binding p GC	0.064698745	1.110597891	0.102653427
P23470	Receptor-type tyros PTPRG	0.066642837	-1.11700392	0.104705783
P05546	Heparin cofactor 2 SERPIND1	0.071480352	1.099233728	0.109642913
P04196	Histidine-rich glycoç HRG	0.075353446	1.127000204	0.113430114
Q06033	Inter-alpha-trypsin i ITIH3	0.079216971	1.133640818	0.117069912
P02753	Retinol-binding prot RBP4	0.080367507	1.196574516	0.118128292
P04278	Sex hormone-bindin SHBG	0.080684743	1.172512096	0.118418109
P15169	Carboxypeptidase NCPN1	0.086141769	1.115231913	0.124034721
O00391	Sulfhydryl oxidase 1 QSOX1	0.088654122	1.132426319	0.126549701
P26927	Hepatocyte growth MST1	0.103282873	1.13451908	0.141887051
P02452	Collagen alpha-1(I) c COL1A1	0.105970957	1.205845129	0.144580739
P19823	Inter-alpha-trypsin i ITIH2	0.111579366	1.060217584	0.150083475
P55056	Apolipoprotein C-IV APOC4	0.112926057	1.219873985	0.151381738
P22891	Vitamin K-depender PROZ	0.118295087	1.259472458	0.156471654
P07359	Platelet glycoprotei GP1BA	0.126005641	1.10389295	0.163549144
P02654	Apolipoprotein C-I;T APOC1	0.129643686	1.141348035	0.16679725
Q9UGM5	Fetuin-B FETUB	0.133605304	1.1361884	0.170270143
P04180	Phosphatidylcholine LCAT	0.134807713	1.130696651	0.171311272
Q04756	Hepatocyte growth HGFAC	0.144138266	1.10680323	0.179371213
Q9UK55	Protein Z-dependen SERPINA10	0.148681289	1.139050262	0.183175822
Q92820	Gamma-glutamyl hy GGH	0.150933036	1.119891581	0.18503353
P29622	Kallistatin SERPINA4	0.158578123	1.083724787	0.191301967
O43866	CD5 antigen-like CD5L	0.170574837	-1.197237141	0.200744801
O75636	Ficolin-3 FCN3	0.179020431	1.122874971	0.2071203
P05154	Plasma serine prote SERPINA5	0.182154333	1.147223699	0.209431526
P43251	Biotinidase BTD	0.184924999	1.084003139	0.211450988
P01031	Complement C5;Cor C5	0.186319558	1.054847621	0.212459085
P07358	Complement compc C8B	0.195315304	1.090993233	0.218830867
P07357	Complement compc C8A	0.202650981	1.071577616	0.223864524
Q96PD5	N-acetylmuramoyl-l PGLYRP2	0.208005641	1.069112662	0.227450562

P04275	von Willebrand factor VWF	0.20810115	1.178203779	0.227513865
P22352	Glutathione peroxidase GPX3	0.21191002	1.147862335	0.230019847
P07360	Complement component C8G	0.225871459	1.06279128	0.240172363
P04217	Alpha-1B-glycoprotein A1BG	0.233413192	1.059134875	0.245486129
P12955	Xaa-Pro dipeptidase PEPD	0.234142844	1.071432603	0.245994088
P02787	Serotransferrin TF	0.241481413	1.074671798	0.251044066
Q76LX8	A disintegrin and metalloproteinase ADAMTS13	0.24682425	1.109426727	0.254654587
P02747	Complement C1q subunit C1QC	0.262528853	1.083497519	0.265781288
P00742	Coagulation factor XIII F10	0.271783484	1.148702485	0.272145025
P68871	Hemoglobin subunit HBB	0.272953101	-1.435794938	0.272939403
P01008	Antithrombin-III SERPINC1	0.274526341	1.041755194	0.274004466
P01766	Ig heavy chain V-III region BRO; Ig heavy chain	0.278853232	-1.114236875	0.277126316
P02760	Protein AMBP; Alpha-2 macroglobulin AMBP	0.280705579	1.051244829	0.278454592
P01009	Alpha-1-antitrypsin; SERPINA1	0.293605755	1.084895571	0.287571348
P00000	Spiked RT standard_Thermo	0.309194275	-1.057047503	0.298285222
O75015	Low affinity immunoglobulin FCGR3B; FCGR3	0.31170931	1.10237462	0.299983671
P05160	Coagulation factor XIII F13B	0.320266579	1.043616646	0.305701475
Q9Y6R7	IgGFc-binding protein FCGBP	0.335244823	1.147690836	0.315487987
P19827	Inter-alpha-trypsin inhibitor ITIH1	0.354198021	1.044097253	0.327483157
P01834	Ig kappa chain C region IGKC	0.370264742	-1.058233658	0.337327104
P07996	Thrombospondin-1 THBS1	0.382787132	-1.258188382	0.34480189
Q14624	Inter-alpha-trypsin inhibitor ITIH4	0.384985026	1.036428018	0.346096481
P05019	Insulin-like growth factor IGF1	0.394985846	1.112605496	0.351923086
P35858	Insulin-like growth factor IGFALS	0.424828188	1.043205874	0.368708387
P00450	Ceruloplasmin CP	0.429133229	1.041568295	0.37105833
P02671	Fibrinogen alpha chain FGA	0.432817468	-1.058352169	0.373055555
P02751	Fibronectin; Anaglycan FN1	0.436648001	1.110234334	0.375118679
P02775	Platelet basic protein PPBP	0.437289562	-1.151246258	0.375462897
P04114	Apolipoprotein B-100 APOB	0.44039284	1.038216246	0.377122565
P27169	Serum paraoxonase PON1	0.449188456	-1.08681175	0.381778986
O95445	Apolipoprotein M APOM	0.453064414	1.083224264	0.383808902
P02765	Alpha-2-HS-glycoprotein AHSG	0.467026409	1.043339005	0.391011868
P13796	Plastin-2 LCP1	0.470282629	1.067543992	0.392667595
P01011	Alpha-1-antichymotrypsin SERPINA3	0.473363344	1.054023475	0.394225814
P48740	Mannan-binding lectin MASP1	0.475014083	1.077444354	0.395057469
Q9NPH3	Interleukin-1 receptor IL1RAP	0.479816366	1.078834974	0.397463961
P06681	Complement C2; Complement C2	0.491706422	-1.076087805	0.403340655
P54108	Cysteine-rich secretory protein CRISP3	0.496175238	1.070860312	0.405519849
P02776	Platelet factor 4; Platelet factor 4 PF4; PF4V1	0.506959932	-1.127673967	0.410713957
P02745	Complement C1q subunit C1QA	0.522400183	1.067748449	0.417994228
Q03591	Complement factor CFHR1	0.523822973	-1.118388625	0.418656049
P02746	Complement C1q subunit C1QB	0.529120639	1.035314964	0.421107118
P36980	Complement factor CFHR2	0.565041702	1.061309537	0.437196662
P05155	Plasma protease C1 SERPING1	0.56892977	-1.027403297	0.4388847
POC0L5	Complement C4-B; Complement C4B	0.577995264	1.058004386	0.442781506
Q96KN2	Beta-Ala-His dipeptidase CNDP1	0.578925727	-1.11075503	0.443178406
P02790	Hemopexin HPX	0.599546602	1.023541177	0.451831607
P27918	Properdin CFP	0.607631973	1.057729588	0.45515154
P19652	Alpha-1-acid glycoprotein ORM2	0.608280939	-1.054836834	0.45541627
P04070	Vitamin K-dependent protein PROC	0.609470175	1.043927384	0.455900722

POC0L4	Complement C4-A;C C4A	0.634783471	-1.029773529	0.466011816
P18428	Lipopolysaccharide- LBP	0.639330457	1.055148969	0.467788373
P02655	Apolipoprotein C-II APOC2	0.65885384	1.062331746	0.475283923
P25311	Zinc-alpha-2-glycopi AZGP1	0.678667983	1.018577188	0.482678274
P33151	Cadherin-5 CDH5	0.698442312	-1.034644395	0.489852872
O14791	Apolipoprotein L1 APOL1	0.704936558	-1.054166313	0.492165926
POCG06	Ig lambda-3 chain C IGLC3;IGLC2;IG	0.712594153	1.04164087	0.494866524
P07225	Vitamin K-depender PROS1	0.718218777	1.017685898	0.496831931
P01019	Angiotensinogen;An AGT	0.72515986	1.017292728	0.499236364
P02766	Transthyretin TTR	0.725580943	1.037540829	0.499381491
B4E1Z4	Complement factor CFB	0.728458692	1.017603926	0.500371062
P01861	Ig gamma-4 chain C IGHG4	0.732353242	1.051937018	0.501704068
P02750	Leucine-rich alpha-2 LRG1	0.749146043	1.022088706	0.507371285
P02647	Apolipoprotein A-I;F APOA1	0.784165493	-1.021148056	0.518784508
P01857	Ig gamma-1 chain C IGHG1	0.811141713	-1.019949627	0.527222082
Q92954	Proteoglycan 4;Prot PRG4	0.844087069	1.032418767	0.537133746
P59666	Neutrophil defensin DEFA3;DEFA1	0.849271453	-1.01981551	0.538655755
P00738	Haptoglobin;Haptog HP	0.859906398	-1.042883852	0.541746802
O00533	Neural cell adhesior CHL1	0.872500267	1.017840309	0.545354064
P01623	Ig kappa chain V-III region WOL;lg k	0.873764704	-1.011570803	0.545713102
P16070	CD44 antigen CD44	0.878865793	-1.018647125	0.54715582
P09172	Dopamine beta-hyd DBH	0.885476548	1.023777009	0.549011934
P01876	Ig alpha-1 chain C re IGHA1;IGHA2	0.890107208	1.013476149	0.550303057
Q9NZP8	Complement C1r su C1RL	0.91510303	-1.008415604	0.557146693
Q96IY4	Carboxypeptidase B CPB2	0.917867267	-1.006147565	0.557890747
P02763	Alpha-1-acid glycopi ORM1	0.922233348	-1.019442212	0.559060892
P02675	Fibrinogen beta cha FGB	0.925132568	-1.008842799	0.55983449
P02656	Apolipoprotein C-III APOC3	0.934903179	-1.00930773	0.562421709
P01024	Complement C3;Cor C3	0.93618371	-1.004933521	0.562758536
P61769	Beta-2-microglobuli B2M	0.940037794	-1.006486641	0.563769181
P03951	Coagulation factor X F11	0.941328284	1.005792166	0.564106539
P11226	Mannose-binding pr MBL2	0.957777128	-1.008484651	0.568361306
P02679	Fibrinogen gamma c FGG	0.9585182	1.003833176	0.568551042
P02743	Serum amyloid P-co APCS	0.976317303	1.002070519	0.57305854
P02748	Complement compc C9	0.98153698	1.00149053	0.574362581
P02649	Apolipoprotein E APOE	0.982318946	1.001918364	0.574557256