

Supplemental Table 1. Complete Gene List, Housekeeping Genes, Gene Function, and Criteria for Study Selection

Gene Symbol	Gene Name	NFkappaB	Function	Selection Criteria
18S	Eukaryotic ribosomal protein 18S	NO	<i>Reference gene</i>	Reference gene
ACTB	actin, beta	NO	<i>Reference gene</i>	Reference gene
ALOX5	arachidonate 5-lipoxygenase	YES	Inflammation	Prelim data: ↑Plt
APCS	amyloid P component, serum	NO	Inflammation; athero	FHS
APP	amyloid beta (A4) precursor protein (peptidase nexin-II, Alzheimer disease)	NO	Neurodegenerative	Literature (Moore)
B2M	beta-2-microglobulin	YES	<i>Reference gene</i>	Reference gene
CADM3	cell adhesion molecule 3	NO	adhesion	FHS
CCL2	chemokine (C-C motif) ligand 2 (MCP-1)	YES	Chemotaxis, binding	Prelim data: ↑Plt
CCL5	chemokine (C-C motif) ligand 5 (RANTES)	YES	Inflammation; obesity, cell migration	Literature (Whitney)
CD163	CD163 molecule	NO	Inflammation; activation	Literature (Moore)
CD36	CD36 molecule (thrombospondin receptor)	NO	Adhesion; athero, CVD	Literature (Moore)
CD40	CD40 molecule, TNF receptor superfamily member 5	YES	Inflammation; vascular function	FHS
CD40LG	CD40 ligand (TNF superfamily, member 5, hyper-IgM syndrome)	YES	Inflammation; vascular function	FHS
CD69	CD69 molecule	YES	Inflammation; immunity	Literature (Healy)
CRP	C-reactive protein, pentraxin-related	YES	Inflammation; CVD	FHS
FCER1A	Fc fragment of IgE, high affinity I, receptor for; alpha polypeptide	NO	Inflammation-IgE	Prelim data: ↑Plt
FGFR1	fibroblast growth factor receptor 1 (fms-related tyrosine kinase 2, Pfeiffer syndrome)	NO	Inflammation; proliferation	Literature (Radich)
GAPDH	glyceraldehyde-3-phosphate dehydrogenase	NO	<i>Reference gene</i>	Reference gene
GP1BA	glycoprotein Ib (platelet), alpha polypeptide	NO	Platelet adhesion	Literature (Ma)
GSTP1	glutathione S-transferase pi	YES	Inflammation; proliferation	Literature (Wettinger)
ICAM1	intercellular adhesion molecule 1 (CD54), human rhinovirus receptor	NO	Inflammation; adhesion	FHS
IFIT1	interferon-induced protein with tetratricopeptide repeats 1	NO	Neoplasia	Literature(Whitney or Radich)
IFNG	interferon, gamma	YES	Inflammation	Literature(Whitney)
IL1R1	interleukin 1 receptor, type I	NO	Inflammation; obesity, CVD	Prelim data: ↑Leuk
IL6	interleukin 6 (interferon, beta 2)	YES	Inflammation; obesity	FHS
IL6R	interleukin 6 receptor	NO	Inflammation; proliferation, obesity	Prelim data: ↑Leuk
ITGA2B	integrin, alpha 2b (platelet glycoprotein IIb of IIb/IIIa complex, antigen CD41)	NO	Aggregation	Literature (Ma)/Prelim data↑leuk
MIF	macrophage migration inhibitory factor (glycosylation-inhibiting factor)	NO	Inflammation; proliferation	Literature (Wettinger)
MPO	myeloperoxidase	NO	Inflammation; phagocytosis	FHS
NFKB1	nuclear factor of kappa light polypeptide gene enhancer in B-cells 1 (p105)	YES	Inflammation; athero, sepsis	Literature (Wettinger)
OR10J1	olfactory receptor, family 10, subfamily J, member 1	YES	Fertilization; regulates Traf6	Prelim data
P2RY12	purinergic receptor P2Y, G-protein coupled, 12	NO	Platelet activation; CVD	Prelim data: ↑Leuk
PF4	platelet factor 4 (chemokine (C-X-C motif) ligand 4)	NO	Inflammation; infection, activation	Literature (Ma)
PLA2G7	phospholipase A2, group VII (platelet-activating factor acetylhydrolase, plasma)	NO	Inflammation; athero, CVD	FHS
PTGER2	prostaglandin E receptor 2 (subtype EP2), 53kDa	NO	Inflammation; neoplasia, proliferation	Prelim data: ↑Plt
PTGS1	prostaglandin-endoperoxide synthase 1 (COX1)	NO	inflammation, platelet function	Prelim data: no change
PTGS2	prostaglandin-endoperoxide synthase 2 (COX2)	YES	inflammation,vascular function	Prelim data: ↑Plt
PTPN1	protein tyrosine phosphatase, non-receptor type 1	YES	Neoplasia; migration	Literature (Wettinger)
PTPRN2	protein tyrosine phosphatase, receptor type, N polypeptide 2	NO	Cellular survival	Literature (Radich)
S100A9	S100 calcium binding protein A9 (calgranulin B)	NO	Inflammation; immunity	Literature (Healy)
SELENBP1	selenium binding protein 1	NO	Inflammation; eosinophilia	Prelim data: ↑Plt
SELP	selectin P (granule membrane protein 140kDa, antigen CD62)	YES		Prelim data: no change
SERPINB9	serpin peptidase inhibitor, clade B (ovalbumin), member 9	NO	Inflammation; cell death, oncology	Prelim data: ↑Plt
TLR2	toll-like receptor 2	YES	immunity-thrombosis	Prelim data-plt
TLR4	toll-like receptor 4	NO	immunity-athero	Prelim data-leuk
TNF	tumor necrosis factor (TNF superfamily, member 2)	? NO	Inflammation	FHS
TNFRSF11B	tumor necrosis factor receptor superfamily, member 11b (osteoprotegerin)	NO	Inflammation; differentiation	FHS
TNFRSF1B	tumor necrosis factor receptor superfamily, member 1B	YES	Inflammation; differentiation	FHS

Supplemental Table 2. Specific Gene Expression Levels in Leukocytes and Platelets.

Gene	Leukocyte Expression			Platelet Expression			Leuk, Plt Correlation, CT	P-value Corr. CT	Leuk., Plt Correlation Delta CT	P-value Corr. Delta CT
	Proportion Expressing Gene	Mean CT	Mean Delta CT	Proportion Expressing Gene	Mean CT	Mean Delta CT				
18s	0.992	4.54	4.12	0.996	5.81	6.96	0.092	<0.0001	0.052	0.026
ACTB	0.997	10.31	-1.61	0.99	14.52	-1.69	0.158	<0.0001	0.36	<0.0001
ALOX5	1	11.42	-2.7	0.964	19.07	-6.24	0.029	0.21	0.172	<0.0001
APP	0.999	12.67	-3.95	0.989	15.55	-2.73	0.138	<0.0001	0.222	<0.0001
B2M	0.999	6.41	2.3	0.995	9.25	3.58	0.101	<0.0001	0.193	<0.0001
CCL2	0.883	22.79	-14.07	0.442	28.28	-15.46	0.045	0.054	0.113	<0.0001
CCL5	0.999	9.46	-0.75	0.996	11.56	1.26	0.15	<0.0001	0.176	<0.0001
CD163	0.999	12.76	-4.04	0.913	21.42	-8.6	0.01	0.67	0.135	<0.0001
CD36	0.999	10.9	-2.19	0.989	15.39	-2.56	0.087	0.0002	0.222	<0.0001
CD40	0.997	15.33	-6.61	0.947	20.29	-7.46	0.074	0.0015	0.188	<0.0001
CD40LG	0.997	14.97	-6.25	0.966	19.87	-7.07	-0.011	0.63	0.167	<0.0001
CD69	0.995	15.28	-6.57	0.936	21.7	-8.87	-0.031	0.18	0.249	<0.0001
FCER1A	0.857	24.49	-15.77	0.317	28.74	-15.92	-0.003	0.9	0.117	<0.0001
FGFR1	0.988	17.13	-8.41	0.815	23.95	-11.13	0.013	0.58	0.17	<0.0001
GAPDH	0.999	9.41	-0.69	0.991	14.71	-1.89	0.056	0.016	0.164	<0.0001
GP1BA	0.968	18.77	-10.05	0.957	19.49	-6.66	0.427	<0.0001	0.47	<0.0001
GSTP1	1	11.45	-2.73	0.963	19.01	-6.19	0.072	0.0019	0.427	<0.0001
house	1	8.72		1	12.82		0.094			
ICAM1	0.994	16.78	-8.06	0.802	24.94	-12.12	0.021	0.37	0.1	<0.0001
IFIT1	0.992	15.6	-8.89	0.876	22.63	-9.82	0.058	0.013	0.339	<0.0001
IFNG	0.946	20.79	-12.07	0.635	26.63	-13.81	0.023	0.33	0.144	<0.0001
IL1R1	0.968	19.14	-10.42	0.75	25.72	-12.9	0.001	0.96	0.096	<0.0001
IL6	0.762	25.82	-17.1	0.347	28.72	-15.89	0.048	0.039	0.133	<0.0001
IL6R	1	13.49	-4.77	0.937	20.4	-7.58	0.039	0.091	0.084	0.0003
ITGA2B	0.998	13.78	-5.07	0.988	14.96	-2.13	0.269	<0.0001	0.326	<0.0001
MIF	0.974	13.84	-5.09	0.885	20.58	-7.76	0.132	<0.0001	0.364	<0.0001
MPO	0.991	17.71	-9	0.8	25.04	-12.22	0.053	0.022	0.233	<0.0001
NFKB1	0.999	13.67	-4.96	0.955	20.4	-7.57	0.02	0.38	0.178	<0.0001
OR10J1	0.87	25.6	-16.88	0.366	28.88	-16.05	-0.016	0.49	0.249	<0.0001
P2RY12	0.999	14.57	-5.86	0.984	16.64	-3.81	0.166	<0.0001	0.209	<0.0001
PF4	0.999	11.82	-3.11	0.993	12.89	-0.07	0.252	<0.0001	0.023	0.31
PLA2G7	0.972	18.31	-9.59	0.709	26.27	-13.44	-0.01	0.68	0.175	<0.0001
PTGER2	0.999	14.77	-6.05	0.926	21.59	-8.77	0.003	0.89	0.143	<0.0001
PTGS1	0.999	13.35	-4.63	0.989	15	-2.17	0.242	<0.0001	0.22	<0.0001
PTGS2	0.972	18.82	-10.1	0.64	26.69	-13.87	0.026	0.27	0.128	<0.0001
PTPN1	0.999	14.45	-5.73	0.959	20.32	-7.49	0.036	0.12	0.267	<0.0001
PTPRN2	0.884	24.4	-15.68	0.178	29.44	-16.61	0.014	0.54	-0.018	0.45
S100A9	0.999	8.08	0.63	0.992	15.89	-3.07	0.004	0.86	0.141	<0.0001
SELENBP1	0.962	21.51	-12.79	0.947	20.45	-7.65	0.265	<0.0001	0.198	<0.0001
SELP	0.976	15.18	-6.46	0.989	16.14	-3.31	0.149	<0.0001	0.087	0.0002
SERPINB9	0.998	13.86	-5.14	0.949	19.97	-7.14	0.034	0.15	0.066	0.0048
TLR2	0.997	13.87	-5.17	0.859	22.78	-9.96	0.03	0.19	0.182	<0.0001
TLR4	0.998	15.81	-7.1	0.852	23.93	-11.11	0.063	0.0063	0.157	<0.0001
TNF	0.994	17.22	-8.5	0.831	24.09	-11.3	0.084	0.0003	0.115	<0.0001
TNFRSF11B	0.871	24.04	-15.32	0.154	29.38	-16.55	0.03	0.2	-0.056	0.016
TNFRSF1B	1	12.34	-3.62	0.946	20.74	-7.92	0.048	0.04	0.138	<0.0001

SUPPLEMENTAL TABLES

Supplemental Table 1. Complete Gene List, Housekeeping Genes, Gene Function, and Criteria for Study Selection

Supplemental Table 2. Gene Expression Levels. Expression levels with and without normalization for housekeeping genes (delta Ct values and raw values, respectively) for platelets and leukocytes.

SUPPLEMENTAL FIGURE LEGENDS

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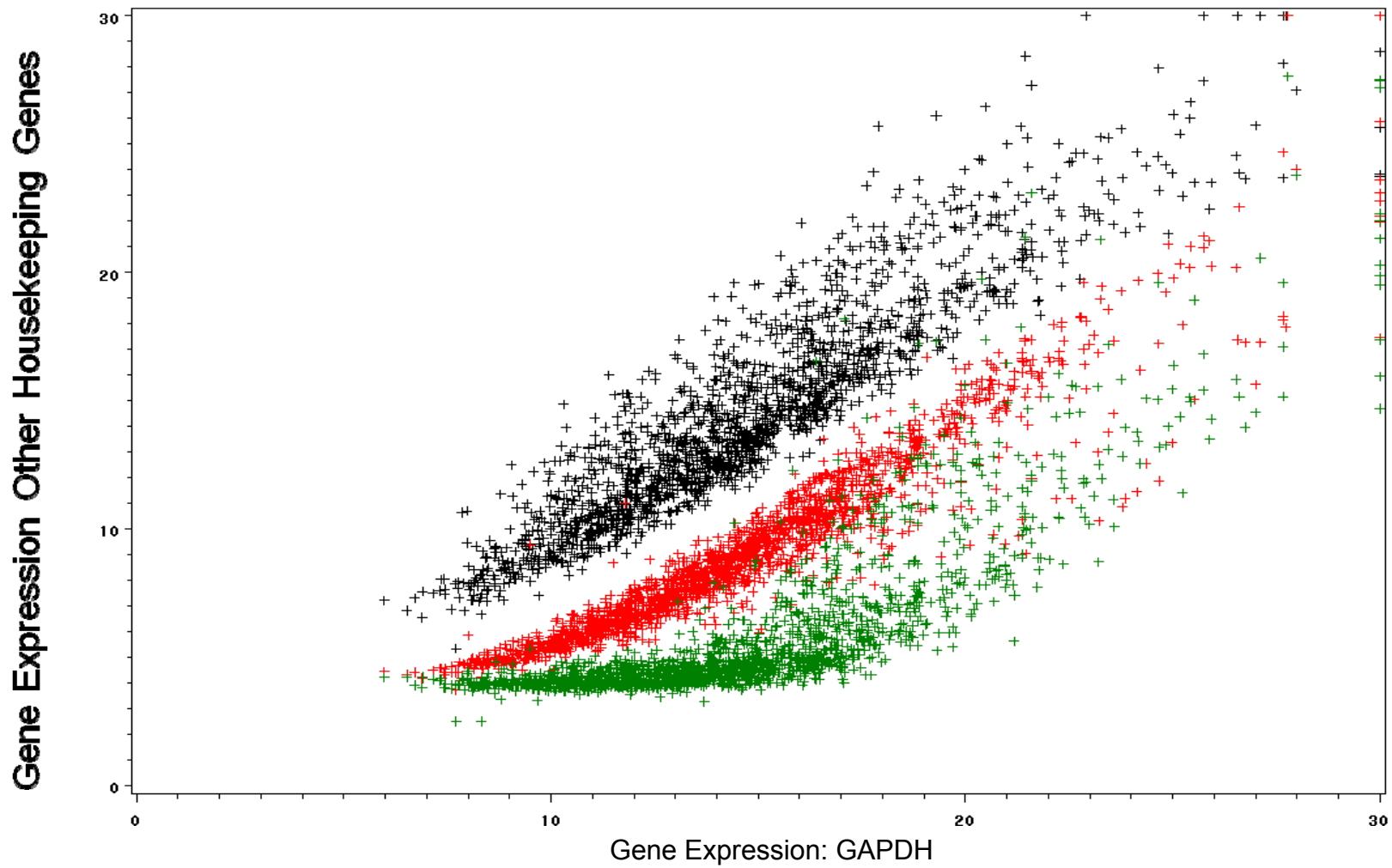
Supplemental Figure 1. Housekeeping Gene Expression. Platelet (Supplemental Figure 1a) and leukocyte (Supplemental Figure 1b). RNA expression from four reference genes were measured; beta actin (*ACTB*; black), beta-2-microglobulin (*B2M*; red), and eukaryotic ribosomal protein 18S (*18S*; green) were plotted against glyceraldehyde-3-phosphate dehydrogenase (*GAPDH*).

Supplemental Figure 2. Age and Difference in Mean Gene Expression in Isolated Circulating Cells. Platelet (Supplemental Figure 2a) and leukocyte (Supplemental Figure 2b) The blue line (open circle) represents the difference in predicted delta CT values between 60-69 age group and youngest age group. The red line (closed circle) is the difference in predicted delta CT values between the 70+ age group and youngest age group. Delta CT is gene-specific CT – housekeeping CT.

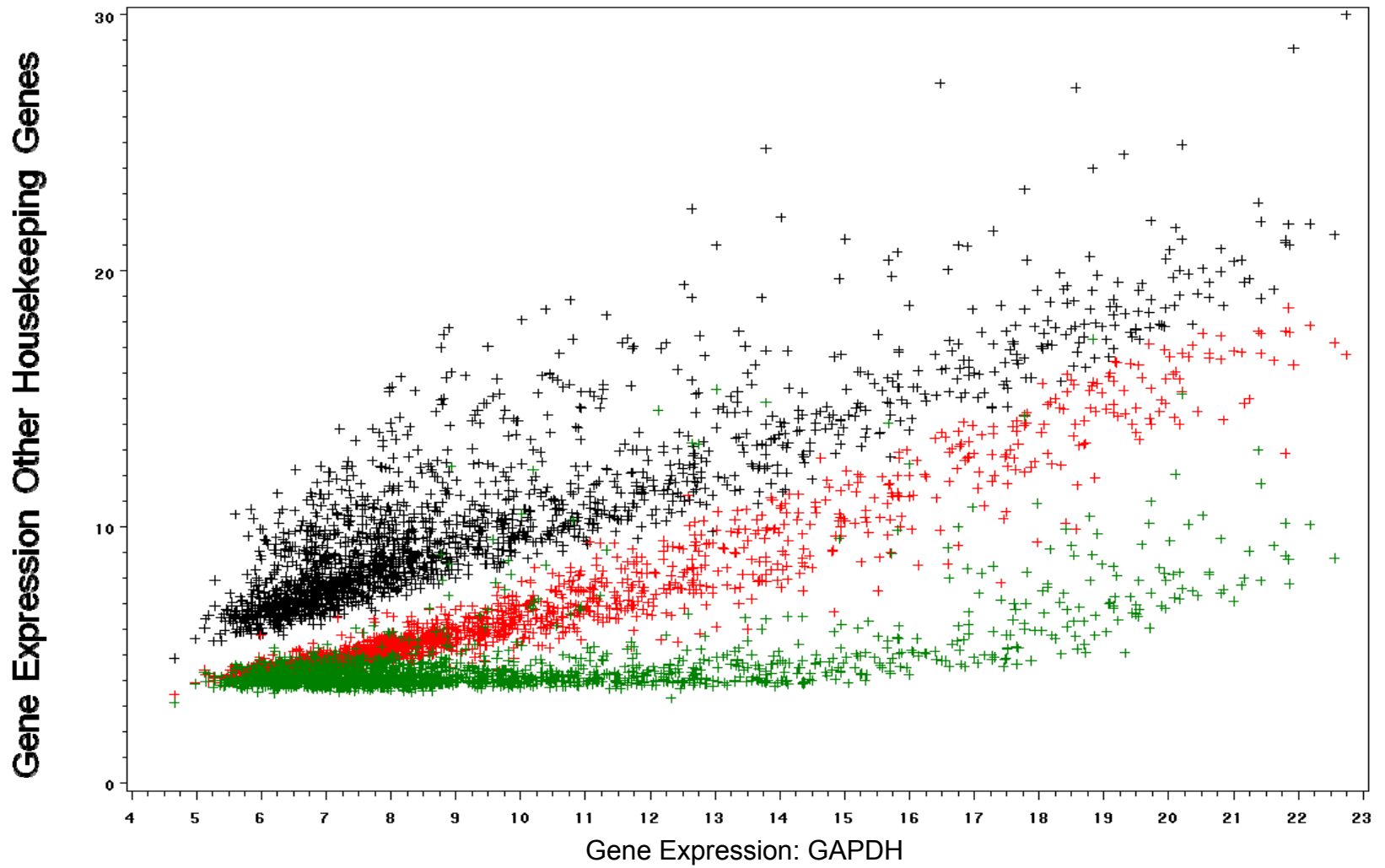
Supplemental Figure 3. Sex and Difference in Mean Gene Expression in Isolated Circulating Cells. Platelet (Supplemental Figure 3a) and leukocyte (Supplemental Figure 3b). The line represents difference in predicted delta CT values of male to female. Delta CT is gene-specific CT – housekeeping CT.

Supplemental Figure 4. Waist Circumference and Difference in Mean Gene Expression in Isolated Circulating Cells. Platelet (Supplemental Figure 4a) and leukocyte (Supplemental Figure 4b).

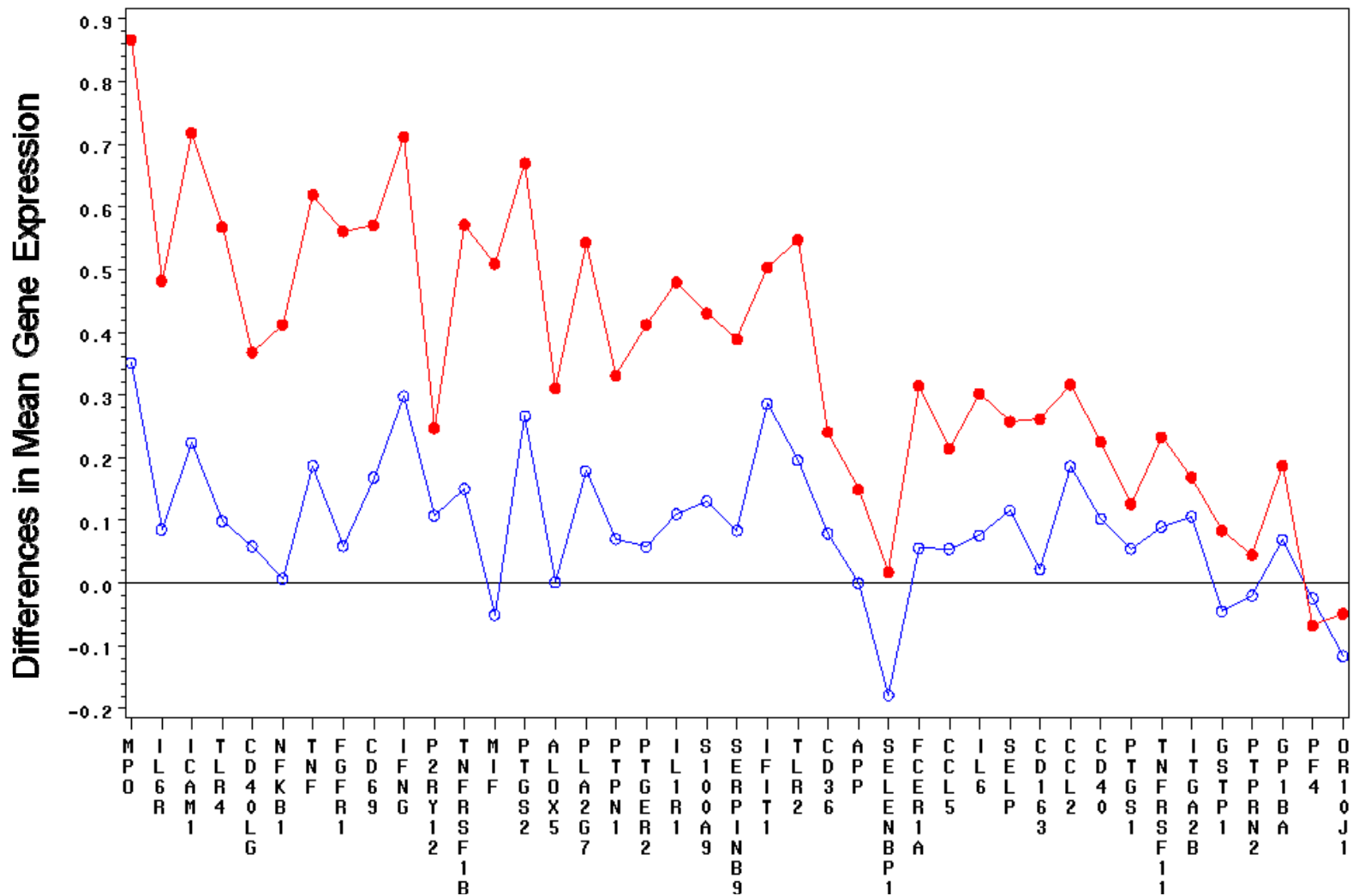
Supplemental Figure 5. Coronary Disease and Difference in Mean Gene Expression in Isolated Circulating Cells. Platelet (Figure 5a) and leukocyte (Figure 5b). The line is least squares mean of delta CT values of those with coronary disease compared to those with no coronary disease. Delta CT is gene-specific CT – housekeeping CT.



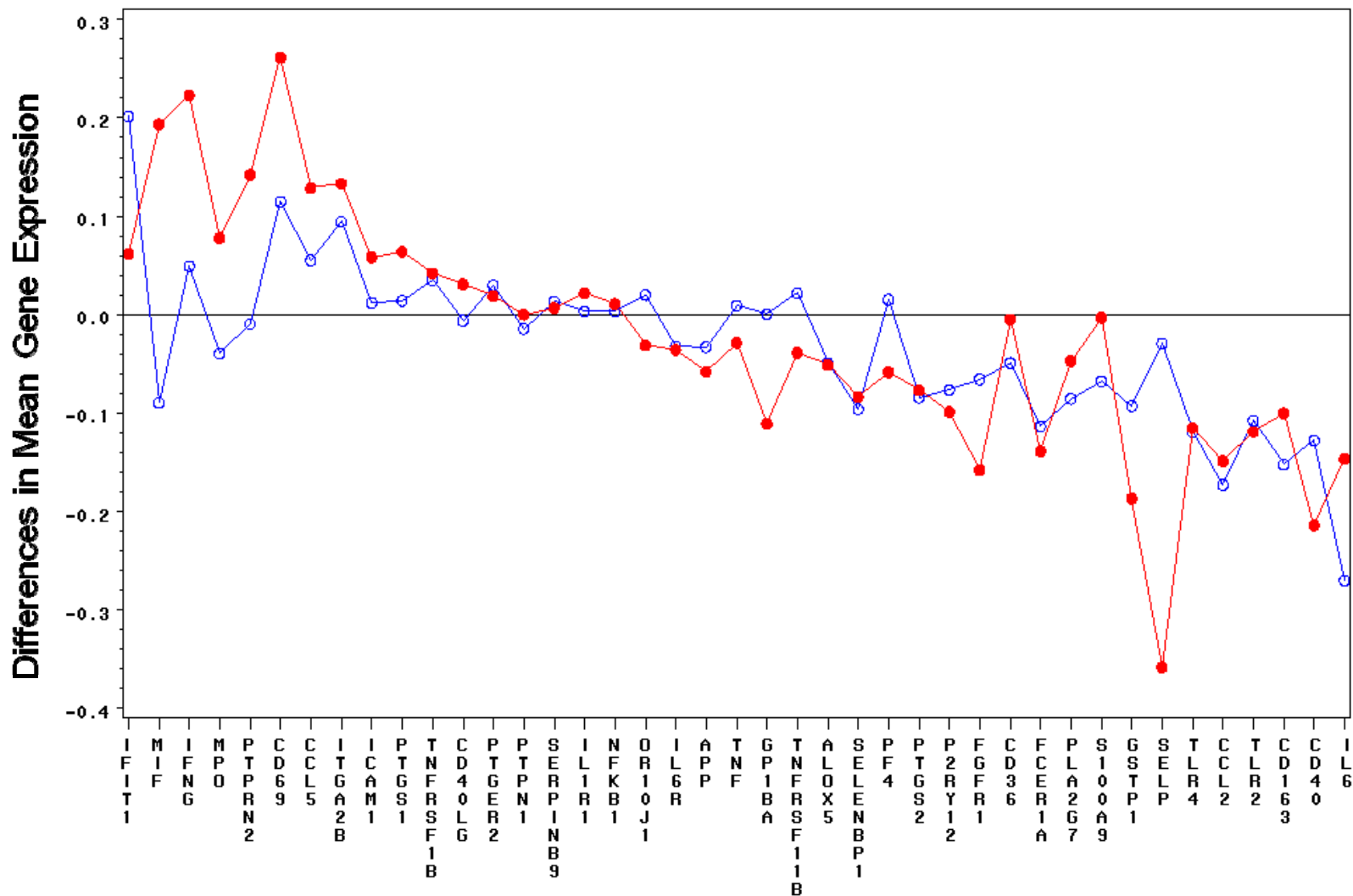
Supplemental Figure 1a: Platelet Housekeeping Gene Expression



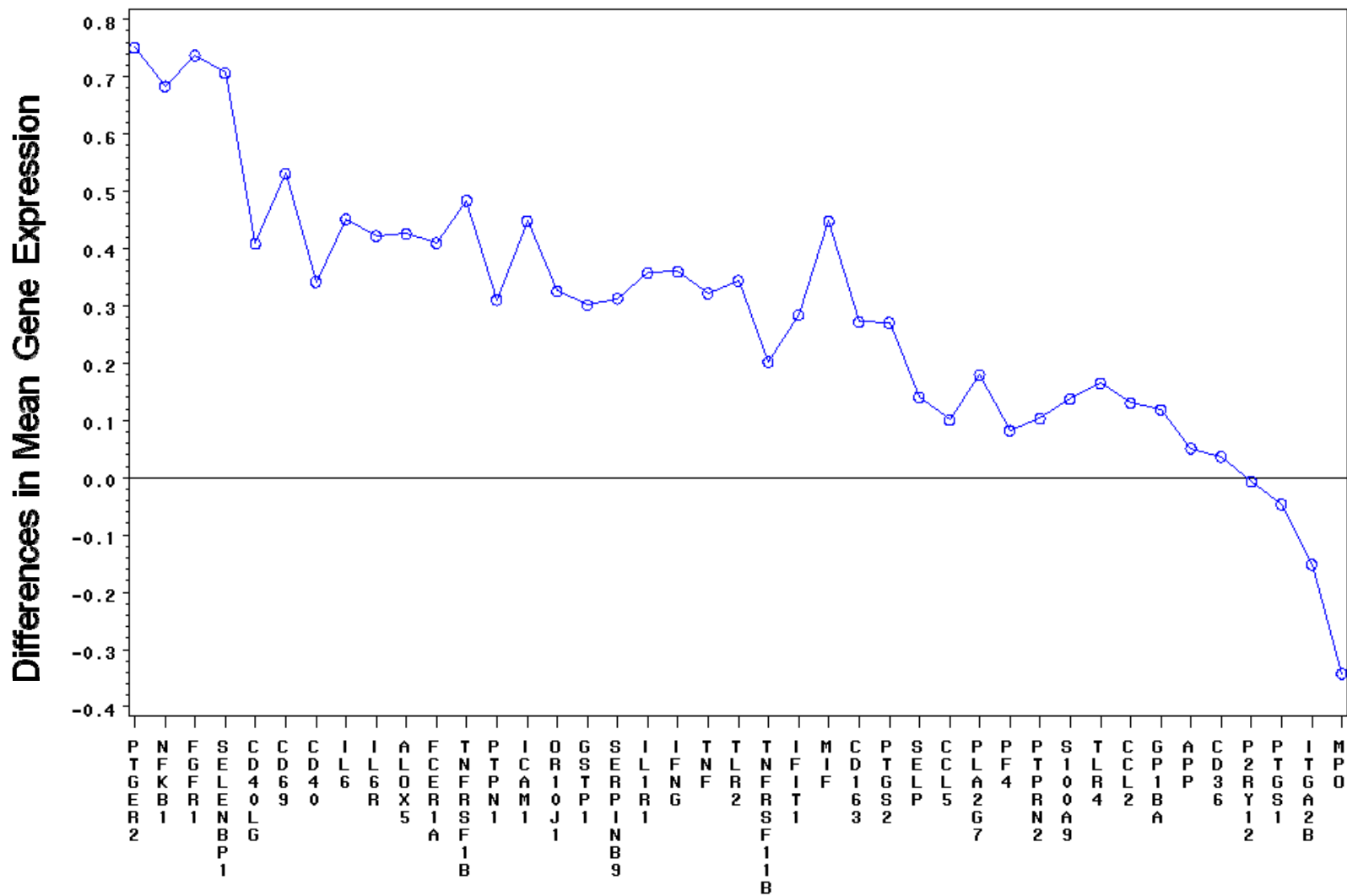
Supplemental Figure 1b: Leukocyte Housekeeping Gene Expression



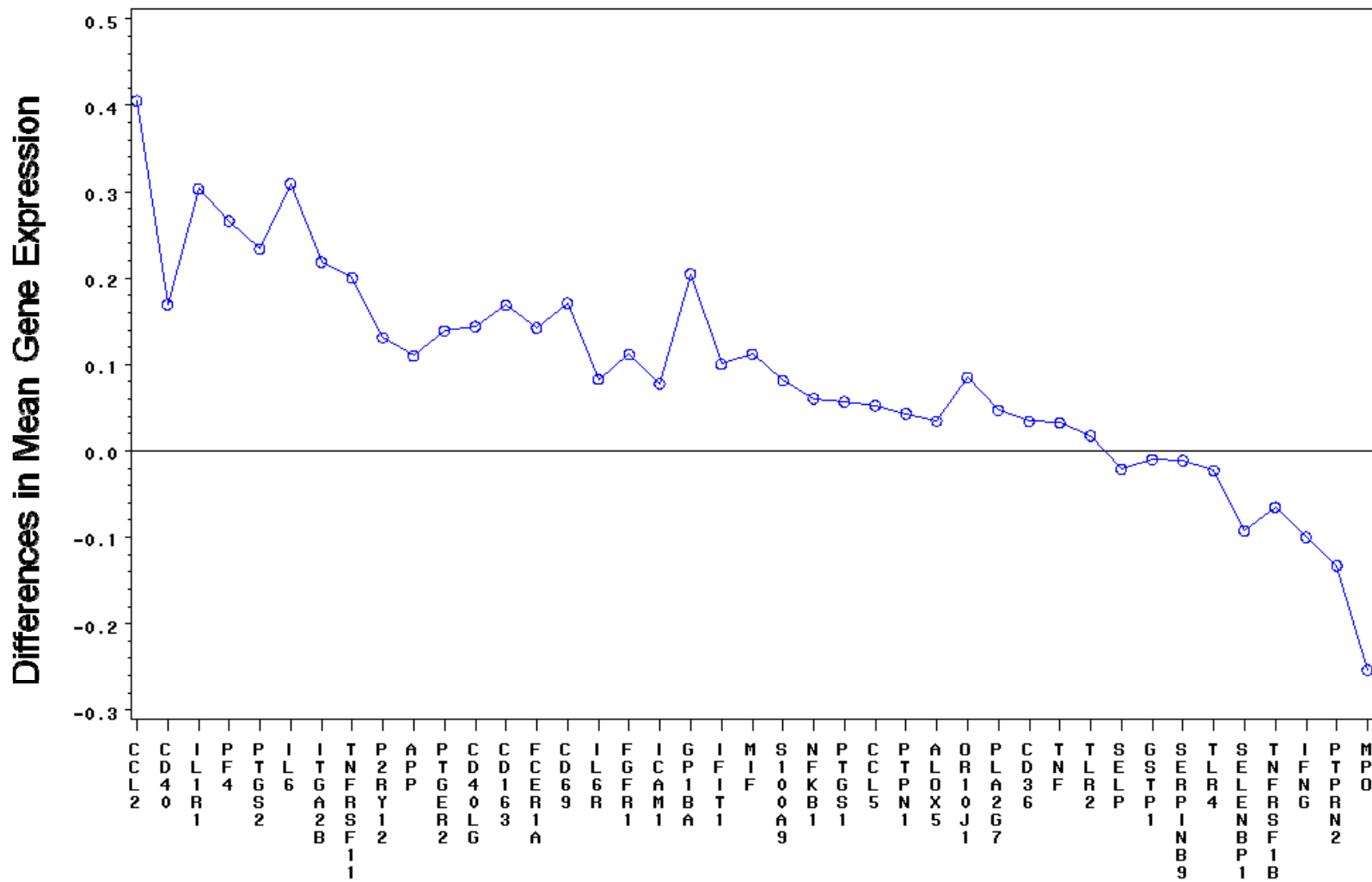
Supplemental Figure 2a: Platelets, Age, and Differences in Mean Gene Expression



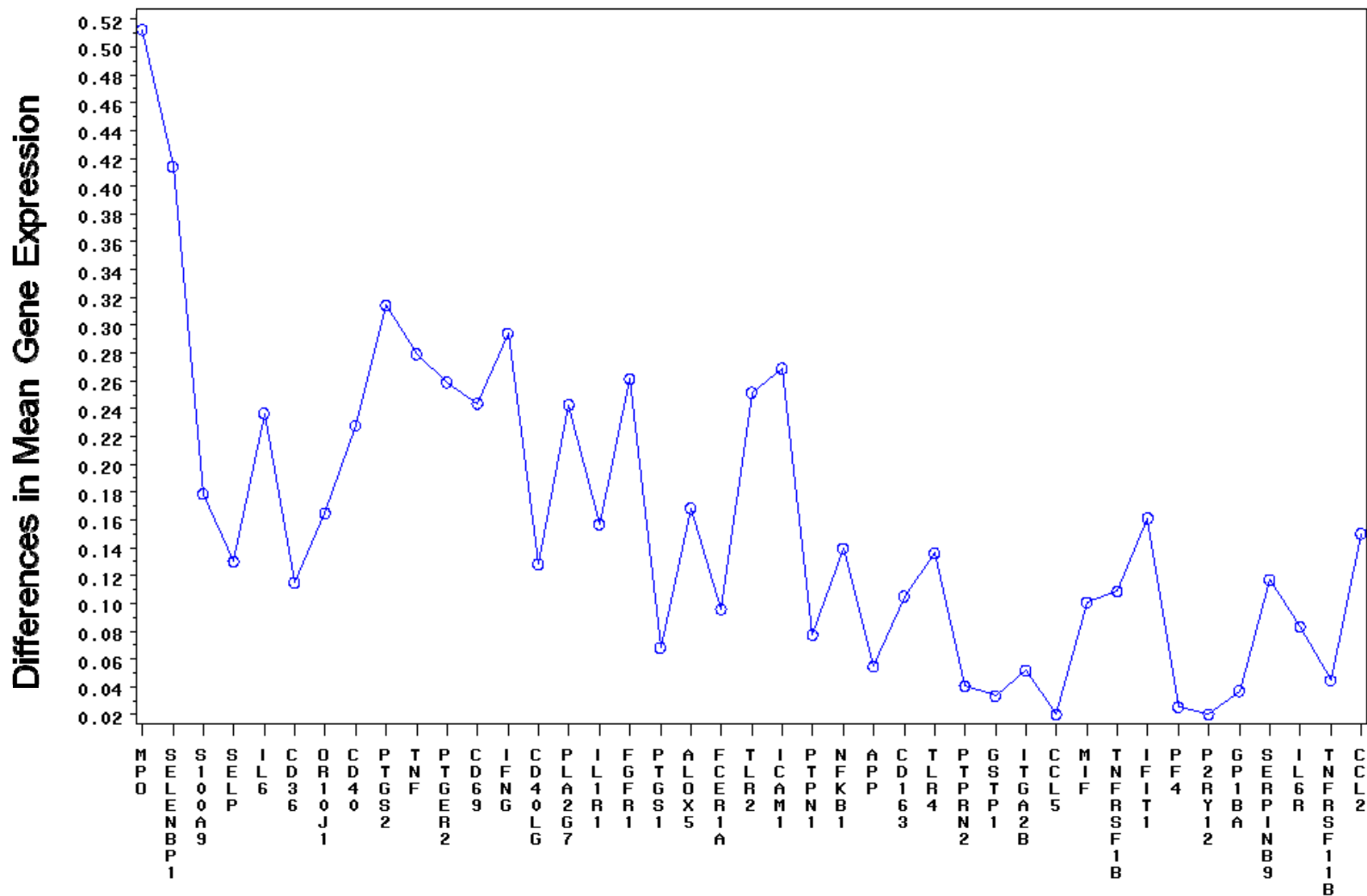
Supplemental Figure 2b: Leukocytes, Age, and Differences in Mean Gene Expression



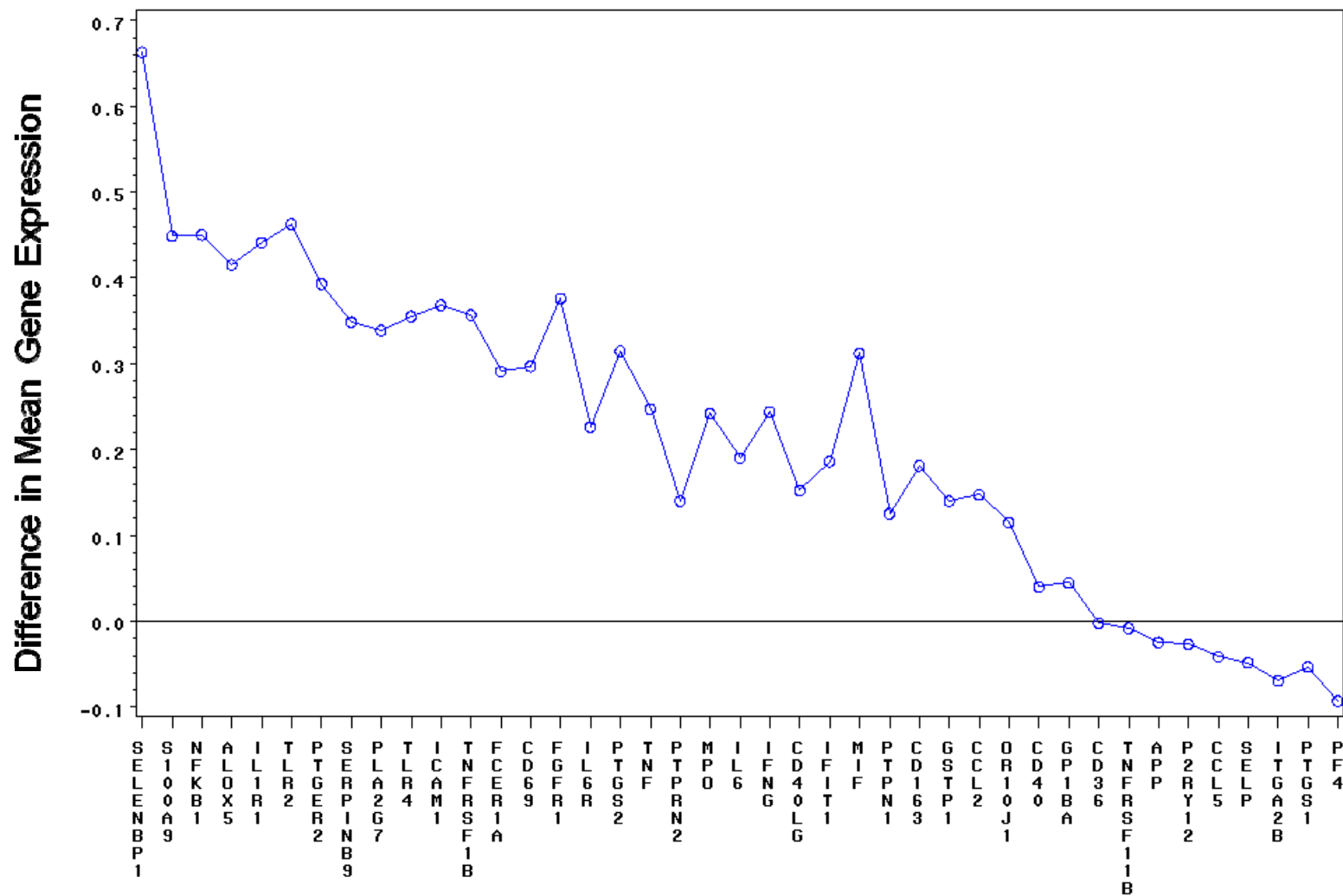
Supplemental Figure 3a: Platelets, Sex, and Differences in Mean Gene Expression



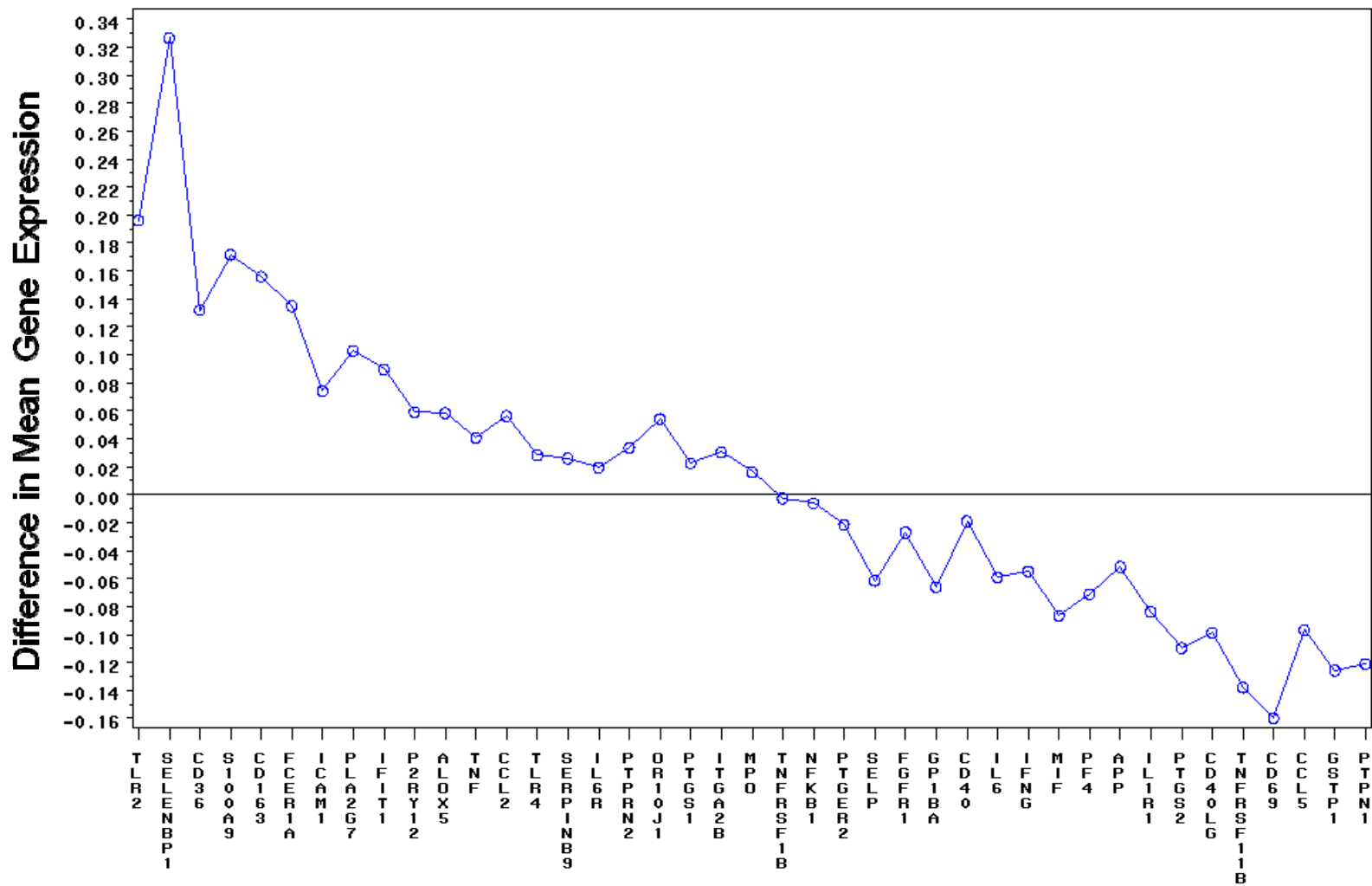
Supplemental Figure 3b: Leukocytes, Sex, and Differences in Mean Gene Expression



Supplemental Figure 4a: Platelets, Waist, and Differences in Mean Gene Expression



Supplemental Figure 5a: Platelets, CHD, and Difference in Mean Gene Expression



Supplemental Figure 5b: Leukocytes, CHD, and Difference in Mean Gene Expression