Appendix 4. Differentially regulated genes in mouse retina between NCD, HFD and bilberries (BB) in either diet to NCD after 12 weeks (n=131, F-test, p<0.01).

#	Symbol	HFD	HFD+BB	NCD+BB	Name	Entrez_ID
1	Crybb2	3.16	1.16	0.94	crystallin, beta B2	12961
2	Crygs	3.08	1.16	0.72	crystallin, gamma S	12970
3	Cryba2	3.03	0.90	0.70	crystallin, beta A2	12958
4	Cryba1	2.96	0.83	0.74	crystallin, beta A1	12957
5	Cryba4	2.05	0.35	0.25	crystallin, beta A4	12959
6	Cryba1	2.53	0.76	0.68	crystallin, beta A1	12957
7	Myl1	-1.19	-1.20	-1.06	myosin, light polypeptide 1	17901
8	Cryaa	1.74	0.45	0.00	crystallin, alpha A	12954
9	Egr1	-0.77	-0.56	0.40	early growth response 1	13653
10	Usp9y	-0.03	-0.09	0.96	ubiquitin specific peptidase 9, Y chromosome	107868
11	Gpnmb	-0.35	0.09	-0.88	glycoprotein (transmembrane) nmb	93695
12	Actb	0.20	0.54	0.59	actin, beta	11461
13	Dct	-0.39	0.15	-0.92	dopachrome tautomerase	13190
14	Atp2a1	-1.04	-0.87	-0.76	ATPase, Ca++ transporting, cardiac muscle, fast twitch 1	11937
15	Mip	0.56	-0.29	-0.19	major intrinsic protein of eye lens fiber	17339
16	Crybb1	0.77	0.10	0.12	crystallin, beta B1	12960
17	Dusp8	0.07	-0.46	-0.46	dual specificity phosphatase 8	18218
18	Crybb3	0.86	0.10	0.03	crystallin, beta B3	12962
19	Crygb	0.82	0.20	0.00	crystallin, gamma B	12965
20	Stfa1	0.04	-0.64	0.25	stefin A1	20861
21	Eif4ebp2	0.24	-0.38	-0.35	eukaryotic translation initiation factor 4E binding protein 2	13688
22	Kif1b	0.45	0.65	0.62	kinesin family member 1B	16561
23	Tyrp1	-0.43	0.08	-0.88	tyrosinase-related protein 1	22178
24	Zbtb7a	0.17	0.65	0.85	zinc finger and BTB domain containing 7a	16969
25	Aldh3a1	-0.03	-0.76	0.09	aldehyde dehydrogenase family 3, subfamily A1	11670
26	Fam123a	0.03	0.40	0.46	family with sequence similarity 123, member A	72125
27	Atp6v0a1	0.31	-0.18	-0.14	ATPase, H+ transporting, lysosomal V0 subunit A1	11975
28	Crygc	0.64	0.20	0.13	crystallin, gamma C	12966
29	Cyp2f2	-0.62	-0.39	-0.36	cytochrome P450, family 2, subfamily f, polypeptide 2	13107
30	Rorb	0.36	-0.14	0.44	RAR-related orphan receptor beta	225998
31	Bsg	0.38	-0.15	0.22	basigin	12215
32	Zfp597	0.38	0.28	-0.06	zinc finger protein 597	71063
33	Diras2	-0.24	-0.36	-0.63	DIRAS family, GTP-binding RAS-like 2	68203
34	Rogdi	0.47	-0.11	0.06	rogdi homolog *Drosophila*	66049
35	Ddhd1	0.03	-0.42	-0.33	DDHD domain containing 1	114874
36	Tubb2b	0.03	0.00	0.25	tubulin, beta 2B	73710
37	Lhx4	0.24	0.68	0.23	LIM homeobox protein 4	16872
38	Sema6d	-0.13	0.63	-0.08	sema domain, transmembrane domain (TM)	214968
39	Tnni2	-0.58	-0.74	-0.74	troponin I, skeletal, fast 2	21953
40	Psme3	0.17	-0.24	-0.35	proteaseome (prosome, macropain) 28 subunit, 3	19192
41	Lbh	0.18	-0.29	-0.35	limb-bud and heart	77889
42	Rtn1	0.50	0.17	0.02	reticulon 1	104001

#	Symbol	HFD	HFD+BB	NCD+BB	Name	Entrez_ID
43	Lbh	0.31	-0.40	-0.07	limb-bud and heart	77889
44	Serbp1	0.48	0.67	0.34	serpine1 mRNA binding protein 1	66870
45	Trpc1	-0.02	0.30	0.75	transient receptor potential cation channel, subfamily C, m1	22063
46	Lypd2	0.21	-0.38	0.26	Ly6/Plaur domain containing 2	68311
47	Olfr1443	0.36	0.46	-0.08	olfactory receptor 1443	258693
48	Ndufc1	0.41	0.03	0.23	NADH dehydrogenase (ubiquinone) 1, subcomplex unknown	66377
49	Prr13	-0.08	0.26	0.38	proline rich 13	66151
50	Reep6	0.51	0.23	0.23	receptor accessory protein 6	70335
51	Mbd1	0.21	-0.27	-0.22	methyl-CpG binding domain protein 1	17190
52	Furin	-0.05	-0.48	-0.27	furin (paired basic amino acid cleaving enzyme)	18550
53	Emp1	0.12	-0.28	0.35	epithelial membrane protein 1	13730
54	Zmynd8	0.05	-0.48	-0.42	zinc finger, MYND-type containing 8	228880
55	Cryab	0.83	0.52	0.09	crystallin, alpha B	12955
56	Cux2	0.17	-0.22	-0.32	cut-like homeobox 2	13048
57	Ube3b	-0.51	-0.43	-0.29	ubiquitin protein ligase E3B	117146
58	4930572J05Rik	0.33	-0.09	-0.30	RIKEN cDNA 4930572J05 gene	223626
59	Stk39	0.05	-0.42	-0.34	serine/threonine kinase 39, STE20/SPS1 homolog *yeast*	53416
60	Tcfap2b	0.23	0.39	0.47	transcription factor AP-2 beta	21419
61	Zfpm2	-0.39	-0.52	-0.59	zinc finger protein, multitype 2	22762
62	Gabrg2	0.21	-0.38	-0.22	gamma-aminobutyric acid (GABA) A receptor, gamma 2	14406
63	Nfic	0.33	-0.30	-0.04	nuclear factor I/C	18029
64	Dram2	0.22	0.17	0.61	VDNA-damage regulated autophagy modulator 2	67171
65	Pik3cd	0.65	0.31	0.23	phosphatidylinositol 3-kinase catalytic delta polypeptide	18707
66	Gpr172b	-0.33	0.27	0.03	G protein-coupled receptor 172B	52710
67	Man2a2	0.35	0.57	0.53	mannosidase 2, alpha 2	140481
68	Bnip2	-0.15	0.16	-0.48	BCL2/adenovirus E1B interacting protein 2	12175
69	Crygd	0.55	0.03	0.16	crystallin, gamma D	12967
70	Sox5	0.25	0.65	0.17	SRY-box containing gene 5	20678
71	B3gat1	0.10	-0.40	-0.25	beta-1,3-glucuronyltransferase 1 (glucuronosyltransferase P)	76898
72	Dcn	-0.38	-0.46	-0.60	decorin	13179
73	Dnajb1	-0.11	0.41	0.13	DnaJ (Hsp40) homolog, subfamily B, member 1	81489
74	Esrrb	0.16	-0.25	0.17	estrogen related receptor, beta	26380
75	Guca1a	0.16	0.11	0.42	guanylate cyclase activator 1a (retina)	14913
76	Acta2	-0.09	-0.16	-0.49	actin, alpha 2, smooth muscle, aorta	11475
77	Gm382	0.06	0.10	0.43	predicted gene 382	211208
78	Sun1	-0.25	0.28	0.33	Sad1 and UNC84 domain containing 1	77053
79	Gng13	0.18	-0.20	0.09	guanine nucleotide binding protein (G protein), gamma 13	64337
80	Sel1l2	0.05	0.63	0.03	sel-1 suppressor of lin-12-like 2 *C. elegans*	228684
81	Dusp1	-0.36	-0.07	0.19	dual specificity phosphatase 1	19252
82	Sgk3	0.11	0.23	0.55	serum/glucocorticoid regulated kinase 3	170755
83	Treml4	-0.10	0.11	0.36	triggering receptor expressed on myeloid cells-like 4	224840
84	Nptn	-0.23	-0.18	-0.48	neuroplastin	20320
85	Krt14	-0.39	-0.50	-0.20	keratin 14	16664
86	Lmo4	0.04	-0.03	-0.46	LIM domain only 4	16911
87	Golga2	0.52	0.15	0.30	golgi autoantigen, golgin subfamily a, 2	99412

#	Symbol	HFD	HFD+BB	NCD+BB	Name	Entrez_ID
88	Serinc1	0.38	0.02	-0.03	serine incorporator 1	56442
89	Tmem214	0.31	-0.23	-0.26	transmembrane protein 214	68796
90	Insig2	0.47	0.38	0.48	insulin induced gene 2	72999
91	Dok2	0.00	0.04	0.59	docking protein 2	13449
92	Irf1	-0.05	0.47	0.08	interferon regulatory factor 1	16362
93	Nccrp1	0.47	-0.08	0.07	non-specific cytotoxic cell receptor prot 1 homolog (zebrafish)	233038
94	Nfyc	0.08	0.17	-0.22	nuclear transcription factor-Y gamma	18046
95	Pdc	0.03	-0.13	0.31	phosducin	20028
96	Stk35	0.50	0.19	0.46	serine/threonine kinase 35	67333
97	Zdhhc14	-0.05	-0.37	-0.42	zinc finger, DHHC domain containing 14	224454
98	Tmc6	-0.14	0.59	-0.06	transmembrane channel-like gene family 6	217353
99	4930503L19Rik	0.53	-0.04	-0.08	RIKEN cDNA 4930503L19 gene	269033
100	Efnb1	-0.15	-0.06	0.37	ephrin B1	13641
101	Lca5	0.53	0.64	0.64	Leber congenital amaurosis 5 (human)	75782
102	Nap1l3	-0.13	0.61	0.38	nucleosome assembly protein 1-like 3	54561
103	1810030N24Rik	0.00	-0.45	-0.15	RIKEN cDNA 1810030N24 gene	66291
104	Ckap5	0.37	0.17	0.39	cytoskeleton associated protein 5	75786
105	Pyy	0.17	0.05	0.48	peptide YY	217212
106	Fos	-0.05	0.16	0.50	FBJ osteosarcoma oncogene	14281
107	Sel1l3	0.06	-0.23	-0.52	sel-1 suppressor of lin-12-like 3 *C. elegans*	231238
108	Zmat4	0.01	-0.48	-0.19	zinc finger, matrin type 4	320158
109	Cisd1	-0.14	0.11	0.37	CDGSH iron sulfur domain 1	52637
110	Nxt2	0.22	-0.25	-0.06	nuclear transport factor 2-like export factor 2	237082
111	Slc6a11	0.12	-0.30	-0.34	solute carrier family 6 (GABA), member 11	243616
112	Ralgapb	-0.04	-0.12	-0.42	Ral GTPase activating protein, beta subunit (non-catalytic)	228850
113	Rorb	-0.01	-0.26	0.35	RAR-related orphan receptor beta	225998
114	Gnb5	0.23	-0.08	-0.13	guanine nucleotide binding protein (G protein), beta 5	14697
115	Camk1g	-0.15	0.08	0.34	calcium/calmodulin-dependent protein kinase I gamma	215303
116	Ppp3cc	-0.17	-0.48	-0.24	protein phosphatase 3, catalytic subunit, gamma isoform	19057
117	Wnk1	0.13	-0.04	0.54	WNK lysine deficient protein kinase 1	232341
118	Mllt3	0.18	0.20	0.52	myeloid/lymphoid or mixed-lineage leukemia *Drosophila*	70122
119	Scaper	0.34	0.23	0.57	S phase cyclin A-associated protein in the ER	244891
120	Rbm16	0.34	0.61	0.51	RNA binding motif protein 16	106583
121	Apol7c	-0.04	0.16	0.50	apolipoprotein L 7c	108956
122	Exog	-0.20	0.39	0.31	endo/exonuclease (5'-3'), endonuclease G-like	208194
123	Csmd1	0.08	0.71	0.38	CUB and Sushi multiple domains 1	94109
124	Ptgr1	0.75	-0.09	0.25	prostaglandin reductase 1	67103
125	Lgals3bp	0.09	-0.43	-0.19	lectin, galactoside-binding, soluble, 3 binding protein	19039
126	Hist1h2ah	0.02	0.43	0.21	histone cluster 1, H2ah	319168
127	Armc9	-0.44	-0.38	-0.73	armadillo repeat containing 9	78795
128	Igj	-0.15	0.33	-0.09	immunoglobulin joining chain	16069
129	Slc4a1	0.04	-0.53	-0.27	solute carrier family 4 (anion exchanger), member 1	20533
130	Ube2z	0.50	-0.15	-0.43	ubiquitin-conjugating enzyme E2Z (putative)	268470
131	Vstm2a	0.21	-0.08	-0.34	V-set and transmembrane domain containing 2A	211739