

## Appendix 9 HJ-Biplot contributions greater than 0.70

### Appendix 9.1 – HJ-Biplot column contributions for gene expression in breast cancer.

Gene	Dim 1	Dim 2
CPA1	68.28	10.24
DPP6	77.14	10.51
HPSE2	79.34	0.01
KCNJ16	80.02	16.87
LRRC3B	78.8	0

### Appendix 9.2 – HJ-Biplot column contributions for gene expression in colorectal cancer.

Gene	Dim 1	Dim 2
AGTR1	77.71	5.03
ALK	77.55	1.78
ANKS1B	78.2	2.18
ASTN1	89.88	0.57
ATCAY	85.42	3.02
BAI3	90.31	0.33
BEST4	75.15	11.04
BEX1	86.02	0.45
BMP3	80.98	3.61
C2orf40	90.12	0.75
C6orf186	83.54	2.11
CADM2	93.16	0.11
CADM3	91.1	0.24
CALY	69.61	0.55
CD300LG	78.53	0.72
CDH19	90.69	0.74
CMA1	83.82	0.16
CNGA3	83.86	1.75
CNTFR	75.91	10.36
CNTN1	81.51	0.56
CNTN2	85.67	1.81
CPEB1	87.44	1.06
CTNNA3	69.68	3.37
CTNND2	84.53	0.25
DIRC3	70.82	0.14
DNER	76.62	1.3
DPP6	80.74	3.95
ELANE	82.54	3.26
ELAVL3	80.79	4.65
ELAVL4	74.72	1.43
ENPP6	79.14	8.99

<b>FAM135B</b>	82.24	9.66
<b>GFRA3</b>	73.26	4.1
<b>GPM6A</b>	83.72	5.1
<b>GRIA3</b>	69.33	3.69
<b>GRIN2A</b>	81.41	0
<b>HPSE2</b>	76.6	3.95
<b>IGSF11</b>	72.38	0.45
<b>INA</b>	79.28	2.07
<b>KIAA2022</b>	88.56	0.01
<b>KIF1A</b>	83.04	3.69
<b>LHFPL4</b>	73.76	7.86
<b>LOC284276</b>	76.47	0.06
<b>LONRF2</b>	80.23	11
<b>LRRC3B</b>	75.28	1.42
<b>MGAT4C</b>	84.43	0.02
<b>MYOT</b>	84.67	0
<b>NEFL</b>	86.55	2.99
<b>NEFM</b>	80.06	5.94
<b>NLGN1</b>	85.75	1.24
<b>NPY</b>	78.45	4.69
<b>NPY2R</b>	78.6	3.62
<b>NRXN1</b>	93.41	1.5
<b>PCDH10</b>	86.33	2.92
<b>PCSK2</b>	95.38	0.26
<b>PHOX2B</b>	94.52	1.41
<b>PLCXD3</b>	72.07	2.05
<b>PLP1</b>	95.04	0.15
<b>PRIMA1</b>	89.73	2.01
<b>PRPH</b>	89.34	1.1
<b>PTPRZ1</b>	87.99	3.57
<b>RASGEF1C</b>	82.68	0.42
<b>RIC3</b>	78.91	2.55
<b>RIMS4</b>	74.17	2.9
<b>RSPO2</b>	86.14	0.5
<b>SCG3</b>	81.1	1.04
<b>SEMA3E</b>	87.01	0.63
<b>SGCG</b>	83.51	0.48
<b>SLC27A6</b>	79.52	2.11
<b>SLC30A10</b>	66.69	21.05
<b>SLC5A7</b>	83.97	2.28
<b>SLC6A15</b>	85.84	1.95
<b>SLC7A14</b>	90.77	2.17
<b>SLITRK2</b>	75.26	0.64
<b>SORCS1</b>	88.04	2.36
<b>SPOCK3</b>	74.18	1.9
<b>SST</b>	81.24	4.37
<b>ST8SIA3</b>	83.02	3.35

<b>SYT10</b>	75.03	2.25
<b>SYT4</b>	87.31	1.6
<b>SYT9</b>	80.83	2.38
<b>TMEFF2</b>	84.22	2.37
<b>VSTM2A</b>	76.65	13.43
<b>XKR4</b>	88.14	0.05

**Appendix 9.3 – HJ-Biplot column contributions for gene expression in head and neck cancer.**

<b>Gene</b>	<b>Dim 1</b>	<b>Dim 2</b>
<b>ADH1B</b>	85.44	9.89
<b>BMP3</b>	76.21	0.1
<b>FOXI2</b>	74.22	0.09
<b>GRIK3</b>	77.14	0.82
<b>LHFPL1</b>	73.22	0.91
<b>RBP4</b>	82.61	3.81
<b>WIF1</b>	74.87	21.11

**Appendix 9.4 – HJ-Biplot column contributions for gene expression in kidney cancer.**

<b>Gene</b>	<b>Dim 1</b>	<b>Dim 2</b>
<b>ADH1C</b>	82.68	2.59
<b>AQP2</b>	83.21	3.79
<b>BSND</b>	92.03	3.24
<b>C20orf151</b>	84.4	0.36
<b>CA10</b>	85.93	0.68
<b>CA9</b>	67.73	7.05
<b>CLCNKA</b>	86.15	2.06
<b>CLDN8</b>	91.16	2.74
<b>EHF</b>	80.44	6.41
<b>ELF5</b>	81.7	4.69
<b>EMID2</b>	76.89	1.68
<b>EPN3</b>	87.55	0.25
<b>ESRP1</b>	71.29	9.85
<b>ESRRB</b>	85.47	3.67
<b>FAM184B</b>	76.09	8.16
<b>FLJ42875</b>	88	1.63
<b>FOXI1</b>	84.29	5.94
<b>FXYD4</b>	87.36	3.91
<b>GABRA2</b>	78.14	7.29
<b>GGT6</b>	81.55	1.94
<b>GPR110</b>	84.86	5.21
<b>GRHL2</b>	87.18	5.98
<b>HEPACAM2</b>	83.19	6.79

<b>IRX1</b>	74.3	0.81
<b>KCNE1</b>	74.8	0.2
<b>KCNJ1</b>	83.65	3.76
<b>LOC100131551</b>	69.68	4.51
<b>LSAMP</b>	70.5	1.98
<b>LYPD6B</b>	79.62	1.38
<b>MAPK4</b>	70.83	3.06
<b>MYO3B</b>	73.83	4.85
<b>NAT8L</b>	86.14	0
<b>NR0B2</b>	82.5	7.3
<b>OVCH2</b>	81.36	1.06
<b>OVOL2</b>	73.89	11.76
<b>PLA2G4F</b>	92.02	0.5
<b>PRSS22</b>	80.92	7.32
<b>PVT1</b>	70.15	4.04
<b>RAB25</b>	79.38	8.21
<b>RANBP3L</b>	79.2	1.81
<b>ROS1</b>	75.29	0.29
<b>SIAH3</b>	71.1	2.95
<b>TFAP2B</b>	87.41	4.99
<b>TMEM61</b>	82.66	4.16
<b>TMPRSS4</b>	77.91	8.27
<b>TRPV6</b>	90.5	0.04
<b>VGLL1</b>	82.18	1.32

**Appendix 9.5 – HJ-Biplot column contributions for gene expression in kidney cancer.**

<b>Gene</b>	<b>Dim 1</b>	<b>Dim 2</b>
<b>ADH1C</b>	76.68	0.44
<b>AQP2</b>	88.2	0.51
<b>BMP5</b>	69.25	1
<b>BSND</b>	93.07	0.03
<b>C16orf11</b>	94.38	0.27
<b>CAMK2A</b>	72.29	10.99
<b>CGA</b>	75.19	4.63
<b>CLDN8</b>	90.12	1.69
<b>CPNE6</b>	69.5	19.34
<b>F11</b>	70.69	4.46
<b>FXVD4</b>	92.12	3.78
<b>HRG</b>	80.34	5
<b>KCNJ1</b>	86.75	2.73
<b>NR0B2</b>	84.61	1.86
<b>NXPH2</b>	73.38	11.27
<b>PLA2G3</b>	76.04	0.31
<b>PRDM16</b>	87.71	0.72
<b>RASL11B</b>	75.62	0.45

<b>SLC4A9</b>	82.51	7.79
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**Appendix 9.6 – HJ-Biplot column contributions for gene expression in liver cancer.**

<b>Gene</b>	<b>Dim 1</b>	<b>Dim 2</b>
<b>BMP10</b>	83.79	0.23
<b>BMPER</b>	91.59	0.33
<b>CCBE1</b>	79.42	10.68
<b>CHRM2</b>	77.3	1.87
<b>CLEC1B</b>	96.17	0.96
<b>CLEC4G</b>	93.85	2.79
<b>CLEC4M</b>	94.43	3.08
<b>COL6A6</b>	76.25	0.8
<b>GDF2</b>	96	0
<b>HHIP</b>	77.79	15.75
<b>NDST3</b>	83.71	0.54
<b>NUDT10</b>	81.57	0.17
<b>STAB2</b>	94.09	0.14

**Appendix 9.7 – HJ-Biplot column contributions for gene expression in lung cancer.**

<b>Gene</b>	<b>Dim 1</b>	<b>Dim 2</b>
<b>ADCY8</b>	72.79	15.08
<b>AGBL1</b>	64.24	0.75
<b>CD300LG</b>	82.6	15.37
<b>CHRM2</b>	65.06	0.86
<b>KCNA4</b>	69.63	1.21
<b>OVCH1</b>	65.97	2.33
<b>ST8SIA6</b>	68.74	0.08

**Appendix 9.8 – HJ-Biplot column contributions for gene expression in thyroid cancer.**

<b>Gene</b>	<b>Dim 1</b>	<b>Dim 2</b>	<b>Dim 3</b>
<b>CSF2</b>	79.61	0.72	1.65
<b>ESPN</b>	77.1	14.96	2.27
<b>FAM178B</b>	76.06	6.52	0.73
<b>KRT15</b>	83.44	0.37	0.01
<b>LIPH</b>	83.15	0.09	16.1
<b>MUC21</b>	81.66	15.16	2.48

**Appendix 9.9 – HJ-Biplot column contributions for DNA methylation in breast cancer.**

<b>cg</b>	<b>Dim 1</b>	<b>Dim 2</b>
cg00017489	68.77	14.03
cg01181150	86.4	2.22
cg02926033	84	2.65
cg03276000	84.84	1.9
cg05989672	87.62	1.76
cg06495961	75.1	17.79
cg09134205	78.2	3.13
cg11300568	77.44	9.09
cg11310812	78.28	10.87
cg11969108	85.43	0.18
cg13016237	87.66	2.17
cg13606025	73.53	11.54
cg14523847	74.32	20.47
cg17006281	85.78	1.56
cg19161124	70.15	13.6
cg21871080	71.29	12.02
cg24073950	79.25	6.78
cg26738880	86.68	1.15
cg27032232	74.56	20.57

**Appendix 9.10 – HJ-Biplot column contributions for DNA methylation in colorectal cancer.**

<b>gene</b>	<b>Dim 1</b>	<b>Dim 2</b>
cg00017489	77.89	9.86
cg00321288	79.62	3
cg00518386	79.62	2.53
cg00596508	90.81	1.66
cg00824018	75.15	7.98
cg00945238	81.91	0
cg01050885	79.91	1.48
cg01618102	75.6	9.03
cg01645753	89.19	1.19
cg01803258	66.33	4.36
cg01808545	77.65	7.39
cg02076785	80.76	0.58
cg02492791	83.76	1.18
cg02562431	93.98	0.04
cg02671603	68.87	11.53
cg03064067	83.97	0.6
cg03169018	83.84	5.02

cg03170056	75.9	6.53
cg03226737	81.63	5.26
cg03532926	77.33	12.52
cg03609960	77.03	1.01
cg04035209	88.88	0
cg04184836	89.02	3.1
cg04774103	72.07	6.47
cg05158615	86.84	4.74
cg05401965	91.8	0.57
cg06008912	89.25	0
cg06495961	77.77	11.05
cg06668555	90.28	2.48
cg06812991	84.5	0.5
cg06838365	76.92	0.21
cg06856528	83.1	4.81
cg07020596	77.04	11.18
cg07502050	79.98	5.7
cg07642043	86.51	2.75
cg07665387	91.52	0.22
cg07769790	76.62	3.95
cg07907386	76.12	6.5
cg08050235	71.77	8.82
cg08104310	84.48	8.18
cg08383315	82.32	2.22
cg08688548	75.16	2.8
cg09044294	89.99	4.81
cg09221867	85.4	2.44
cg09239744	80.78	2.77
cg10068034	88	1.34
cg10196720	90.25	3.38
cg10259748	82.95	7.65
cg10524033	91.04	0.05
cg10623221	73.71	9.36
cg12746059	75.55	1.03
cg13096208	81.84	4.87
cg14070647	82.96	3.38
cg14146100	82.97	1.44
cg14243778	87.57	4.06
cg14304469	83.71	0.36
cg14326644	73.85	2.6
cg14449051	81.89	0.11
cg14462017	79.17	0.19
cg14510812	89.12	0.02
cg14523847	76.63	12.57
cg14625113	88.92	3.28
cg15542741	79.7	0.01
cg16043144	79.57	1.83

<b>cg16080876</b>	77.38	0.42
<b>cg16232126</b>	79.73	0.56
<b>cg16368442</b>	91.42	0
<b>cg16415058</b>	90.18	1.33
<b>cg16495212</b>	77.73	7.64
<b>cg16964348</b>	90.5	3.11
<b>cg17222500</b>	88.88	0.69
<b>cg17526573</b>	82.09	10.51
<b>cg17567560</b>	84.56	7.32
<b>cg17814335</b>	69.6	7.39
<b>cg18023283</b>	87.2	0.02
<b>cg18106668</b>	82.52	7.23
<b>cg18221862</b>	70.4	7.81
<b>cg18232816</b>	76.79	2.9
<b>cg18404308</b>	77.79	0.01
<b>cg18560328</b>	76.66	6.49
<b>cg18673954</b>	87.17	2.23
<b>cg18898125</b>	83.5	2.42
<b>cg18930994</b>	77.03	1.83
<b>cg18932798</b>	80.86	2.28
<b>cg19370054</b>	78.74	0.22
<b>cg19952303</b>	91.95	0.13
<b>cg20271517</b>	78.9	0.02
<b>cg20581321</b>	83.03	0.31
<b>cg20737185</b>	69.35	13.62
<b>cg20944283</b>	84.08	8.92
<b>cg20950932</b>	75.78	7.51
<b>cg21154627</b>	76.69	0.3
<b>cg21174746</b>	77.55	2.42
<b>cg21384402</b>	89.93	0.37
<b>cg21884231</b>	76.94	3.87
<b>cg22410478</b>	84.15	2.89
<b>cg22723056</b>	79.91	4.85
<b>cg23003534</b>	85.26	1.45
<b>cg23294090</b>	88.43	2.13
<b>cg23642747</b>	86.59	0.11
<b>cg24242823</b>	91.86	3.09
<b>cg24319381</b>	91.14	0.07
<b>cg24680586</b>	75.72	1.32
<b>cg24764979</b>	75.99	3.86
<b>cg24778248</b>	77.74	0.91
<b>cg24885417</b>	90.5	4.05
<b>cg24926711</b>	79.71	0.25
<b>cg25045746</b>	89.35	0.02
<b>cg25778535</b>	84.34	8.15
<b>cg26001902</b>	75.17	0.06
<b>cg26165108</b>	68.43	0.78

cg26980244	79.72	6.09
cg27032232	78.81	12.97
cg27195326	77.95	0.02
cg27578811	84.92	0.75
cg27600205	86.21	0

**Appendix 9.11 – HJ-Biplot column contributions for DNA methylation in head and neck cancer.**

cg	Dim 1	Dim 2
cg02595832	95.22	1.08
cg04510788	68.69	25.72
cg07918545	96.34	0.31
cg13272644	66.63	13.96
cg13929328	98.04	0.25
cg19884262	96.09	1.67
cg26115633	97.57	0.62

**Appendix 9.12 – HJ-Biplot column contributions for DNA methylation in kidney<sub>R</sub> cancer.**

cg	Dim 1	Dim 2
cg00689360	86.4	0.36
cg00812246	84.26	0.31
cg02537838	94.35	0.18
cg03415545	88.46	0.34
cg03762549	83.07	0.15
cg04052038	83.78	1.82
cg04511534	85.8	0.58
cg06162324	74.81	0.3
cg06427867	91.48	1.39
cg06650260	87.95	0.07
cg07795964	83.46	1.34
cg08842032	91.41	0.1
cg10055471	89.82	0.11
cg13267718	93.9	0.01
cg13290149	91.06	0.13
cg13675753	88.96	0.19
cg14481339	92.84	0.46
cg15679829	80.31	0.04
cg15896939	74.68	4.27
cg17565967	89.67	0.46
cg17976205	91.05	0.15
cg19580810	86.04	1.7

cg24580782	90.97	0.22
cg26511075	83.09	9.28
cg27300950	79.15	8.19

**Appendix 9.13 – HJ-Biplot column contributions for DNA methylation in kidney cancer.**

cg	Dim 1	Dim 2
cg00831237	85.15	3.57
cg06650260	85.09	9
cg07168810	87.05	0.17
cg07493760	81.03	0.2
cg10483275	79.3	16.49
cg16762386	85.82	4.46
cg22162435	86.19	0.65

**Appendix 9.14 – HJ-Biplot column contributions for DNA methylation in liver cancer.**

cg	Dim 1	Dim 2
cg02026371	74.83	9.2
cg04651193	79.36	1.37
cg04711063	76.85	11.55
cg05912481	72.21	4.88
cg06324957	82.52	8.75
cg07584894	79.32	0.2
cg09362722	87.22	0.16
cg09585906	83.58	0.34
cg11615959	81.43	4.74
cg12244288	73.11	5.4
cg14720996	74.47	0.5
cg14944166	85.36	0.03
cg15020132	79.38	0.15
cg15190834	78.93	0.04
cg16202017	78.62	4.33
cg16980530	73.97	2.63
cg17752799	77.96	2.63
cg21780600	77.86	0.38
cg21844331	76.49	1.75
cg22238777	76.19	1.18
cg22863118	76.13	1.75
cg26068292	79.71	2.04
cg26955491	83.57	0

**Appendix 9.15 – HJ-Biplot column contributions for DNA methylation in lung cancer.**

<b>cg</b>	<b>Dim 1</b>	<b>Dim 2</b>
cg02842496	82.18	1.45
cg04842426	76.54	1.14
cg05756220	74.36	22.37
cg07557260	78.93	3.98
cg07664198	74.28	2.51
cg08490115	72.88	25.36
cg12164612	53.65	8.74
cg15310492	74.5	23.62
cg17714025	71.3	22.88
cg19630629	62.82	9.08
cg22639011	51.92	6.61
cg22762091	77.74	2.9
cg24575234	71.37	3.79
cg26332560	79.01	4.09
cg26351229	81.24	1.27

**Appendix 9.16 – HJ-Biplot column contributions for DNA methylation in thyroid cancer.**

<b>cg</b>	<b>Dim 1</b>	<b>Dim 2</b>
cg02196805	89.88	2.41
cg02325250	90.48	5.04
cg05368724	87.8	0.53
cg08328750	79.5	3.33
cg08686879	84.72	2.21
cg13394864	69.37	7.71
cg15442792	69.38	22.47
cg23620049	74.26	6.5
cg26369418	87.36	3.59