

**Table S6. Lists of up-regulated hyperplasia zebrafish enriched genes in human dysplastic liver data sets.** The hyperplasia up-regulated zebrafish enriched genes, comprising of hyperplasia-specific and overlapping enriched genes in both stages, were significantly associated with human dysplastic liver (GSE6764) (FDR q-value  $\leq 0.05$  and FWER p-value  $\leq 0.05$ ). GSEA identified the genes from this gene list which contributed maximally to the GSEA scores of human dysplastic liver transcriptomic profiles.

<b>Zebrafish up-regulated hyperplasia enriched genes in human dysplastic liver (GSE6764)</b>		
No.	Gene Symbol	Gene Name
1	A2M	Alpha-2-macroglobulin
2	ADSSL1	Adenylosuccinate synthase like 1
3	AGXT	Alanine-glyoxylate aminotransferase
4	AHSG	Alpha-2-HS-glycoprotein
5	APOA1	Apolipoprotein A-I
6	APOE	Apolipoprotein E
7	AVP	Arginine vasopressin
8	C1S	Complement component 1, s subcomponent
9	C8G	Complement component 8, gamma polypeptide
10	CAB39	Calcium binding protein 39
11	CALR	Calreticulin
12	CCNB1	Cyclin B1
13	CCND1	Cyclin D1
14	CDC25A	Cell division cycle 25 homolog A (S. pombe)
15	CDO1	Cysteine dioxygenase, type I
16	CFB	Complement factor B
17	CFH	Complement factor H
18	CP	Ceruloplasmin (ferroxidase)
19	CTBP1	C-terminal binding protein 1
20	CYP2J2	Cytochrome P450, family 2, subfamily J, polypeptide 2
21	DERL1	Der1-like domain family, member 1
22	DUSP5	Dual specificity phosphatase 5
23	DUSP6	Dual specificity phosphatase 6
24	EDF1	Endothelial differentiation-related factor 1
25	F10	Coagulation factor X
26	F7	Coagulation factor II (thrombin)
27	FGA	Fibrinogen alpha chain
28	FGD1	FYVE, RhoGEF and PH domain containing 1
29	FYN	FYN oncogene related to SRC, FGR, YES
30	GADD45A	Growth arrest and DNA-damage-inducible, alpha
31	GATA6	GATA binding protein 6
32	GDA	Guanine deaminase

33	GGT1	Gamma-glutamyltransferase 1
34	GK	Glycerol kinase
35	GPX1	Glutathione peroxidase 1
36	IGF1	Insulin-like growth factor 1 (somatomedin C)
37	LDB1	LIM domain binding 1
38	LIPA	Lipase A, lysosomal acid, cholesterol esterase
39	MAFB	v-Maf musculoaponeurotic fibrosarcoma oncogene homolog B (avian)
40	MAP3K12	Mitogen-activated protein kinase kinase kinase 12
41	MAPK1	Mitogen-activated protein kinase 1
42	MAPK3	Mitogen-activated protein kinase 3
43	MAPKAPK2	Mitogen-activated protein kinase-activated protein kinase 2
44	MBP	Myelin basic protein
45	MCM5	Minichromosome maintenance complex component 5
46	MDM2	Mdm2 p53 binding protein homolog (mouse)
47	MGST1	Microsomal glutathione S-transferase 1
48	MMP14	Matrix metallopeptidase 14 (membrane-inserted)
49	MRE11A	MRE11 meiotic recombination 11 homolog A (S. cerevisiae)
50	NARG1	N(alpha)-acetyltransferase 15, NatA auxiliary subunit
51	NBN	Nibrin
52	NFIL3	Nuclear factor, interleukin 3 regulated
53	NFKB2	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 2 (p49/p100)
54	NFYA	Nuclear transcription factor Y, alpha
55	NLK	Nemo-like kinase
56	NMI	N-myc (and STAT) interactor
57	PCNA	Proliferating cell nuclear antigen
58	PDE8B	Phosphodiesterase 8B
59	PDGFRA	Platelet-derived growth factor receptor, alpha polypeptide
60	PIK3CA	Phosphoinositide-3-kinase, catalytic, alpha polypeptide
61	PLG	Plasminogen
62	POLB	Polymerase (DNA directed), beta
63	PPARD	Peroxisome proliferator-activated receptor delta
64	PPM1G	Protein phosphatase, Mg <sup>2+</sup> /Mn <sup>2+</sup> dependent, 1G
65	PRKACA	Protein kinase, cAMP-dependent, catalytic, alpha
66	PRKCB1	Protein kinase C, beta
67	PXN	Paxillin
68	ROBO2	Roundabout, axon guidance receptor, homolog 2 (Drosophila)
69	RRM2	Ribonucleotide reductase M2
70	RTN4RL1	Reticulon 4 receptor-like 1
71	RUVBL2	RuvB-like 2 (E. coli)
72	SERPINA1	Serpin peptidase inhibitor, clade A (alpha-1 antiproteinase, antitrypsin), member 1
73	SERPINC1	Serpin peptidase inhibitor, clade C (antithrombin), member 1
74	SRC	v-Src sarcoma (Schmidt-Ruppin A-2) viral oncogene homolog (avian)
75	THY1	Thy-1 cell surface antigen
76	TINF2	TERF1 (TRF1)-interacting nuclear factor 2
77	TK1	Thymidine kinase 1, soluble
78	UBC	Ubiquitin C
79	WNT16	Wingless-type MMTV integration site family, member 16
80	XPC	Xeroderma pigmentosum, complementation group C
81	YWHAB	Tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein,

beta polypeptide