

Supplementary Material 1: Lavenex et al.

Developmental regulation of gene expression and astrocytic processes may explain selective hippocampal vulnerability

Genes differentially expressed in CA1 (Fold change >2),  
as compared to every other region analyzed (DG, CA3, subiculum, EC)

Gene symbol	Gene Title	Affymetrix Probe Set ID	Unigene	Entrez Gene
<b>Overexpressed (n=8)</b>				
CACNA1G	calcium channel, voltage-dependent, alpha 1G subunit	207869_s_at	Hs.591169	8913
CD24	CD24 molecule	209771_x_at	Hs.632285	934
CD24	CD24 molecule	216379_x_at	Hs.632285	934
DKFZp761H21	hypothetical protein DKFZp761H21.1	1553865_a_at	Hs.134065	171582
NOG	Noggin	231798_at	Hs.248201	9241
SEZ6L	Seizure related 6 homolog (mouse)-like	231650_s_at	Hs.194766	23544
SH2D4B	SH2 domain containing 4B	1563849_at	Hs.147643	387694
SLC35F4	solute carrier family 35, member F4	240799_at	Hs.28280	341880
SYNE1	Spectrin repeat containing, nuclear envelope 1	232027_at	Hs.12967	23345
	MRNA full length insert cDNA clone EUROIIMAGE 29222	214896_at	Hs.593529	
	CDNA FLJ42949 fis, clone BRSTN2006583	215126_at	Hs.20034	
	Transcribed locus, moderately similar to NP_055301.1 neuronal thread prot	229641_at	Hs.49943	
	Homo sapiens, clone IMAGE:3869276, mRNA	231963_at	Hs.26039	
<b>Underexpressed (n=108)</b>				
ACADVL	acyl-Coenzyme A dehydrogenase, very long chain	200710_at	Hs.437178	37
ACO2	aconitase 2, mitochondrial	200793_s_at	Hs.643610	50
ACOT1	acyl-CoA thioesterase 2	202982_s_at	Hs.446685	10965
ACTB	actin, beta	AFFX-HSAC07	Hs.520640	60
ACTR1A	ARP1 actin-related protein 1 homolog A, centractin alpha (yeast)	200721_s_at	Hs.153961	10121
ADCK2	aarF domain containing kinase 2	221893_s_at	Hs.534141	90956
AK1	adenylate kinase 1	202587_s_at	Hs.175473	203
ALDOA	aldolase A, fructose-bisphosphate	200966_x_at	Hs.513490	226
ALDOA	aldolase A, fructose-bisphosphate	214687_x_at	Hs.513490	226
ALDOC	aldolase C, fructose-bisphosphate	202022_at	Hs.155247	230
APOE	apolipoprotein E	203382_s_at	Hs.654439	348
ARF1	ADP-ribosylation factor 1	208750_s_at	Hs.286221	375
ARF3	ADP-ribosylation factor 3	211622_s_at	Hs.119177	377
ARHGDI3	Rho GDP dissociation inhibitor (GDI) gamma	206888_s_at	Hs.647388	398
ATP1A1	ATPase, Na+/K+ transporting, alpha 1 polypeptide	220948_s_at	Hs.371889	476
BAT1	HLA-B associated transcript 1	200041_s_at	Hs.254042	7919
BCAP31	B-cell receptor-associated protein 31	200837_at	Hs.522817	10134
C12orf10	chromosome 12 open reading frame 10	218220_at	Hs.655988	60314
C1orf43	chromosome 1 open reading frame 43	1555226_s_at	Hs.287471	25912
CALM3	calmodulin 3 (phosphorylase kinase, delta)	200622_x_at	Hs.515487	808
CAPNS1	calpain, small subunit 1	200001_at	Hs.515371	826
CLTB	clathrin, light chain (Lcb)	205172_x_at	Hs.484241	1212
CLTB	clathrin, light chain (Lcb)	206284_x_at	Hs.484241	1212
CLTB	clathrin, light chain (Lcb)	211043_s_at	Hs.484241	1212
CLU	clusterin	208791_at	Hs.436657	1191
COPS6	COP9 constitutive photomorphogenic homolog subunit 6 (Arabidopsis)	201405_s_at	Hs.15591	10980
CPLX1	complexin 1	223500_at	Hs.478930	10815
CPNE2	copine II	225129_at	Hs.339809	221184
CRIP2	cysteine-rich protein 2	208978_at	Hs.534309	1397
CTBP1	C-terminal binding protein 1	203392_s_at	Hs.208597	1487
DCXR	dicarbonyl/L-xylulose reductase	217973_at	Hs.9857	51181
DDOST	dolichyl-diphosphooligosaccharide-protein glycosyltransferase	208675_s_at	Hs.523145	1650
DEAF1	deformed epidermal autoregulatory factor 1 (Drosophila)	209407_s_at	Hs.243994	10522
DKFZP761M15	hypothetical protein DKFZP761M15.1	225355_at	Hs.91521	54492
DRD1P	dopamine receptor D1 interacting protein	219896_at	Hs.148680	50632
EEF1D	eukaryotic translation elongation factor 1 delta (guanine nucleotide exchange	203113_s_at	Hs.333388	1936
EEF1G	eukaryotic translation elongation factor 1 gamma	200689_x_at	Hs.144835	1937
EEF1G	eukaryotic translation elongation factor 1 gamma	211345_x_at	Hs.144835	1937
EEF1G	eukaryotic translation elongation factor 1 gamma	211927_x_at	Hs.144835	1937
FABP7	fatty acid binding protein 7, brain	205029_s_at	Hs.26770	2173
FBL	fibrillarin	211623_s_at	Hs.299002	2091
FDT1	farnesyl-diphosphate farnesyltransferase 1	210950_s_at	Hs.593928	2222
FIS1	fission 1 (mitochondrial outer membrane) homolog (S. cerevisiae)	218034_at	Hs.423968	51024
FLOT1	flotillin 1	208749_x_at	Hs.179986	10211
FSD1	fibronectin type III and SPRY domain containing 1	219170_at	Hs.28144	731565
FUS	fusion (involved in t(12;16) in malignant liposarcoma)	200959_at	Hs.513522	2521
GABBR1	gamma-aminobutyric acid (GABA) B receptor, 1	203146_s_at	Hs.167017	2550
GABBR2	gamma-aminobutyric acid (GABA) B receptor, 2	209991_x_at	Hs.198612	9568
GABBR2	gamma-aminobutyric acid (GABA) B receptor, 2	217077_s_at	Hs.198612	9568
GAPDH	glyceraldehyde-3-phosphate dehydrogenase	212581_x_at	Hs.544577	2597
GAPDH	glyceraldehyde-3-phosphate dehydrogenase	213453_x_at	Hs.544577	2597
GAPDH	glyceraldehyde-3-phosphate dehydrogenase	217398_x_at	Hs.544577	2597
GAPDH	glyceraldehyde-3-phosphate dehydrogenase	AFFX-HUMGAF	Hs.479728	2597
GAPDH	glyceraldehyde-3-phosphate dehydrogenase	AFFX-HUMGAF	Hs.479728	2597
GAPDH	glyceraldehyde-3-phosphate dehydrogenase	AFFX-HUMGAF	Hs.479728	2597
GFAP	glial fibrillary acidic protein	203540_at	Hs.514227	2670
GLUL	glutamate-ammonia ligase (glutamine synthetase)	200648_s_at	Hs.518525	2752
GLUL	glutamate-ammonia ligase (glutamine synthetase)	217202_s_at	Hs.518525	2752
GMPR2	guanosine monophosphate reductase 2	217990_at	Hs.368855	51292
GNB2	guanine nucleotide binding protein (G protein), beta polypeptide 2	200852_x_at	Hs.185172	2783
GOT1	glutamic-oxaloacetic transaminase 1, soluble (aspartate aminotransferase 1	208813_at	Hs.500756	2805
HLA-B	major histocompatibility complex, class I, B	211911_x_at	Hs.77961	3106
HMOX2	heme oxygenase (decycling) 2	218120_s_at	Hs.284279	3163
HNRNPC	heterogeneous nuclear ribonucleoprotein C (C1/C2)	212626_x_at	Hs.449114	3183
HNRNPC	heterogeneous nuclear ribonucleoprotein C (C1/C2)	214737_x_at	Hs.449114	3183
HSP90AB1	heat shock protein 90kDa alpha (cytosolic), class B member 1	214359_s_at	Hs.509736	3326
HSPA8	heat shock 70kDa protein 8	210338_s_at	Hs.647918	3312
IDH3G	isocitrate dehydrogenase 3 (NAD+) gamma	202471_s_at	Hs.410197	3421
ILF2	interleukin enhancer binding factor 2, 45kDa	200052_s_at	Hs.75117	3608
ITM2C	integral membrane protein 2C	221004_s_at	Hs.111577	81618
KLC1	kinesin light chain 1	212878_s_at	Hs.20107	3831
KLHDC3	kelch domain containing 3	214383_x_at	Hs.412468	116138
LOC643287	prothymosin, alpha (gene sequence 28)	200773_x_at	Hs.459927	5757
LOC64511	ribosomal protein L13a	211942_x_at	Hs.523185	23521
LY6H	lymphocyte antigen 6 complex, locus H	206773_at	Hs.159590	4062
MAP1LC3A	microtubule-associated protein 1 light chain 3 alpha	232011_s_at	Hs.632273	84557
MC1R	melanocortin 1 receptor (alpha melanocyte stimulating hormone receptor)	213476_x_at	Hs.513829	10381
NOMO1	NODAL modulator 1	221853_s_at	Hs.583391	23420
NSFL1C	NSFL1 (p97) cofactor (p47)	217831_s_at	Hs.12865	55968
NSFL1C	NSFL1 (p97) cofactor (p47)	220248_x_at	Hs.12865	55968
OAZ1	ornithine decarboxylase antizyme 1	215952_s_at	Hs.446427	4946
PAQR6	progesterin and adipQ receptor family member VI	219236_at	Hs.235873	79957
PCSK1N	proprotein convertase subtilisin/kexin type 1 inhibitor	218952_at	Hs.522640	27344

PEA15	phosphoprotein enriched in astrocytes 15	200787_s_at	Hs.517216	8682
PGK1	phosphoglycerate kinase 1	217356_s_at	Hs.695967	5230
PGRMC1	progesterone receptor membrane component 1	201120_s_at	Hs.90061	10857
PI4KB	phosphatidylinositol 4-kinase, catalytic, beta	210417_s_at	Hs.632465	5298
PP1B	peptidylprolyl isomerase B (cyclophilin B)	200967_at	Hs.434937	5479
PP1B	peptidylprolyl isomerase B (cyclophilin B)	200968_s_at	Hs.434937	5479
PPP2R1A	protein phosphatase 2 (formerly 2A), regulatory subunit A , alpha isoform	200695_at	Hs.467192	5518
PQB1	polyglutamine binding protein 1	214527_s_at	Hs.534384	10084
PRDX1	peroxiredoxin 1	208680_at	Hs.180909	5052
PRDX5	peroxiredoxin 5	1560587_s_at	Hs.502823	25824
PRKAG1	protein kinase, AMP-activated, gamma 1 non-catalytic subunit	201805_at	Hs.530862	5571
PSAP	prosaposin (variant Gaucher disease and variant metachromatic leukodystrophy)	200866_s_at	Hs.523004	5660
PSMC3	proteasome (prosome, macropain) 26S subunit, ATPase, 3	201267_s_at	Hs.250758	5702
PSMD4	proteasome (prosome, macropain) 26S subunit, non-ATPase, 4	200882_s_at	Hs.505059	5710
PSMD4	proteasome (prosome, macropain) 26S subunit, non-ATPase, 4	210460_s_at	Hs.505059	5710
PSMD4	proteasome (prosome, macropain) 26S subunit, non-ATPase, 4	211609_x_at	Hs.505059	5710
PTGDS	prostaglandin D2 synthase 21kDa (brain)	211663_x_at	Hs.446429	5730
PYGM	phosphorylase, glycogen; muscle (McArdle syndrome, glycogen storage disease type II)	205577_at	Hs.154084	5837
RABAC1	Rab acceptor 1 (prenylated)	203136_at	Hs.11417	10567
RANBP1	RAN binding protein 1	202483_s_at	Hs.24763	5902
RHBDD2	rhomboid domain containing 2	232053_x_at	Hs.488827	57414
ROGDI	rogdi homolog (Drosophila)	218394_at	Hs.459795	79641
RPL3	ribosomal protein L3	211666_x_at	Hs.119598	6122
RPL8	ribosomal protein L8	200936_at	Hs.178551	6132
SFRS9	splicing factor, arginine/serine-rich 9	201698_s_at	Hs.652394	8683
SLC25A6	solute carrier family 25 (mitochondrial carrier; adenine nucleotide translocase)	212085_at	Hs.350927	293
SLC25A6	solute carrier family 25 (mitochondrial carrier; adenine nucleotide translocase)	212826_s_at	Hs.350927	293
STIP1	stress-induced-phosphoprotein 1 (Hsp70/Hsp90-organizing protein)	213330_s_at	Hs.337295	10963
TBCB	tubulin folding cofactor B	201804_x_at	Hs.31053	1155
TBCB	tubulin folding cofactor B	211759_x_at	Hs.31053	1155
TBCB	tubulin folding cofactor B	216194_s_at	Hs.31053	1155
TCEA2	transcription elongation factor A (SII), 2	203919_at	Hs.505004	6919
TMEM4	transmembrane protein 4	209796_s_at	Hs.8752	10330
TRO	trophinin	210882_s_at	Hs.695979	7216
TUBA1B	tubulin, alpha 1b	201090_x_at	Hs.524390	10376
TUBA1B	tubulin, alpha 1b	211058_x_at	Hs.524390	10376
TUBA1B	tubulin, alpha 1b	211072_x_at	Hs.524390	10376
TUBA1B	tubulin, alpha 1b	212639_x_at	Hs.524390	10376
TUBA1B	tubulin, alpha 1b	213646_x_at	Hs.524390	10376
TUBA1C	tubulin, alpha 1c	209251_x_at	Hs.652390	84790
TUBA1C	tubulin, alpha 1c	211750_x_at	Hs.652390	84790
TUBB	tubulin, beta	209026_x_at	Hs.636480	203068
TUBB	tubulin, beta	211714_x_at	Hs.636480	203068
TUBB2A /// TL	tubulin, beta 2A /// tubulin, beta 2B	209372_x_at	Hs.654543	347733 /// 7280
TUBB2C	tubulin, beta 2C	208977_x_at	Hs.433615	10383
UCHL1	ubiquitin carboxyl-terminal esterase L1 (ubiquitin thiolesterase)	201387_s_at	Hs.518731	7345
UST	uronyl-2-sulfotransferase	205139_s_at	Hs.657370	10090
XPNPEP1	X-prolyl aminopeptidase (aminopeptidase P) 1, soluble	208453_s_at	Hs.390623	7511
YBX1	Y box binding protein 1	208628_s_at	Hs.473583	4904
YWHAH	tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein 1	201020_at	Hs.226755	7533
ZFPM2	zinc finger protein, multitype 2	219778_at	Hs.431009	23414
		AFFX-HUMRGE/M10098_5_at		

## Genes differentially expressed in CA3 (Fold change >2) as compared to every other region analyzed (DG, CA1, subiculum, EC)

Gene symbol	Gene Title	Affymetrix Probe Set ID	Unigene	Entrez Gene
<b>Overexpressed (n=2)</b>				
LATS2	LATS, large tumor suppressor, homolog 2 (Drosophila)	227013_at	Hs.78960	26524
NR1P3	nuclear receptor interacting protein 3	219557_s_at	Hs.523467	56675
<b>Underexpressed (n=4)</b>				
CAMK2D	calcium/calmodulin-dependent protein kinase (CaM kinase) II delta	225019_at	Hs.144114	817
FLJ43390	hypothetical LOC646113	231186_at	Hs.592321	646113
MALAT1	metastasis associated lung adenocarcinoma transcript 1 (non-coding RNA)	224559_at		378938
PAM	peptidylglycine alpha-amidating monooxygenase	202336_s_at	Hs.369430	5066

## Genes differentially expressed in the dentate gyrus (Fold change >2) as compared to every other region analyzed (CA3, CA1, subiculum, EC)

Gene symbol	Gene Title	Affymetrix Probe Set ID	Unigene	Entrez Gene
<b>Overexpressed (n=24)</b>				
BHLHB5	basic helix-loop-helix domain containing, class B, 5	228636_at	Hs.591870	27319
BTG1	B-cell translocation gene 1, anti-proliferative	200920_s_at	Hs.255935	694
BTG1	B-cell translocation gene 1, anti-proliferative	200921_s_at	Hs.255935	694
C5orf13	chromosome 5 open reading frame 13	201310_s_at	Hs.36053	9315
C6orf206	chromosome 6 open reading frame 206	230695_s_at	Hs.534585	221421
CAMK1	calcium/calmodulin-dependent protein kinase I	204392_at	Hs.434875	8536
CCDC80	coiled-coil domain containing 80	225242_s_at	Hs.477128	151887
CEBPD	CCAAT/enhancer binding protein (C/EBP), delta	203973_s_at	Hs.440829	1052
CXCL12	chemokine (C-X-C motif) ligand 12 (stromal cell-derived factor 1)	209687_at	Hs.522891	6387
DOCK10	dedicator of cytokinesis 10	219279_at	Hs.46578	55619
FLRT3	fibronectin leucine rich transmembrane protein 3	222853_at	Hs.41296	23767
FRZB	frizzled-related protein	203698_s_at	Hs.128453	2487
GPR64	G protein-coupled receptor 64	206002_at	Hs.146978	10149
GRP	gastrin-releasing peptide	206326_at	Hs.153444	2922
IL11RA	interleukin 11 receptor, alpha	204773_at	Hs.591088	3590
NPY1R	neuropeptide Y receptor Y1	205440_s_at	Hs.519057	4886
NTF3	neurotrophin 3	206706_at	Hs.99171	4908
PCDH20	protocadherin 20	232054_at	Hs.391781	64881
PPP1R1A	protein phosphatase 1, regulatory (inhibitor) subunit 1A	205478_at	Hs.505662	5502
SEMA3C	sema domain, immunoglobulin domain (Iq), short basic domain, secreted, (	203789_s_at	Hs.269109	10512
STXBP6	syntaxin binding protein 6 (amisyn)	230560_at	Hs.508958	29091
TNC	tenascin C (hexabrachion)	201645_at	Hs.143250	3371
TNNT2	troponin T type 2 (cardiac)	215389_s_at	Hs.533613	7139
ZCCHC12	zinc finger, CCHC domain containing 12	228715_at	Hs.21417	170261
ZFPM2	zinc finger protein, multitype 2	219778_at	Hs.431009	23414
		229376_at		
<b>Underexpressed (n=7)</b>				
DUSP6	dual specificity phosphatase 6	208891_at	Hs.298654	1848
DUSP6	dual specificity phosphatase 6	208892_s_at	Hs.298654	1848
EGR1	Early growth response 1	227404_s_at	Hs.326035	1958
HS6ST2	heparan sulfate 6-O-sulfotransferase 2	1552767_a_at	Hs.385956	90161
HS6ST2	heparan sulfate 6-O-sulfotransferase 2	230030_at	Hs.385956	90161
HT2C	5-hydroxytryptamine (serotonin) receptor 2C	207307_at	Hs.149037	3358

MEIS2	Meis1, myeloid ecotropic viral integration site 1 homolog 2 (mouse)	207480_s_at	Hs.510989	4212
NR4A2	nuclear receptor subfamily 4, group A, member 2	216248_s_at	Hs.563344	4929
PCSK1	proprotein convertase subtilisin/kexin type 1	205825_at	Hs.78977	5122
	CDNA FLJ37694 fis, clone BRHIP2015224	1556583_a_a	Hs.31961	

## Genes differentially expressed in the subiculum (Fold change >2) as compared to every other region analyzed (DG, CA3, CA1, EC)

Gene symbol	Gene Title	Affymetrix Probe Set ID	Unigene	Entrez Gene
<b>Overexpressed (n=23)</b>				
ATOH7	atonal homolog 7 (Drosophila)	1552879_a_at	Hs.175396	220202
ATP6V1C2	ATPase, H+ transporting, lysosomal 42kDa, V1 subunit C2	1553989_a_at	Hs.580464	245973
C8orf47	chromosome 8 open reading frame 47	1552390_a_at	Hs.171455	203111
CLDN11	claudin 11 (oligodendrocyte transmembrane protein)	228335_at	Hs.31595	5010
CTXN1	cortexin 1	228126_x_at	Hs.657978	404217
ENPP2	ectonucleotide pyrophosphatase/phosphodiesterase 2 (autotaxin)	210839_s_at	Hs.190977	5168
FEZF2	FEZ family zinc finger 2	221086_s_at	Hs.241523	55079
KIAA1189	KIAA1189	231911_at	Hs.443894	57471
LOC285281	hypothetical protein LOC285281	241717_at	Hs.594670	285281
MAG	myelin associated glycoprotein	216617_s_at	Hs.643440	4099
MBP	myelin basic protein	207323_s_at	Hs.551713	4155
MBP	myelin basic protein	209072_at	Hs.551713	4155
MOBP	myelin-associated oligodendrocyte basic protein	207659_s_at	Hs.121333	4336
MOBP	myelin-associated oligodendrocyte basic protein	235794_at	Hs.121333	4336
MOBP	myelin-associated oligodendrocyte basic protein	242765_at	Hs.121333	4336
MOG	myelin oligodendrocyte glycoprotein	211836_s_at	Hs.141308	4340
MOG	myelin oligodendrocyte glycoprotein	214650_x_at	Hs.141308	4340
NDST4	N-deacetylase/N-sulfotransferase (heparan glucosaminyl) 4	208334_at	Hs.591700	64579
NTS	neurotensin	206291_at	Hs.80962	4922
PCP4	Purkinje cell protein 4	205549_at	Hs.80296	5121
PPAPDC1A	phosphatidic acid phosphatase type 2 domain containing 1A	236044_at	Hs.40479	196051
PPP1R14A	protein phosphatase 1, regulatory (inhibitor) subunit 14A	227006_at	Hs.631569	94274
RXFP1	relaxin/insulin-like family peptide receptor 1	1552715_a_at	Hs.591686	59350
RXFP1	relaxin/insulin-like family peptide receptor 1	231804_at	Hs.591686	59350
SEPT4	septin 4	210657_s_at	Hs.287518	5414
TOX	thymocyte selection-associated high mobility group box	204529_s_at	Hs.491805	9760
TOX	thymocyte selection-associated high mobility group box	204530_s_at	Hs.491805	9760
TSHZ2	teashirt zinc finger homeobox 2	235616_at		128553
TSHZ2	Teashirt zinc finger homeobox 2	238577_s_at	Hs.596474	128553
UGT8	UDP glycosyltransferase 8 (UDP-galactose ceramide galactosyltransferase)	228956_at	Hs.144197	7368
<b>Underexpressed (n=1)</b>				
KCTD4	potassium channel tetramerisation domain containing 4	240512_x_at	Hs.23406	386618

## Genes differentially expressed in the entorhinal cortex (Fold change >2) as compared to every other region analyzed (DG, CA3, CA1, subiculum)

Gene symbol	Gene Title	Affymetrix Probe Set ID	Unigene	Entrez Gene
<b>Overexpressed (n=36)</b>				
ARPP_21	cyclic AMP-regulated phosphoprotein, 21 kD	220359_s_at	Hs.475902	10777
CDH13	cadherin 13, H-cadherin (heart)	204726_at	Hs.654386	1012
CFB	complement factor B	202357_s_at	Hs.69771	629
COL1A1	collagen, type I, alpha 1	1556499_s_at	Hs.172928	1277
COL1A2	collagen, type I, alpha 2	202403_s_at	Hs.489142	1278
COL3A1	collagen, type III, alpha 1 (Ehlers-Danlos syndrome type IV, autosomal dominant)	215076_s_at	Hs.443625	1281
CUTL2	cut-like 2 (Drosophila)	213920_at	Hs.124953	23316
DCN	decorin	201893_x_at	Hs.694789	1634
DCN	decorin	211896_s_at	Hs.694789	1634
DCN	decorin	211968_s_at	Hs.525600	3320
HSP90AA1	heat shock protein 90kDa alpha (cytosolic), class A member 1	211000_s_at	Hs.532082	3572
IL6ST	interleukin 6 signal transducer (gp130, oncostatin M receptor)	205206_at	Hs.521869	3730
KAL1	Kallmann syndrome 1 sequence	230692_at	Hs.103535	157503
LOC157503	hypothetical protein LOC157503	35974_at	Hs.124922	4033
LRMP	lymphoid-restricted membrane protein	209199_s_at	Hs.654474	4208
MEF2C	myocyte enhancer factor 2C	209200_at	Hs.654474	4208
MEF2C	myocyte enhancer factor 2C	223189_x_at	Hs.592262	55904
MLL5	myeloid/lymphoid or mixed-lineage leukemia 5 (trithorax homolog, Drosophila)	213067_at	Hs.16355	4628
MYH10	myosin, heavy chain 10, non-muscle	209120_at	Hs.695933	7026
NR2F2	nuclear receptor subfamily 2, group F, member 2	209121_x_at	Hs.695933	7026
NR2F2	nuclear receptor subfamily 2, group F, member 2	215073_s_at	Hs.695933	7026
NR2F2	nuclear receptor subfamily 2, group F, member 2	205728_at		10178
ODZ1	odz, odd Oz/ten-m homolog 1 (Drosophila)	219523_s_at	Hs.130438	55714
ODZ3	odz, odd Oz/ten-m homolog 3 (Drosophila)	213638_at	Hs.436996	221692
PHACTR1	phosphatase and actin regulator 1	204048_s_at	Hs.654921	9749
PHACTR2	phosphatase and actin regulator 2	227947_at	Hs.654921	9749
PHACTR2	phosphatase and actin regulator 2	209803_s_at	Hs.154036	7262
PHLDA2	pleckstrin homology-like domain, family A, member 2	213241_at	Hs.584845	10154
PLXNC1	plexin C1	213729_at	Hs.643580	55660
PRPF40A	PRP40 pre-mRNA processing factor 40 homolog A (S. cerevisiae)	211663_x_at	Hs.446429	5730
PTGDS	prostaglandin D2 synthase 21kDa (brain)	200607_s_at	Hs.81848	5885
RAD21	RAD21 homolog (S. pombe)	205576_at	Hs.474270	3053
SERPIND1	serpin peptidase inhibitor, clade D (heparin cofactor), member 1	219824_at	Hs.490241	26266
SLC13A4	solute carrier family 13 (sodium/sulfate symporters), member 4	220551_at	Hs.242821	57084
SLC17A6	solute carrier family 17 (sodium-dependent inorganic phosphate cotransporters), member 6	207336_at	Hs.657542	6660
SOX5	SRY (sex determining region Y)-box 5	225496_s_at	Hs.369520	54843
SYTL2	synaptotagmin-like 2	232914_s_at	Hs.369520	54843
SYTL2	synaptotagmin-like 2	213943_at	Hs.66744	7291
Twist1	twist homolog 1 (acrocephalosyndactyly 3; Saethre-Chotzen syndrome) (Drosophila)	225093_at	Hs.133135	7402
UTRN	utrophin	237802_at	Hs.130197	114786
XKR4	XK, Kell blood group complex subunit-related family, member 4	228788_at	Hs.517436	29799
YPEL1	yippee-like 1 (Drosophila)	229092_at	Hs.657455	
	Full length insert cDNA clone YX37E06	230233_at	Hs.480068	
	Transcribed locus			
<b>Underexpressed (n=1)</b>				
HPCA	hippocalcin	205454_at	Hs.632391	3208

Supplementary Material 2: Lavenex et al.

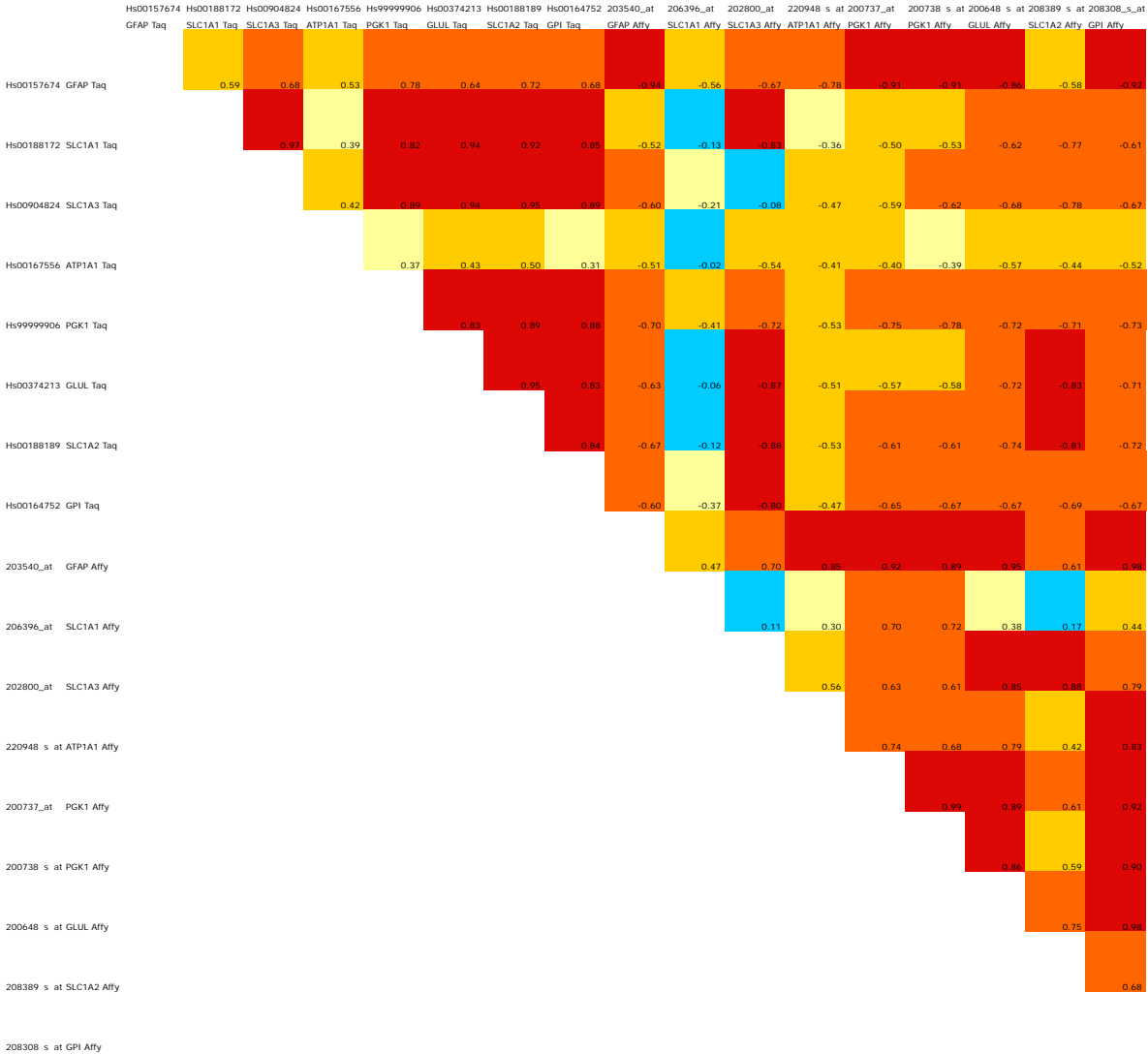
Developmental regulation of gene expression and astrocytic processes may explain selective hippocampal vulnerability

TAQMAN® RT-PCR: Statistical analyses conducted on samples from 6-month-old (n=4), 1-year-old (n=4), and adult (8-9-year-old; n=4) male rhesus monkeys														
TaqMan® Assay ID	Gene Symbo	ANOVA		EC		DG		CA3		CA1		Sub		Post-hoc analyses (Fisher PLSD p<0.05)
		F value	p-value	Average	SE	Average	SE	Average	SE	Average	SE	Average	SE	
Hs00157674_m1	GFAP	50.523	0.0001	21.290	0.100	20.223	0.138	21.280	0.161	22.944	0.243	21.113	0.131	CA1 different from all other regions
Hs00188172_m1	SLC1A1	2.004	0.1148	28.066	0.089	28.646	0.139	29.625	0.952	28.975	0.328	28.171	0.123	no significant differences
Hs00188189_m1	SLC1A2	15.107	0.0001	23.881	0.083	24.832	0.197	24.742	0.138	25.591	0.388	24.116	0.114	CA1 different from all other regions
Hs00904824_m1	SLC1A3	9.747	0.0001	29.363	0.100	29.947	0.135	30.023	0.159	30.560	0.349	29.570	0.092	CA1 different from all other regions
Hs00167556_m1	ATP1A1	15.331	0.0001	25.997	0.048	26.150	0.064	26.683	0.131	27.007	0.201	26.360	0.055	CA1 different from all other regions
Hs99999906_m1	PGK1	15.003	0.0001	25.418	0.063	25.583	0.075	25.324	0.085	26.122	0.167	25.317	0.040	CA1 different from all other regions
Hs00374213_m1	GLUL	21.448	0.0001	31.701	0.081	32.347	0.152	32.387	0.168	32.903	0.272	31.552	0.109	CA1 different from all other regions
Hs00164752_m1	GPI	7.239	0.0006	24.613	0.049	25.057	0.082	24.720	0.149	25.388	0.210	24.905	0.055	CA1 different from all other regions

The genes SLC1A2, SLC1A3 and GPI were not present in the initial list of 108 genes with a lower expression level in CA1 (supplementary material 1), because the cut-off was set at a fold change of 2 and a statistical correction for multiple comparisons (Benjamin and Hochberg, 2005) was applied to select that group of genes. Statistical analyses performed on the microarray data derived from individual probes for these genes were consistent with the Taqman® RT-PCR data and revealed a differential expression in CA1 as compared to every other region.

Correlation Matrix between Taqman® RT-PCR and Affymetrix® U133 microarray analyses of gene expression

TaqMan® Assay ID and Affymetrix® Probeset ID are listed adjacent to the Gene Symbol



### Supplementary Material 3: Lavenex et al.

#### Developmental regulation of gene expression and astrocytic processes may explain selective hippocampal vulnerability

Genes differentially expressed in ten- to 11-week-old C57BL/6 male mice (Lein et al. (2004), J Neuroscience 24(15):3879-3889) and showing similar differences in expression in the monkey hippocampal formation across postnatal development

Comparisons were limited to the three regions sampled in the Lein et al's study

Dentate gyrus		versus	CA3		versus	CA1	
Higher	Lower		Higher	Lower		Higher	Lower
PPP1R1A	MAN1A		BOK	CALB1		NOV	TGFB2
IGFBP5	MAN2A1		SPOCK1	LRRN1		BHLHB2	
TRCPC6	SEZ6		ELAVL2	NGEF		ETV1	
EHD1			SOCS2	MARCKS		KL	
CEBPD			SH3GL2	TLE1		EGR1	
JUN			SNAP91	ACTA2		PBX3	
SSTR2			PRKCA				
RYR1			CADPS				
CAMK2G			AK4				
DGAT2			SGK				
ATP1A1			NEFL				

Genes differentially expressed in pyramidal neurons of 62-92-year-old male humans (Ginsberg and Che (2005), J Comp Neurol 487:107-118) and showing similar differences in expression in the monkey hippocampal formation across postnatal development

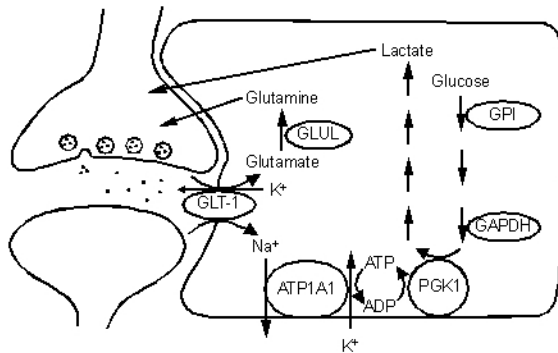
Comparisons were limited to the two regions sampled in the Ginsberg et Che's study

CA3	versus	CA1
Higher		Higher
ACTB		GRIK1
ACTG		GRIN2B
APP		GABRA1
SNCA		GABRA2
JUND		BCL2
		EEA1

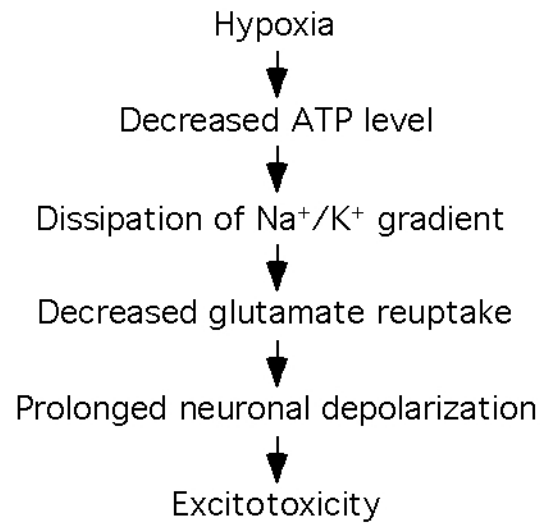
## Supplementary Material 4: Lavenex et al.

Developmental regulation of gene expression and astrocytic processes may explain selective hippocampal vulnerability

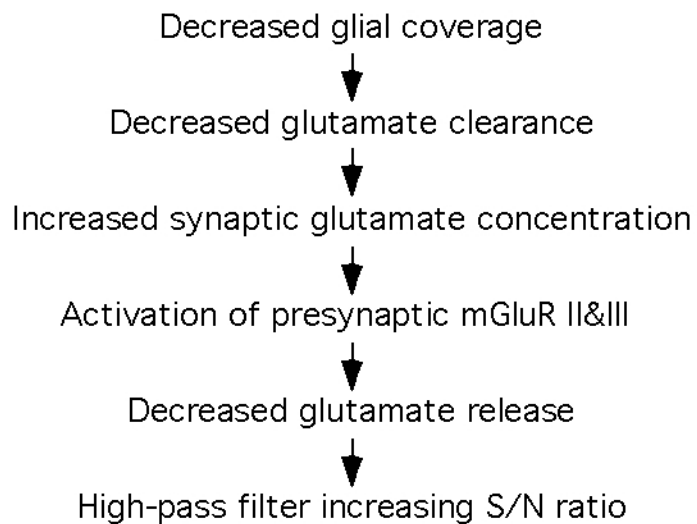
a



b



c



d

