

## Supplementary Materials

Sexual dimorphism and ageing in the human hippocampus: Identification, validation and impact of differentially expressed genes by factorial microarray and network analysis

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**Table S9:** Comparison between proteins altered during ageing as detected by proteome analysis (Xu et al., 2016) with respect to our results using factorial Q-GDEMAR (micro-array data from Berchtold et al., 2008). In both the samples were taken from the hippocampus region, but in the proteomic study the samples come from a chinese population, whereas in the case of micro-array the samples come from a caucasian population.

Proteome Analysis [Elderred]	Microarray analysed by factorial Q-GDEMAR		
	Age Effect [Elderred to Adult Ratio]	Sex Effect [Female to Male Ratio]	Sex-Age Interaction [Super-Ratio]
HPCA			HPCA: +2.14
BGN	BGN: +1.20	BGN: -1.43	
TPM1	TMP4: -1.60		TPM2: +1.73 TPM3: +1.92
MYH11	MYH2: +1.93 MYH3: -1.37 MYH8: +1.19 MYH10: +1.41		MYH11: +2.04 MYH10: +1.20
GSTM4	GSTM5: +1.24	GSTM3 +1.30	
CAPS2			CAPS2: +1.71 CAPS2: -2.19
SYNPO2	SYNPO2: +1.57 SYNPO: -1.68	SYNPO: -1.37	
VIM			
PMP2			PMP2: +1.87
TAGLN	TAGLN: -1.80	TAGLN: -1.55	
FHL2	FHL1: +2.04 FHL3: +1.36 FHL5: +1.26		FHL1: +3.18 FHL1: -1.64
CAS			CASR: +2.03
FTL			
RIMS3			RIMS4: +1.26
TF (transferrine)			TF: +1.19 TFR2: +1.47
BDH2			HIBADH: +9.84
CTSH	CTSB: -1.45 CTSC: -1.52 CTSF: -1.37		CTSS: +1.96 CTSB: +1.89 CTSG: +1.59 CTSL: -2.28

GPRC5B		GPRC5B: +1.18	
COL6A2	COL6A2: -1.50		COL6A5: +1.46
COL6A3	COL6A1: +1.24	COL6A1: +1.35	COL6A1:+1.55
HLA-Class I	HLA-C: -1.55		HLA_A2: +2.11 HLA-B: +1.44 HLA-E: -1.68 HLA-G:+1.41 HLA_A2: +2.11
HLA-Class II	HLA-DPA2: +1.47 HLA-DQA1: -1.33 HLA-DQA2: -1.33 HLA-DRB4: +1.24 HLD-DRB5: +1.29	HLA-DRA:-1.26	HLA-DRB1: +1.24 HLA-DRB2: +1.14 HLA-DRB6: -2.55 HLA-DPA1: -3.57 HLA-DQA1: -1.41 HLA-DQB1: +2.18 HLA-DOA: +1.56
RENBP??			
H2AFY	H2FY: -1.38 H2APY2: -1.40 H2AFX: -1.88		H2AFY: -1.958
ITPKB	ITPKA: -1.32	ITPKB: 1.27	ITPKB: +1.89 ITPKB: -1.23
FLNA	FLNC: +1.38		FLNB: +1.68 FBLIM1: -1.60
GFAP			
ANXA2		ANXA2: -1.65	ANXA2: +1.54 ANXA2: +1.62 ANXA2: -2.31
NUDTIC	NUDT2: +1.22 NUDT4: +1.24 NUDT12: +1.59 NUDT13: +1.20 NUDT22: +1.43 NUDC: 1.19 NUDT16R1: 1.19	NUDT2:-1.36 NUDT3: -1.65 NUDT4: +1.37 NUDT10:-1.29 NUDT13: +1.21 NUDT22: -1.36	NUDT4: +1.66 NUDT5: +1.68 NUDT9: +1.66 NUDT11: +1.70 NUDT17: +1.52 NUDT17: -1.54 NUDT19: +1.80 NUDT6: +2.55
NES			
COG8	COG1: +1.21 COG2: +1.23 COG5: +1.26 COG5: -1.33 COG6: -1.45		COG1: -1.70 COG2: -2.85
S100A9			S100A12: +1.61 S100A16: +1.20
SCG2	SCG3: +1.31	SCG2: +1.23 SCG3: -1.31	SCG5: +1.85
NRP1	NRP1: -1.40 NRP2: -1.63	NRP1: -1.37 NRP2: +1.23	NRP2: +1.234 NRP2: -2.011
IGLC2	IGL7: +1.37 IGLL5: +1.22 IGLC7: +1.36		IGLL1: -1.77 IGLV140/44: -1.84

	IGLV@: +1.24 IGLV1-40: +1.62		
PCDHGC5	PCDHGC5: -1.50 PCDGC3: +1.44 PCDHA10: +1.20 PCDHGA8: -1.35 PCDH12: -1.76 PCDHGB7: -2.21	PCDHBS5: +1.20 PCDH11X: -1.26 PCDHB10: -1.34 PCDH12: -1.38	PDCDH17: +3.75 PDCDH18: +1.68 PDCDHGA9: +1.64 PDCDH19: +1.51 PCDH7: -1.53 //-1.70
FABP3	FABP5: +1.34		FABP7: -1.70
SERPINA1	SERPINA1: -2.02	SERPINA1: -1.28	SERPINA6: +2.90
HSPB1		HSPA8: +1.34 HSPA9: +1.19 HSPB9: +1.21 HSPD1: +1.26 HSP90A1: 1.26	HSPB7: +1.54 HSPB8: -2.64
GPT			GPT: +2.03
CLIC6			CLIC2: -1.96
CACNG8	CACNG8: +1.22	CACNG8: +1.23 CACNG2: +1.24	CACNG1: +1.89 CACNGG3: -1.51
SMARCE1	SMARCA4: +1.20 SMARCA1: +1.18		SMARCA2: +1.80 SMARCA2: +1.35
KNG1	KNG1: +1.26		KNG1: +1.82
APOA2	APOB: 1.34 APOC2: -1.65 APOBEC3A: -1.46 (cytidine deaminase editing enzyme, antiviral) APOOL: -1.70	APOE: +1.19 APOOC: +1.19 APOC2: -1.30 APOBEC2: -1.60 (Editing enzyme of ApoE mRNA)	APOA2: +1.86
WIPF3	WIPF1: +1.46		WIPF2: +1.21
RAB3D	RAB3IP: -1.39 RAB33A: -1.45	RAB3B: +1.19 RAB36: +1.20 RAB39A: +1.29 RAB3IL1: +1.26 RAB3GAP1: -1.30	RAB3C: -1.70 RAB30: +3.01 RAB37: +2.06
ALBUMIN			ALBUMIN: +2.55
PVALB			
AHS6	AHS2: +1.19		
CRMP1			
VITAMIN D BINDING PROTEIN	VDR: +1.19 VDR: +1.18		
IGHG1	IGHG1: -1.35// -2.68// +1.66		IGHG1: 1.72// 1.51// 1.45
PVRL1		PVRL1: -1.26	PVRL1: -3.45
SHISA6	SHISA3: +1.80 SHISA5: +1.21	SHISA3: +1.22 SHISA5: +1.32	SHISA2: -1.51