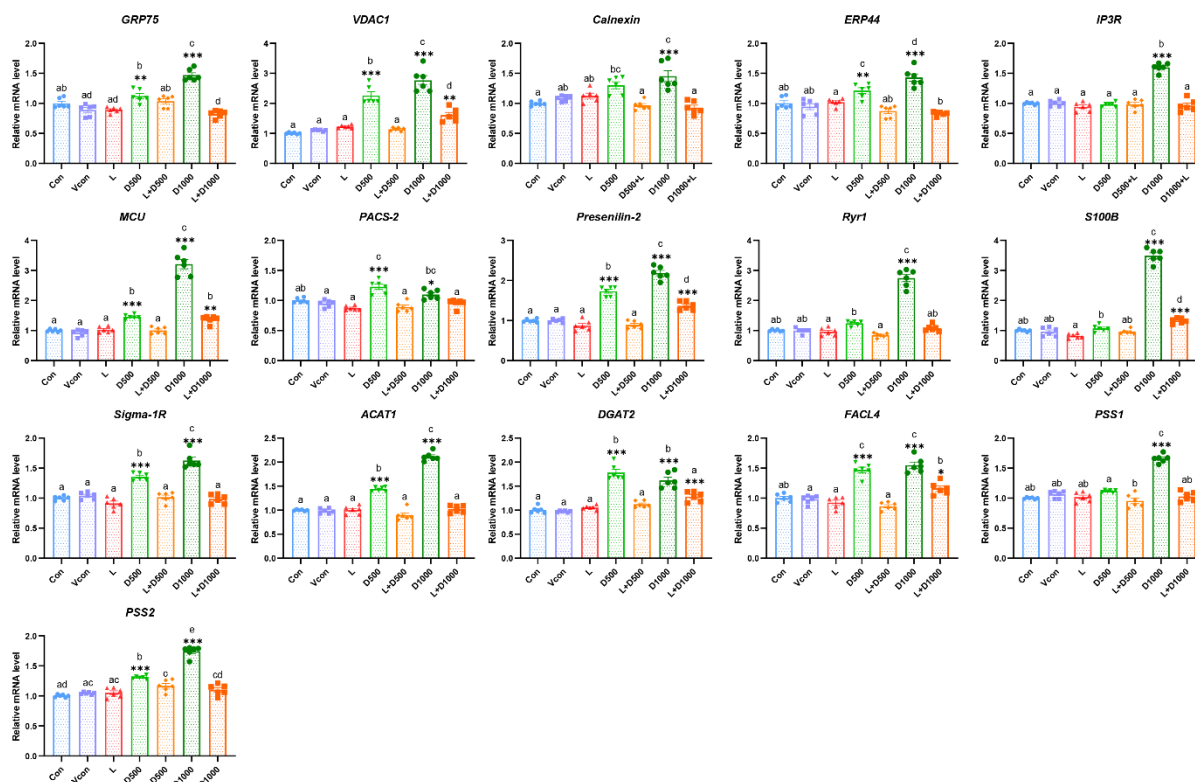


Supplemental Materials

Fig. S1. The MAMs-related mRNA expression of liver



The data are presented as means $\pm$ SEM. Symbol for the significance of differences between the vehicle control group and another group: * P < 0.05, ** P < 0.01, *** P < 0.001. Different letters above columns indicate significant differences at P < 0.05 level between treatments.

Tab. S1. The dosage regimen and experimental groups.

Groups	Dosage regimen
Con group	Distilled water
Vcon group	Corn oil
L group	5 mg/kg body weight /day (Lycopene)
D500 group	500 mg/kg body weight /day (DEHP)
D1000 group	1000 mg/kg body weight /day (DEHP)
L+D500 group	5 mg/kg body weight /day (Lycopene) +500 mg/kg body weight /day (DEHP)
L+D1000 group	5 mg/kg body weight /day (Lycopene) +1000 mg/kg body weight /day (DEHP)

Tab. S2. Sequences of oligonucleotide primers for qRT-PCR.

Gene Names	Sequence (5' → 3')	NCBI Sequence	Reference	Amplicon (bp)	size
GADPH	AAGGTCGGTGTGAACGGATT CAACAATCTCCACTTTGCCACT	NM_001289726.1		82	
β-actin	CAAGAGAGGTATCCTGACCT TGATCTGGGTCATCTTTTCAC	NM_007393.5		188	
Mfn1	TTCTGAGTTTCATCCTACCCC CGATCAGCCAAATTTCTCCCA	NM_024200.4		96	
Mfn2	AGCAAGTTGACATCACCCGAGA AAGTGAATCCAGAGCCTCGAC	NM_001285920.1		80	
OPA1	CCGCTTCATGACAGAACCCAA CCTCGGCAAAGTCGTTCCAC	NM_001199177.1		113	
Fis1	ACGCAATTTGAATATGCCTGGT CGCTGTTCTCTTTGCTCCC	NM_025562.3		113	
Drp1	CAAGAAAAGTGTCTGCCCCGAGA TTACTGCCTTTGGGACACTG	NM_152816.3		114	
MFF	ACAACGTCAGGTATGGCATT GAAGCTGCATCTACCACAGT	NM_029409.3		82	
Mief1	GACGGCTGACCATATCCAAC TTCTCACGACGAACCAGGA	NM_001357659.1		120	
Mief2	CTGCCCTGTCACTTCAACCC ACAGCACGTAGCCAATGTCA	NM_001009927.2		82	
VDAC1	TCTGCCAACACGGAAACCAC TTCTCTGTAAACGTCAGCCCAT	NM_001362693.1		86	
GRP75	AGCCAGGTGTTTTCTACTGC TGTCTCCAGCCATCTCTCG	NM_010481.2		85	
Calnexin	AAACTGAATAAGCCCTTCCTGT GCAGCTTCACATAGGCACCA	NM_007597.3		103	
ERp44	TCACCAATCTTGATCGCAGT GAAGGCACAGTCATCATGCAA	NM_029572.3		116	
IP3R	ATATGGCAACGTGATCCAGCTC TCATGGCGTTCTTCTCTAGCAA	NM_010585.5		95	
MCU	TCCTCGATGACTTTAAGCTTG CCAGGGTCTTCACGTCGTTT	NM_001033259.4		114	

PACS-2	AAAGAACTCCTGTCCGTGGT GTCCACTAGGAGGCAACACA	NM_001291444.1	91
Presenilin-2	ATCATGCTATTCGTGCCTGT CTGCCC GTTCTTCTCAGTGT	NM_011183.3	90
Ryr1	CAACTATGTCACCAGCATCCG TGTCAGAAATGGAGCCACCT	NM_009109.2	115
S100B	AGCTTATCAACAACGAGCTCT CCATCTTCGTCCAGCGTCT	NM_009115.3	91
Sigma-1	GGGCACTCAAACTTCGTCT AGCTCCACGATCAGCCGAGA	NM_011014.3	105
ACAT1	GCCACTAAACTTGGTACTGCT CCTTGGATGACATTGCCCAT	NM_144784.3	101
DGAT2	TGCCTTCTGTAAC TTCAGCAC AGTTACCAGCCAACGTAGCC	NM_026384.3	89
FACL4	TATCCCTGGACTAGGACCGAA TCCTACAGCCATAGGTAAAGCA	NM_207625.2	104
PSS1	CTGGATGATCCCGGAGCCAA TCTTTATCTTCTTCCTCGCCAT	NM_022029.2	82
PSS2	TACTGTGGCATGAAGACCCTC TGAAGTGAAGGCAATCCTC	NM_013782.4	112
ATF4	ACATTCTTGCAGCCTTTCCC TCAACTTCACTGCCTAGCTCT	NM_009716.3	89
ATF6	ATTACCAGCTACCACCCACA AGTCCTGCCCATTGATCACA	NM_001081304.1	98
GRP78	CCAAAACCGCCTGACACCT ATTCCTGGTGTCAATGCGCTCT	NM_001163434.1	103
GRP94	CAAGCATACCAGACGGGCAA CTTCCTTAATCCGCCGCAAC	NM_011631.1	118
CHOP	CTCGCTCTCCAGATTCCAGT TGACCACTCTGTTTCCGTTT	NM_007837.4	91
EIF2a	CAGCTTATAGACCTCCAGCCTT ATGGCTTGTCACCTCCTGGAT	NM_001005509.2	108
PERK	ATCAGCACTTTAGATGGACGAA AGACCCCACGTCCAAATCCCA	NM_001313918.1	81

Tab. S3. Total Variance Explained of PCA

Total Variance Explained (Mitochondrial dynamics)

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Total	% of Variance	Total	% of Variance
1	7.686	64.052	64.052	7.686	64.052	64.052
2	1.986	16.552	80.604	1.986	16.552	80.604
3	.936	7.800	88.404	.936	7.800	88.404
4	.535	4.456	92.860			
5	.342	2.852	95.712			
6	.209	1.741	97.453			
7	.143	1.190	98.643			
8	.067	.557	99.200			
9	.046	.380	99.580			
10	.032	.268	99.848			
11	.013	.105	99.953			
12	.006	.047	100.000			

Extraction Method: Principal Component Analysis (PCA).

Tab. S4. Total Variance Explained of PCA

Total Variance Explained (MAMs)

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Total	% of Variance	Total	% of Variance
1	10.290	79.153	79.153	10.290	79.153	79.153
2	1.050	8.080	87.232	1.050	8.080	87.232
3	.601	4.626	91.859	.601	4.626	91.859
4	.390	3.002	94.861			
5	.223	1.717	96.578			
6	.159	1.227	97.804			
7	.122	.935	98.740			
8	.082	.630	99.370			
9	.050	.384	99.754			
10	.016	.123	99.877			
11	.007	.058	99.934			
12	.005	.038	99.973			
13	.004	.027	100.000			

Extraction Method: Principal Component Analysis (PCA).

Tab. S5. Total Variance Explained of PCA

Total Variance Explained (ER stress)

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Total	% of Variance	Total	% of Variance
1	7.556	68.695	68.695	7.556	68.695	68.695
2	1.858	16.890	85.585	1.858	16.890	85.585
3	.708	6.437	92.022	.708	6.437	92.022
4	.345	3.132	95.154			
5	.206	1.871	97.025			
6	.141	1.278	98.303			
7	.076	.689	98.992			
8	.058	.525	99.517			
9	.032	.287	99.804			
10	.015	.138	99.942			
11	.006	.058	100.000			

Extraction Method: Principal Component Analysis (PCA).

Tab. S6. The result of correlation analysis

		GRP75	VDAC1	Calnexin	ERp44	IP3R	MCU	PACS2	Presenilin2	Ryr1	S100B	Sigma1R	ACAT1
GRP75	Pearson correlation	1.000	.283	.426"	.814"	.448"	.308	.499"	.422"	.330"	.303	.706"	.484"
	Significant (Bilateral)		.069	.005	.000	.003	.047	.001	.005	.033	.051	.000	.001
	N	42	42	42	42	42	42	42	42	42	42	42	42
VDAC1	Pearson correlation	.283	1.000	.577"	.426"	.229	.839"	.512"	.746"	.715"	.551"	.544"	.692"
	Significant (Bilateral)	.069		.000	.005	.145	.000	.001	.000	.000	.000	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
Calnexin	Pearson correlation	.426"	.577"	1.000	.647"	.222	.564"	.501"	.497"	.584"	.190	.416"	.540"
	Significant (Bilateral)	.005	.000		.000	.158	.000	.001	.001	.000	.229	.006	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
ERp44	Pearson correlation	.814"	.426"	.647"	1.000	.352	.355"	.511"	.458"	.504"	.209	.629"	.671"
	Significant (Bilateral)	.000	.005	.000		.022	.021	.001	.002	.001	.184	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
IP3R	Pearson correlation	.448"	.229	.222	.352	1.000	.347	.300	.504"	.419"	.525"	.664"	.563"
	Significant (Bilateral)	.003	.145	.158	.022		.024	.054	.001	.006	.000	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
MCU	Pearson correlation	.308	.839"	.564"	.355"	.347	1.000	.674"	.868"	.757"	.698"	.543"	.730"
	Significant (Bilateral)	.047	.000	.000	.021	.024		.000	.000	.000	.000	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
PACS2	Pearson correlation	.499"	.512"	.501"	.511"	.300	.674"	1.000	.722"	.681"	.533"	.630"	.617"
	Significant (Bilateral)	.001	.001	.001	.001	.054	.000		.000	.000	.000	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
Presenilin2	Pearson correlation	.422"	.746"	.497"	.458"	.504"	.868"	.722"	1.000	.832"	.797"	.735"	.811"
	Significant (Bilateral)	.005	.000	.001	.002	.001	.000	.000		.000	.000	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
Ryr1	Pearson correlation	.330"	.715"	.584"	.504"	.419"	.757"	.681"	.832"	1.000	.693"	.603"	.732"
	Significant (Bilateral)	.033	.000	.000	.001	.006	.000	.000	.000		.000	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
S100B	Pearson correlation	.303	.551"	.190	.209	.525"	.698"	.533"	.797"	.693"	1.000	.590"	.516"
	Significant (Bilateral)	.051	.000	.229	.184	.000	.000	.000	.000	.000		.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
Sigma1R	Pearson correlation	.706"	.544"	.416"	.629"	.664"	.543"	.630"	.735"	.603"	.590"	1.000	.777"
	Significant (Bilateral)	.000	.000	.006	.000	.000	.000	.000	.000	.000	.000		.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
ACAT1	Pearson correlation	.484"	.692"	.540"	.671"	.563"	.730"	.617"	.811"	.732"	.516"	.777"	1.000
	Significant (Bilateral)	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	
	N	42	42	42	42	42	42	42	42	42	42	42	42
DGAT2	Pearson correlation	.451"	.880"	.429"	.437"	.205	.798"	.594"	.715"	.600"	.532"	.586"	.646"
	Significant (Bilateral)	.003	.000	.005	.004	.193	.000	.000	.000	.000	.000	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
FACL4	Pearson correlation	.399"	.702"	.417"	.530"	.288	.687"	.710"	.829"	.880"	.758"	.658"	.719"
	Significant (Bilateral)	.009	.000	.006	.000	.064	.000	.000	.000	.000	.000	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
PSS1	Pearson correlation	.436"	.639"	.478"	.575"	.722"	.621"	.569"	.751"	.682"	.552"	.837"	.905"
	Significant (Bilateral)	.004	.000	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
PSS2	Pearson correlation	.565"	.713"	.638"	.469"	.123	.656"	.512"	.563"	.504"	.508"	.552"	.391"
	Significant (Bilateral)	.000	.000	.000	.002	.439	.000	.001	.000	.001	.001	.000	.011
	N	42	42	42	42	42	42	42	42	42	42	42	42
Mfn1	Pearson correlation	-.495"	-.476"	-.490"	-.552"	-.288	-.411"	-.415"	-.442"	-.407"	-.428"	-.532"	-.471"
	Significant (Bilateral)	.001	.001	.001	.000	.064	.007	.006	.003	.007	.005	.000	.002
	N	42	42	42	42	42	42	42	42	42	42	42	42
Mfn2	Pearson correlation	-.561"	-.374"	-.434"	-.571"	-.067	-.329	-.494"	-.456"	-.379	-.319	-.619"	-.479"
	Significant (Bilateral)	.000	.015	.004	.000	.674	.033	.001	.002	.013	.039	.000	.001
	N	42	42	42	42	42	42	42	42	42	42	42	42
OPA1	Pearson correlation	-.546"	-.223	-.316"	-.344"	-.290	-.283	-.225	-.298	-.198	-.405"	-.477"	-.258
	Significant (Bilateral)	.000	.156	.041	.026	.063	.070	.151	.055	.209	.008	.001	.099
	N	42	42	42	42	42	42	42	42	42	42	42	42
Mief1	Pearson correlation	.251	.528"	.379	.454"	.248	.520"	.318	.373	.411"	.356"	.373	.474"
	Significant (Bilateral)	.109	.000	.013	.003	.113	.000	.040	.015	.007	.021	.015	.002
	N	42	42	42	42	42	42	42	42	42	42	42	42
Mief2	Pearson correlation	.162	.411"	.084	.293	.160	.394"	.219	.302	.322"	.457"	.207	.322"
	Significant (Bilateral)	.305	.007	.597	.059	.312	.010	.163	.052	.038	.002	.187	.037
	N	42	42	42	42	42	42	42	42	42	42	42	42
DRP1	Pearson correlation	.390"	.831"	.280	.278	.263	.768"	.427"	.695"	.590"	.633"	.536"	.538"
	Significant (Bilateral)	.011	.000	.073	.075	.092	.000	.005	.000	.000	.000	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
Fis1	Pearson correlation	.440"	.876"	.420"	.353"	.287	.804"	.521"	.736"	.647"	.603"	.573"	.588"
	Significant (Bilateral)	.004	.000	.006	.022	.065	.000	.000	.000	.000	.000	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
MFF	Pearson correlation	.512"	.745"	.351	.340	.201	.627"	.550"	.642"	.535"	.485"	.645"	.495"
	Significant (Bilateral)	.001	.000	.023	.027	.203	.000	.000	.000	.000	.001	.000	.001
	N	42	42	42	42	42	42	42	42	42	42	42	42

		DGAT2	FACL4	PSS1	PSS2	Mfn1	Mfn2	OPA1	Mief1	Mief2	DRP1	Fis1	MFF
GRP75	Pearson correlation	.451"	.399"	.436"	.565"	-.495"	-.561"	-.546"	.251	.162	.390"	.440"	.512"
	Significant (Bilateral)	.003	.009	.004	.000	.001	.000	.000	.109	.305	.011	.004	.001
	N	42	42	42	42	42	42	42	42	42	42	42	42
VDAC1	Pearson correlation	.880"	.702"	.639"	.713"	-.476"	-.374"	-.223	.528"	.411"	.831"	.876"	.745"
	Significant (Bilateral)	.000	.000	.000	.000	.001	.015	.156	.000	.007	.000	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
Calnexin	Pearson correlation	.429"	.417"	.478"	.638"	-.490"	-.434"	-.316"	.379	.084	.280	.420"	.351"
	Significant (Bilateral)	.005	.006	.001	.000	.001	.004	.041	.013	.597	.073	.006	.023
	N	42	42	42	42	42	42	42	42	42	42	42	42
ERp44	Pearson correlation	.437"	.530"	.575"	.469"	-.552"	-.571"	-.344"	.454"	.293	.278	.353"	.340"
	Significant (Bilateral)	.004	.000	.000	.002	.000	.000	.026	.003	.059	.075	.022	.027
	N	42	42	42	42	42	42	42	42	42	42	42	42
IP3R	Pearson correlation	.205	.288	.722"	.123	-.288	-.067	-.290	.248	.160	.263	.287	.201
	Significant (Bilateral)	.193	.064	.000	.439	.064	.674	.063	.113	.312	.092	.065	.203
	N	42	42	42	42	42	42	42	42	42	42	42	42
MCU	Pearson correlation	.798"	.687"	.621"	.656"	-.411"	-.329	-.283	.520"	.394"	.768"	.804"	.627"
	Significant (Bilateral)	.000	.000	.000	.000	.007	.033	.070	.000	.010	.000	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
PACS2	Pearson correlation	.594"	.710"	.569"	.512"	-.415"	-.494"	-.225	.318"	.219	.427"	.521"	.550"
	Significant (Bilateral)	.000	.000	.000	.001	.006	.001	.151	.040	.163	.005	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
Presenilin2	Pearson correlation	.715"	.829"	.751"	.563"	-.442"	-.456"	-.298	.373	.302	.695"	.736"	.642"
	Significant (Bilateral)	.000	.000	.000	.000	.003	.002	.055	.015	.052	.000	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
Ryr1	Pearson correlation	.600"	.880"	.682"	.504"	-.407"	-.379	-.198	.411"	.322"	.590"	.647"	.535"
	Significant (Bilateral)	.000	.000	.000	.001	.007	.013	.209	.007	.038	.000	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
S100B	Pearson correlation	.532"	.758"	.552"	.508"	-.428"	-.319"	-.405"	.356	.457"	.633"	.603"	.485"
	Significant (Bilateral)	.000	.000	.000	.001	.005	.039	.008	.021	.002	.000	.000	.001
	N	42	42	42	42	42	42	42	42	42	42	42	42
Sigma1R	Pearson correlation	.586"	.658"	.837"	.552"	-.532"	-.619"	-.477"	.373	.207	.536"	.573"	.645"
	Significant (Bilateral)	.000	.000	.000	.000	.000	.000	.001	.015	.187	.000	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
ACAT1	Pearson correlation	.646"	.719"	.905"	.391	-.471"	-.479"	-.258	.474"	.322"	.538"	.588"	.495"
	Significant (Bilateral)	.000	.000	.000	.011	.002	.001	.099	.002	.037	.000	.000	.001
	N	42	42	42	42	42	42	42	42	42	42	42	42
DGAT2	Pearson correlation	1.000	.660"	.535"	.700"	-.445"	-.437"	-.223	.365"	.281	.835"	.898"	.852"
	Significant (Bilateral)	.000	.000	.000	.000	.003	.004	.156	.017	.095	.000	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
FACL4	Pearson correlation	.660"	1.000	.648"	.530"	-.525"	-.558"	-.242	.403"	.418"	.622"	.673"	.816"
	Significant (Bilateral)	.000	.000	.000	.000	.000	.000	.123	.008	.006	.000	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
PSS1	Pearson correlation	.535"	.648"	1.000	.340	-.386"	-.366"	-.255	.446"	.275	.485"	.509"	.452"
	Significant (Bilateral)	.000	.000	.000	.027	.012	.017	.104	.003	.078	.001	.001	.003
	N	42	42	42	42	42	42	42	42	42	42	42	42
PSS2	Pearson correlation	.700"	.530"	.340"	1.000	-.586"	-.592"	-.572"	.368"	.297	.688"	.741"	.714"
	Significant (Bilateral)	.000	.000	.027	.000	.000	.000	.000	.017	.056	.000	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
Mfn1	Pearson correlation	-.445"	-.525"	-.386"	-.586"	1.000	.752"	.676"	-.492"	-.398"	-.285	-.431"	-.413"
	Significant (Bilateral)	.003	.000	.012	.000	.000	.000	.000	.001	.009	.068	.004	.007
	N	42	42	42	42	42	42	42	42	42	42	42	42
Mfn2	Pearson correlation	-.437"	-.558"	-.366"	-.592"	.752"	1.000	.640"	-.174	-.081	-.209	-.325"	-.464"
	Significant (Bilateral)	.004	.000	.017	.000	.000	.000	.000	.270	.610	.183	.035	.002
	N	42	42	42	42	42	42	42	42	42	42	42	42
OPA1	Pearson correlation	-.223	-.242	-.255	-.572"	.676"	.640"	1.000	-.201	-.227	-.199	-.221	-.243
	Significant (Bilateral)	.156	.123	.104	.000	.000	.000	.000	.203	.149	.207	.160	.121
	N	42	42	42	42	42	42	42	42	42	42	42	42
Mief1	Pearson correlation	.365"	.403"	.446"	.368"	-.492"	-.174	-.201	1.000	.774"	.430"	.396"	.199
	Significant (Bilateral)	.017	.008	.003	.017	.001	.270	.203	.000	.000	.004	.009	.206
	N	42	42	42	42	42	42	42	42	42	42	42	42
Mief2	Pearson correlation	.261	.418"	.275	.297	-.398"	-.081	-.227	.774"	1.000	.414"	.322"	.075
	Significant (Bilateral)	.095	.006	.078	.056	.009	.610	.149	.000	.000	.006	.038	.635
	N	42	42	42	42	42	42	42	42	42	42	42	42
DRP1	Pearson correlation	.835"	.622"	.485"	.688"	-.285	-.209	-.199	.430"	.414"	1.000	.953"	.838"
	Significant (Bilateral)	.000	.000	.001	.000	.068	.183	.207	.004	.006	.000	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
Fis1	Pearson correlation	.898"	.673"	.509"	.741"	-.431"	-.325	-.221	.396"	.322"	.953"	1.000	.903"
	Significant (Bilateral)	.000	.000	.001	.000	.004	.035	.160	.009	.038	.000	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
MFF	Pearson correlation	.852"	.616"	.452"	.714"	-.413"	-.464"	-.243	.199	.075	.838"	.903"	1.000
	Significant (Bilateral)	.000	.000	.003	.000	.007	.002	.121	.206	.635	.000	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42

		GRP75	VDAC1	Calnexin	ERp44	IP3R	MCU	PACS2	Presenilin2	Ryr1	S100B	Sigma1R	ACAT1
GRP75	Pearson correlation	1.000	.283	.426	.814	.448	.308	.499	.422	.330	.303	.706	.484
	Significant (Bilateral)		.069	.005	.000	.003	.047	.001	.005	.033	.051	.000	.001
	N	42	42	42	42	42	42	42	42	42	42	42	42
VDAC1	Pearson correlation	.283	1.000	.577	.426	.229	.839	.512	.746	.715	.551	.544	.692
	Significant (Bilateral)	.069		.000	.005	.145	.000	.001	.000	.000	.000	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
Calnexin	Pearson correlation	.426	.577	1.000	.647	.222	.564	.501	.497	.584	.190	.416	.540
	Significant (Bilateral)	.005	.000		.000	.158	.000	.001	.001	.000	.229	.006	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
ERp44	Pearson correlation	.814	.426	.647	1.000	.352	.355	.511	.458	.504	.209	.629	.671
	Significant (Bilateral)	.000	.005	.000		.022	.021	.001	.002	.001	.184	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
IP3R	Pearson correlation	.448	.229	.222	.352	1.000	.347	.300	.504	.419	.525	.664	.563
	Significant (Bilateral)	.003	.145	.158	.022		.024	.054	.001	.006	.000	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
MCU	Pearson correlation	.308	.839	.564	.355	.347	1.000	.674	.868	.757	.698	.543	.730
	Significant (Bilateral)	.047	.000	.000	.021	.024		.000	.000	.000	.000	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
PACS2	Pearson correlation	.499	.512	.501	.511	.300	.674	1.000	.722	.681	.533	.630	.617
	Significant (Bilateral)	.001	.001	.001	.001	.054	.000		.000	.000	.000	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
Presenilin2	Pearson correlation	.422	.746	.497	.458	.504	.868	.722	1.000	.832	.797	.735	.811
	Significant (Bilateral)	.005	.000	.001	.002	.001	.000	.000		.000	.000	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
Ryr1	Pearson correlation	.330	.715	.584	.504	.419	.757	.681	.832	1.000	.693	.603	.732
	Significant (Bilateral)	.033	.000	.000	.001	.006	.000	.000	.000		.000	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
S100B	Pearson correlation	.303	.551	.190	.209	.525	.698	.533	.797	.693	1.000	.590	.516
	Significant (Bilateral)	.051	.000	.229	.184	.000	.000	.000	.000	.000		.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
Sigma1R	Pearson correlation	.706	.544	.416	.629	.664	.543	.630	.735	.603	.590	1.000	.777
	Significant (Bilateral)	.000	.000	.006	.000	.000	.000	.000	.000	.000	.000		.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
ACAT1	Pearson correlation	.484	.692	.540	.671	.563	.730	.617	.811	.732	.516	.777	1.000
	Significant (Bilateral)	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	
	N	42	42	42	42	42	42	42	42	42	42	42	42
DGAT2	Pearson correlation	.451	.880	.429	.437	.205	.798	.594	.715	.600	.532	.586	.646
	Significant (Bilateral)	.003	.000	.005	.004	.193	.000	.000	.000	.000	.000	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
FACL4	Pearson correlation	.399	.702	.417	.530	.288	.687	.710	.829	.880	.758	.658	.719
	Significant (Bilateral)	.009	.000	.006	.000	.064	.000	.000	.000	.000	.000	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
PSS1	Pearson correlation	.436	.639	.478	.575	.722	.621	.569	.751	.682	.552	.837	.905
	Significant (Bilateral)	.004	.000	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
PSS2	Pearson correlation	.565	.713	.638	.469	.123	.656	.512	.563	.504	.508	.552	.391
	Significant (Bilateral)	.000	.000	.000	.002	.439	.000	.001	.000	.001	.001	.000	.011
	N	42	42	42	42	42	42	42	42	42	42	42	42
ATF4	Pearson correlation	.548	.556	.500	.502	.407	.587	.748	.637	.655	.418	.649	.588
	Significant (Bilateral)	.000	.000	.001	.001	.008	.000	.000	.000	.000	.006	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
ATF6	Pearson correlation	.575	.699	.297	.531	.153	.585	.655	.668	.616	.592	.655	.539
	Significant (Bilateral)	.000	.000	.056	.000	.333	.000	.000	.000	.000	.000	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
GRP78	Pearson correlation	.351	.368	.067	.253	-.202	.155	.263	.220	.198	.035	.271	.126
	Significant (Bilateral)	.023	.016	.673	.106	.199	.328	.092	.162	.208	.826	.083	.425
	N	42	42	42	42	42	42	42	42	42	42	42	42
GRP94	Pearson correlation	.045	.859	.314	.154	.201	.809	.420	.723	.710	.638	.348	.573
	Significant (Bilateral)	.778	.000	.043	.331	.203	.000	.006	.000	.000	.000	.024	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
CHOP	Pearson correlation	-.089	.763	.313	.170	-.163	.557	.283	.422	.495	.181	.158	.457
	Significant (Bilateral)	.575	.000	.043	.283	.302	.000	.069	.005	.001	.252	.317	.002
	N	42	42	42	42	42	42	42	42	42	42	42	42
EIF2a	Pearson correlation	.460	.845	.372	.370	.202	.738	.536	.702	.613	.539	.584	.571
	Significant (Bilateral)	.002	.000	.015	.016	.199	.000	.000	.000	.000	.000	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42	42
PERK	Pearson correlation	.408	.564	.452	.397	.225	.513	.622	.646	.703	.345	.513	.510
	Significant (Bilateral)	.007	.000	.003	.009	.152	.001	.000	.000	.000	.025	.001	.001
	N	42	42	42	42	42	42	42	42	42	42	42	42

		DGAT2	FACL4	PSS1	PSS2	ATF4	ATF6	GRP78	GRP94	CHOP	EIF2a	PERK
GRP75	Pearson correlation	.451**	.399**	.436**	.565**	.548**	.575**	.351	.045	-.089	.460**	.408**
	Significant (Bilateral)	.003	.009	.004	.000	.000	.000	.023	.778	.575	.002	.007
	N	42	42	42	42	42	42	42	42	42	42	42
VDAC1	Pearson correlation	.880**	.702**	.639**	.713**	.556**	.699**	.368*	.859**	.763**	.845**	.564**
	Significant (Bilateral)	.000	.000	.000	.000	.000	.000	.016	.000	.000	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42
Calnexin	Pearson correlation	.429**	.417**	.478**	.638**	.500**	.297	.067	.314	.313*	.372	.452**
	Significant (Bilateral)	.005	.006	.001	.000	.001	.056	.673	.043	.043	.015	.003
	N	42	42	42	42	42	42	42	42	42	42	42
ERp44	Pearson correlation	.437**	.530**	.575**	.469**	.502**	.531**	.253	.154	.170	.370**	.397**
	Significant (Bilateral)	.004	.000	.000	.002	.001	.000	.106	.331	.283	.016	.009
	N	42	42	42	42	42	42	42	42	42	42	42
IP3R	Pearson correlation	.205	.288	.722**	.123	.407**	.153	-.202	.201	-.163	.202	.225
	Significant (Bilateral)	.193	.064	.000	.439	.008	.333	.199	.203	.302	.199	.152
	N	42	42	42	42	42	42	42	42	42	42	42
MCU	Pearson correlation	.798**	.687**	.621**	.656**	.587**	.585**	.155	.809**	.557**	.738**	.513**
	Significant (Bilateral)	.000	.000	.000	.000	.000	.000	.328	.000	.000	.000	.001
	N	42	42	42	42	42	42	42	42	42	42	42
PACS2	Pearson correlation	.594**	.710**	.569**	.512**	.748**	.655**	.263	.420**	.283	.536**	.622**
	Significant (Bilateral)	.000	.000	.000	.001	.000	.000	.092	.006	.069	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42
Presenilin2	Pearson correlation	.715**	.829**	.751**	.563**	.637**	.668**	.220	.723**	.422**	.702**	.646**
	Significant (Bilateral)	.000	.000	.000	.000	.000	.000	.162	.000	.005	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42
Ryr1	Pearson correlation	.600**	.880**	.682**	.504**	.655**	.616**	.198	.710**	.495**	.613**	.703**
	Significant (Bilateral)	.000	.000	.000	.001	.000	.000	.208	.000	.001	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42
S100B	Pearson correlation	.532**	.758**	.552**	.508**	.418**	.592**	.035	.638**	.181	.539**	.345
	Significant (Bilateral)	.000	.000	.000	.001	.006	.000	.826	.000	.252	.000	.025
	N	42	42	42	42	42	42	42	42	42	42	42
Sigma1R	Pearson correlation	.586**	.658**	.837**	.552**	.649**	.655**	.271	.348*	.158	.584**	.513**
	Significant (Bilateral)	.000	.000	.000	.000	.000	.000	.083	.024	.317	.000	.001
	N	42	42	42	42	42	42	42	42	42	42	42
ACAT1	Pearson correlation	.646**	.719**	.905**	.391*	.588**	.539**	.126	.573**	.457**	.571**	.510**
	Significant (Bilateral)	.000	.000	.000	.011	.000	.000	.425	.000	.002	.000	.001
	N	42	42	42	42	42	42	42	42	42	42	42
DGAT2	Pearson correlation	1.000	.660**	.535**	.700**	.645**	.781**	.547**	.730**	.634**	.913**	.570**
	Significant (Bilateral)		.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42
FACL4	Pearson correlation	.660**	1.000	.648**	.530**	.590**	.807**	.361*	.697**	.516*	.682**	.652**
	Significant (Bilateral)	.000		.000	.000	.000	.000	.019	.000	.000	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42
PSS1	Pearson correlation	.535**	.648**	1.000	.340*	.616**	.486**	.052	.490**	.342*	.498**	.477**
	Significant (Bilateral)	.000	.000		.027	.000	.001	.744	.001	.026	.001	.001
	N	42	42	42	42	42	42	42	42	42	42	42
PSS2	Pearson correlation	.700**	.530**	.340*	1.000	.517**	.672**	.326*	.472**	.321*	.699**	.407**
	Significant (Bilateral)	.000	.000	.027		.000	.000	.035	.002	.038	.000	.008
	N	42	42	42	42	42	42	42	42	42	42	42
ATF4	Pearson correlation	.645**	.590**	.616**	.517**	1.000	.687**	.403**	.424**	.305*	.704**	.772**
	Significant (Bilateral)	.000	.000	.000	.000		.000	.008	.005	.050	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42
ATF6	Pearson correlation	.781**	.807**	.486**	.672**	.687**	1.000	.651**	.620**	.481**	.840**	.664**
	Significant (Bilateral)	.000	.000	.001	.000	.000		.000	.000	.001	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42
GRP78	Pearson correlation	.547**	.361*	.052	.326*	.403**	.651**	1.000	.308*	.506**	.683**	.637**
	Significant (Bilateral)	.000	.019	.744	.035	.008	.000		.047	.001	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42
GRP94	Pearson correlation	.730**	.697**	.490**	.472**	.424**	.620**	.308*	1.000	.769**	.770**	.557**
	Significant (Bilateral)	.000	.000	.001	.002	.005	.000	.047		.000	.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42
CHOP	Pearson correlation	.634**	.516**	.342*	.321*	.305*	.481**	.506**	.769**	1.000	.659**	.520**
	Significant (Bilateral)	.000	.000	.026	.038	.050	.001	.001	.000		.000	.000
	N	42	42	42	42	42	42	42	42	42	42	42
EIF2a	Pearson correlation	.913**	.682**	.498**	.699**	.704**	.840**	.683**	.770**	.659**	1.000	.726**
	Significant (Bilateral)	.000	.000	.001	.000	.000	.000	.000	.000	.000		.000
	N	42	42	42	42	42	42	42	42	42	42	42
PERK	Pearson correlation	.570**	.652**	.477**	.407**	.772**	.664**	.637**	.557**	.520**	.726**	1.000
	Significant (Bilateral)	.000	.000	.001	.008	.000	.000	.000	.000	.000	.000	
	N	42	42	42	42	42	42	42	42	42	42	42

** . At the 0.01 level (Bilateral) significant correlation.

* . At the 0.05 level (Bilateral) significant correlation.