

Supplementary Materials: Hepatic Transcriptome Profiles of Mice with Diet-Induced Nonalcoholic Steatohepatitis Treated with Astaxanthin and Vitamin E

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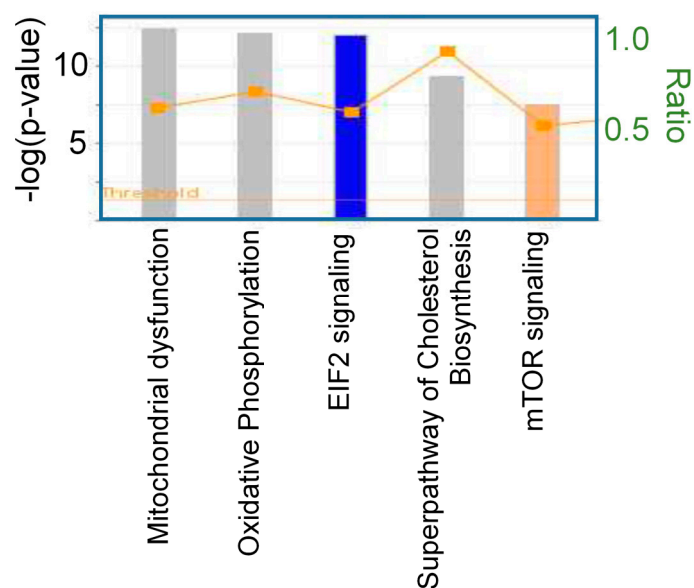


Figure S1. The top five canonical pathways of hepatic genes that were significantly altered in mice with diet-induced nonalcoholic steatohepatitis. Genes that were significantly up- or downregulated in the livers of the CL diet group compared with those in the normal chow group were analyzed by Ingenuity Pathway Analysis to identify the most significant pathways in the data set. The orange bar indicates the predicted pathway activation. The blue bar indicates the predicted pathway inhibition. Gray bars indicate pathways where no prediction had been made. Orange points connected by lines represent the ratio of the number of genes in a given pathway to the total number of genes in the reference set that make up that pathway. EIF2, eukaryotic initiation factor-2; mTOR, mammalian target of rapamycin.

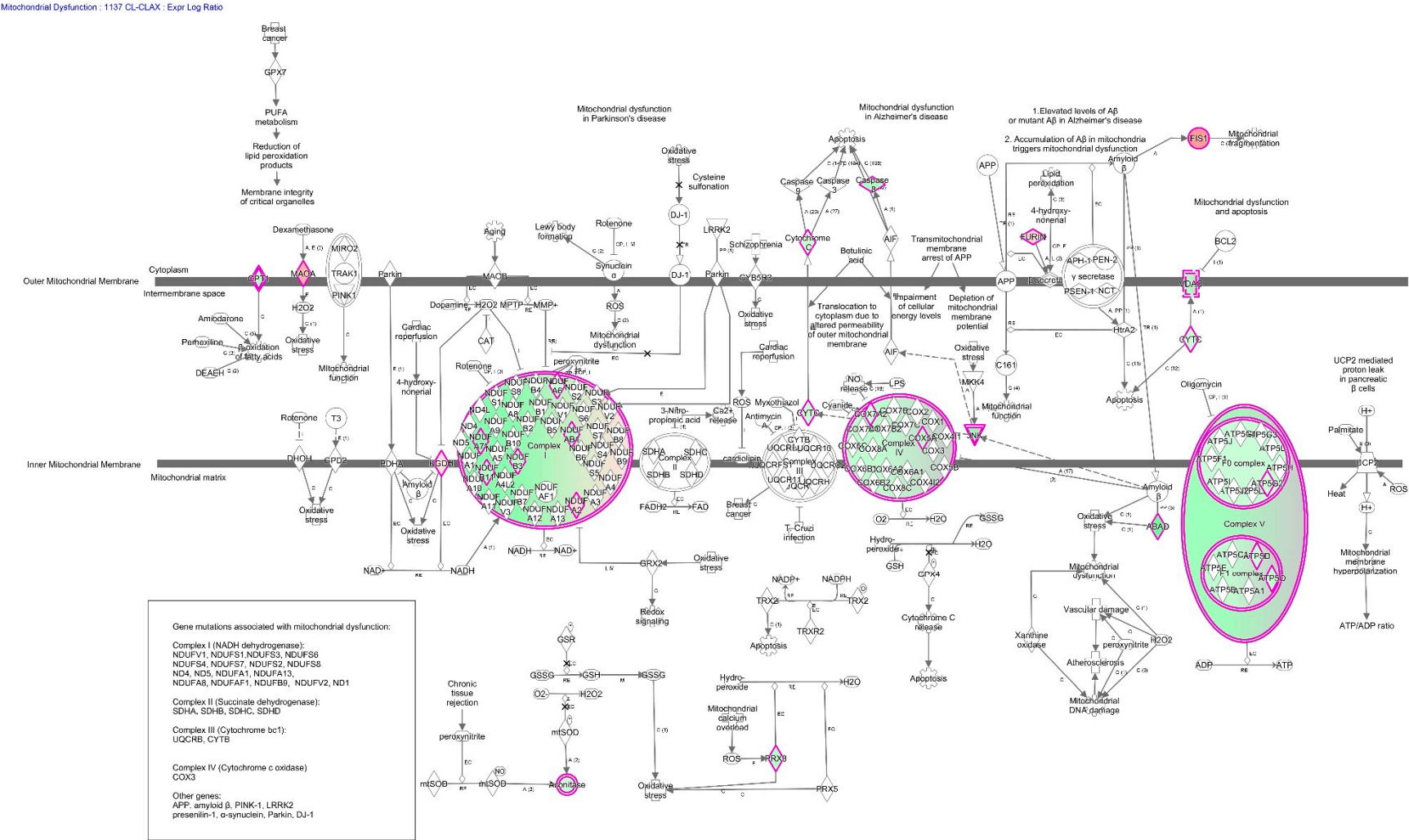
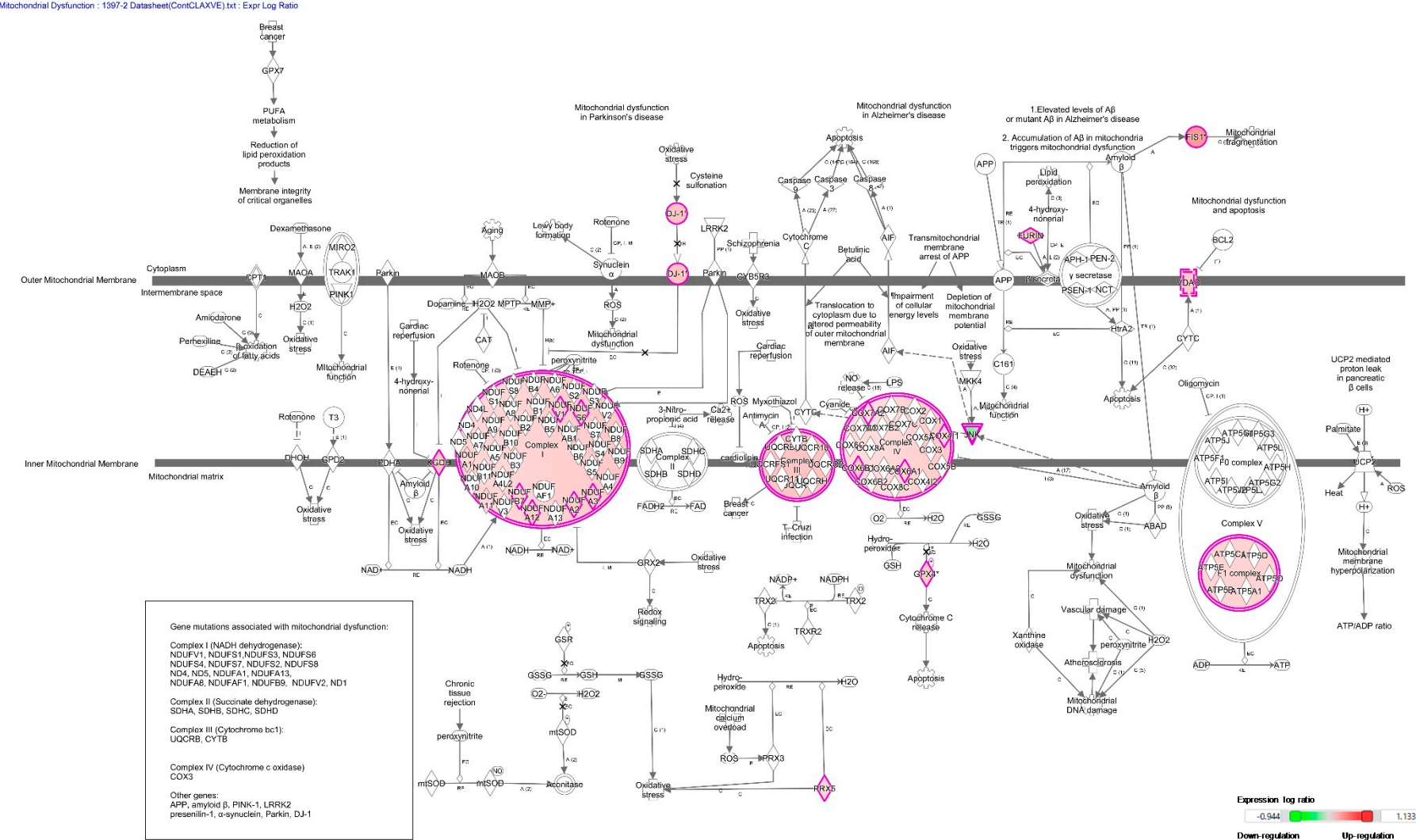


Figure S2. Astaxanthin suppressed the gene expression associated with mitochondrial dysfunction. The Ingenuity Pathway Analysis (IPA) mitochondrial dysfunction pathway of hepatic genes that were significantly altered by astaxanthin.



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Figure S3. Vitamin E improved the gene expression associated with mitochondrial dysfunction. The IPA mitochondrial dysfunction pathway of hepatic genes that were significantly altered by vitamin E.

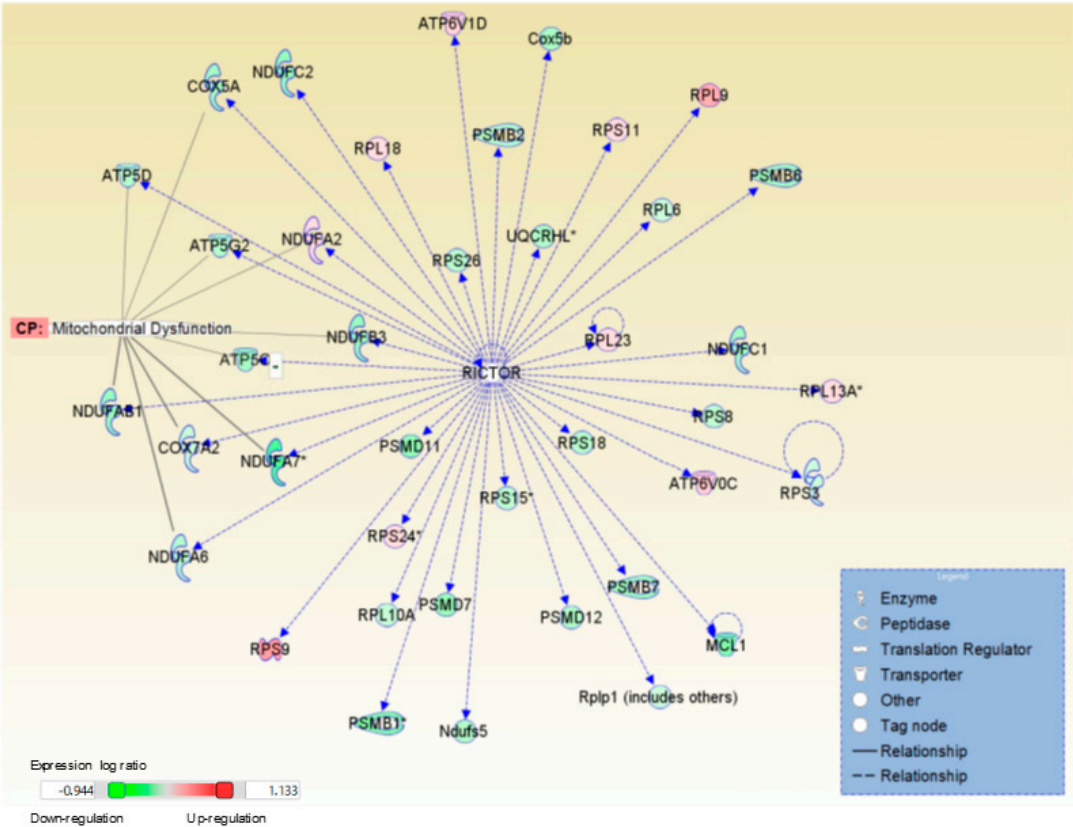


Figure S4. Relationship between rapamycin-insensitive companion of mTOR (RICTOR) and the target molecules in the dataset regulated by astaxanthin in mice with nonalcoholic steatohepatitis. →, expression. The network of the molecules was identified by Ingenuity Pathway Analysis. Most of the genes in the figure are known to be downregulated by RICTOR activation.

Table S2. Primer sequence used for real-time PCR.

Gene	5' Primer	3' Primer
<i>Scd1</i>	CAT CAT TCT CAT GGT CCT GCT	CCC AGT CGT ACA CGT CAT TTT
<i>Cpt1a</i>	AAA CCC ACC AGG CTA CAG TG	TCC TTG TAA TGT GCG AGC TG
<i>Acox1</i>	TTA TGC GCA GAC AGA GAT GG	AGG CAT GTA ACC CGT AGC AC
<i>Akt2</i>	CAT AGA TTC TTC CTC AGC ATC AAC	GCT GGT CCA GTT CCA GCG GG