

SUPPLEMENTARY MATERIALS

Daily Vinegar Ingestion Improves Depression Scores and Alters the Metabolome in Healthy Adults: A Randomized Controlled Trial

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Table S1. Metabolite changes over the trial period that differed significantly between groups as determined by independent samples *t*-test*.

Metabolite	<i>p</i>
3-Hexenedioic acid	0.002
Hexanoic acid	0.002
Homoserine	0.007
Threonine	0.007
Methionine	0.011
Fructose	0.012
3-Methyladipic acid	0.021
Imidazole	0.023
N-Acetyl-D-galactosamine	0.026
Fumarate	0.027
Proline	0.027
Acetylcysteine	0.031
Sarcosine	0.038
Galactonic acid	0.041
Acetohydroxamic acid	0.043
Pipecolinic acid	0.044
Lauric acid	0.049

*Significance calculated using change values (post/pre) between VIN and CON groups.

Table S2. Results of enzyme enrichment analysis.

Enzyme	Total	Hits	Statistic	<i>p</i>
L-threonine deaminase	3	1	26.783	0.007
N-acetylglucosamine-6-phosphate deacetylase	5	3	16.009	0.011
glucosamine-6-phosphate deaminase	6	3	16.009	0.011
N-acetyl-glucosamine lysosomal efflux	8	3	16.009	0.011
N-acetylglucosamine kinase	8	3	16.009	0.011
cystathionine beta-synthase	6	1	24.014	0.011
cystathionine g-lyase	6	1	24.014	0.011
H ₂ O transport, lysosomal	5	2	19.373	0.012
alpha-mannosidase, lysosomal	7	2	19.373	0.012
beta-mannosidase, lysosomal	7	2	19.373	0.012
DM Asn-X-Ser/Thr(ly)	7	2	19.373	0.012
mannose efflux from lysosome	7	2	19.373	0.012
Iodide: hydrogen-peroxide oxidoreductase 4	25	2	13.786	0.026
L-Thyroxine exchange	25	2	13.786	0.026

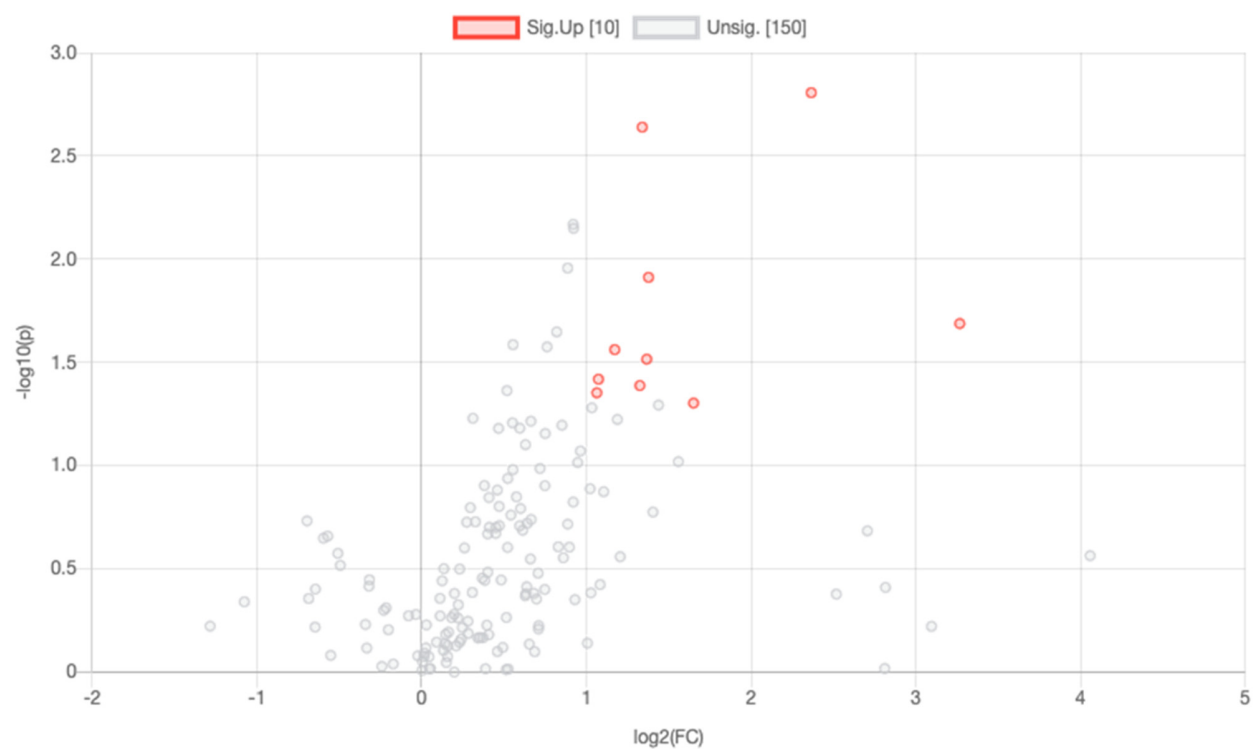


Figure S1. Volcano plot displaying the 10 metabolites to be significantly upregulated ($p < 0.05$) with a large magnitude of change ($\text{FC} > 2.0$) in the liquid vinegar group in comparison to controls.

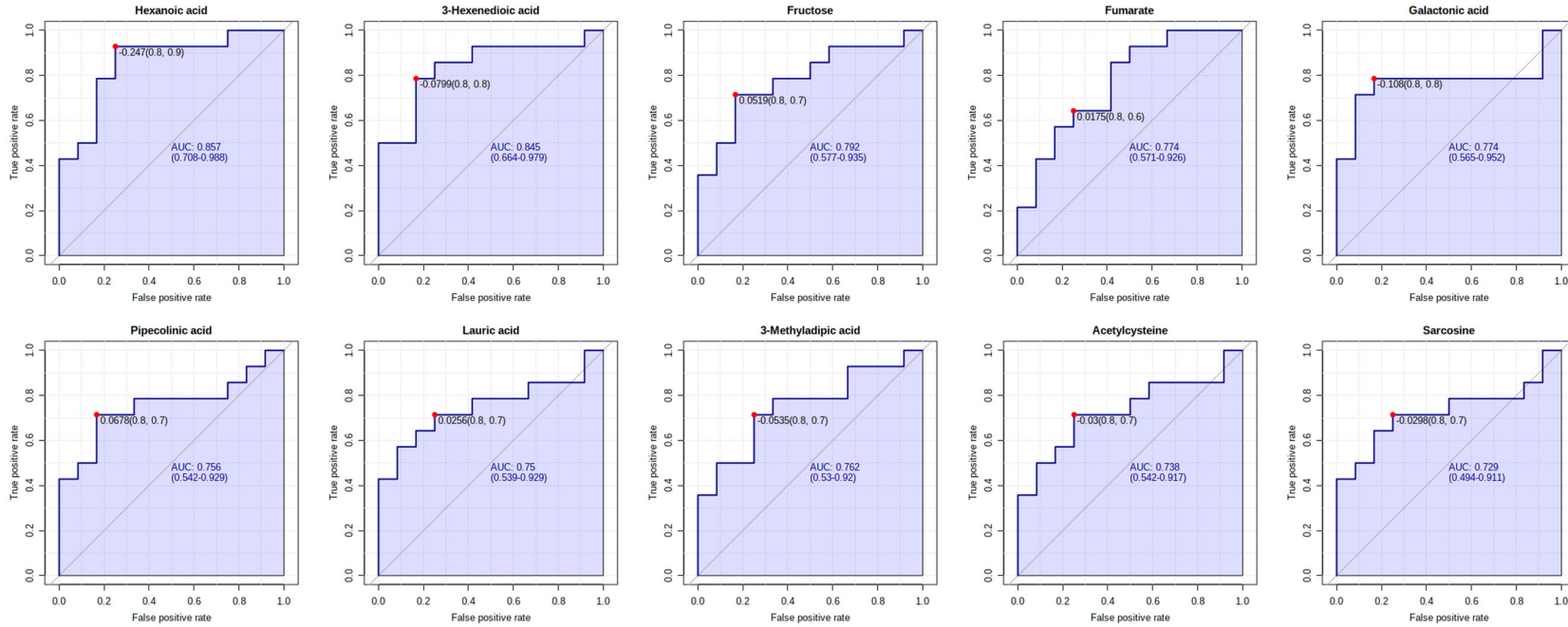


Figure S2. Univariate ROC analysis of 10 candidate metabolites with $p < 0.05$ and $FC > 2.0$ between groups. Results show AUC with 95% CI in addition to sensitivity and specificity estimates.