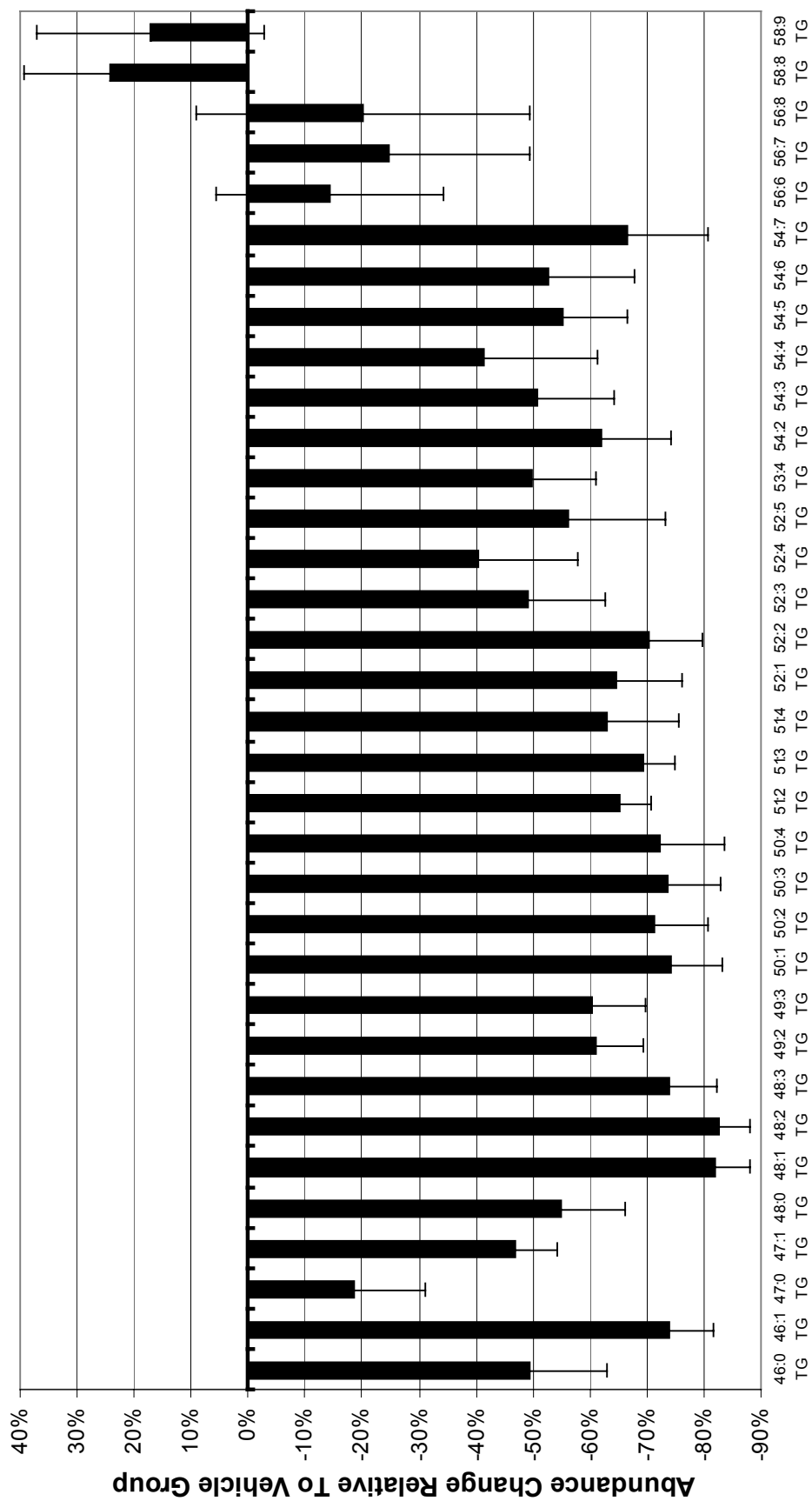**Table S1.** All Measured Plasma Triglyceride (TG) Analytes.

Plasma Triglyceride	Seven-day 200 mg/kg/day treatment group change relative to vehicle group (± standard error of mean)	Significance of change ('+' indicates $p_{FDR} < 0.05$)	Also measured in liver tissue? ('+' indicates yes)	Median integrated peak area in vehicle group[†] (arb. units)
46:0 TG	-49% ± 13%	+		2329
46:1 TG	-73% ± 7%	+		4498
47:0 TG	-18% ± 12%	+		1481
47:1 TG	-46% ± 7%	+		16025
48:0 TG	-54% ± 11%	+		13790
48:1 TG	-81% ± 6%	+		21937
48:2 TG	-82% ± 5%	+		25652
48:3 TG	-74% ± 8%	+		6295
49:2 TG	-60% ± 8%	+		8462
49:3 TG	-60% ± 9%	+		3132
50:1 TG	-74% ± 9%	+	+	87408
50:2 TG	-71% ± 9%	+	+	167384
50:3 TG	-73% ± 9%	+	+	75210
50:4 TG	-72% ± 11%	+	+	14941
51:2 TG	-65% ± 5%	+		10987
51:3 TG	-69% ± 5%	+		6093
51:4 TG	-63% ± 12%	+	+	5318
52:1 TG	-64% ± 11%	+		41075
52:2 TG	-70% ± 9%	+	+	307162
52:3 TG	-49% ± 13%	+		274998
52:4 TG	-40% ± 17%	+	+	201736
52:5 TG	-56% ± 17%	+	+	51209
53:4 TG	-49% ± 11%	+		4665
54:2 TG	-61% ± 12%	+	+	27044
54:3 TG	-50% ± 13%	+		65329
54:4 TG	-41% ± 19%	+	+	40095
54:5 TG	-55% ± 11%	+	+	57278
54:6 TG	-52% ± 15%	+	+	128350
54:7 TG	-66% ± 14%	+		37189
56:6 TG	-14% ± 20%		+	21018
56:7 TG	-24% ± 24%		+	32430
56:8 TG	-20% ± 29%		+	11090
58:8 TG	+24% ± 15%		+	5143
58:9 TG	+17% ± 21%		+	3569

[†]Provided as an assessment of relative abundances of plasma trigylceride species in vehicle group. Scale is not identical to that of reported peak areas in other Tables elsewhere.
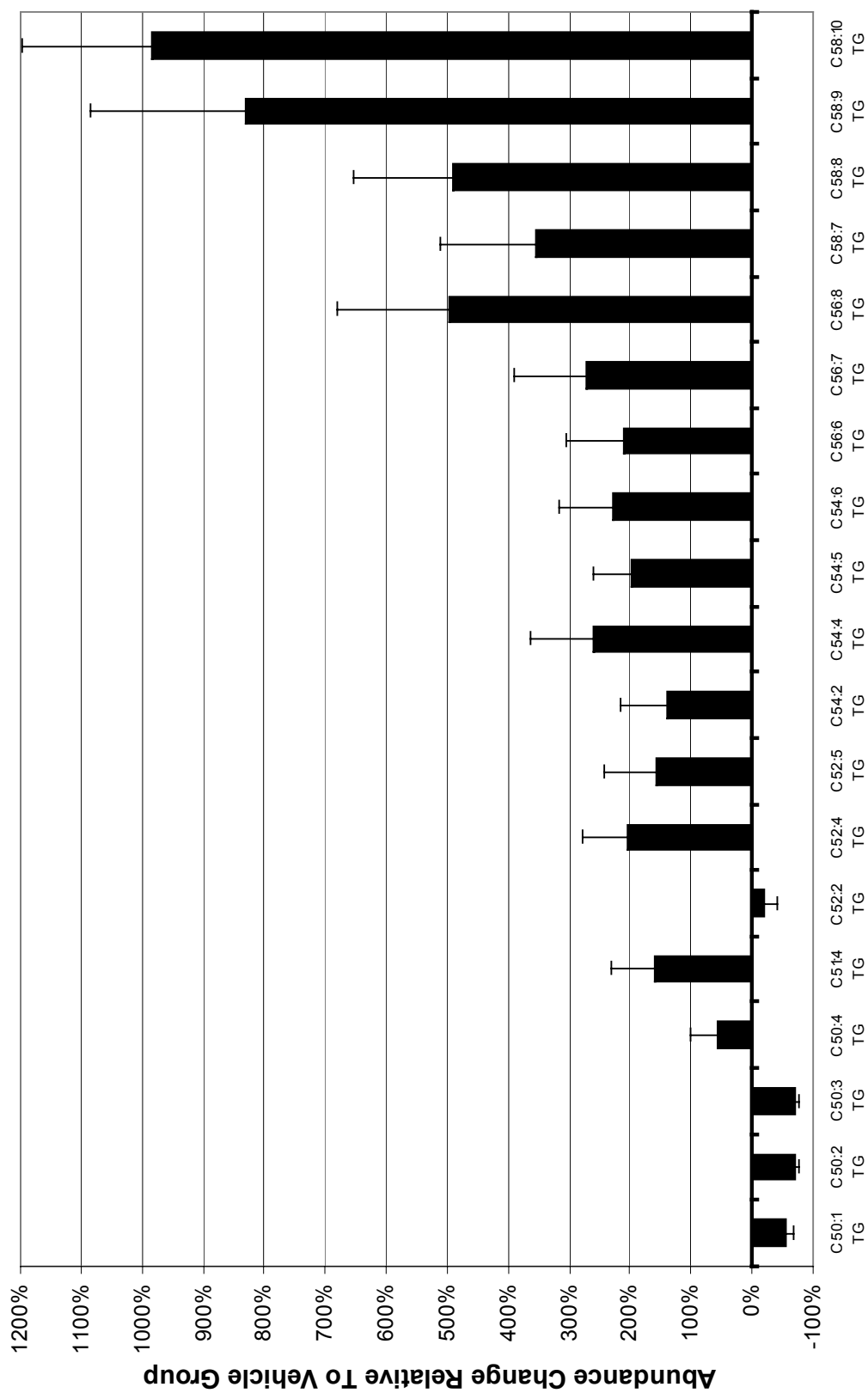
Figure S1. (above) Change in plasma abundances of all observed triglyceride species (also listed in Table S1) in the 7-day 200 mg/kg/day treatment group relative to the vehicle-administered group. Error bars represent standard error of the mean.

Table S2. All Measured Liver Tissue Triglyceride (TG) Analytes.

Liver Triglyceride	Seven-day 200 mg/kg/day treatment group change relative to vehicle group (± standard error of mean)	Significance of change ('+' indicates $p_{FDR} < 0.05$)	Also measured in plasma? ('+' indicates yes)	Median integrated peak area in vehicle group[†] (arb. units)
50:1 TG	-57% ± 9%	+	+	113269
50:2 TG	-71% ± 6%	+	+	39022
50:3 TG	-69% ± 6%	+	+	17328
50:4 TG	+57% ± 45%	+	+	61447
51:4 TG	+159% ± 71%	+	+	11045
52:2 TG	-21% ± 21%		+	1767110
52:4 TG	+205% ± 73%	+	+	547222
52:5 TG	+158% ± 83%	+	+	126711
54:2 TG	+138% ± 77%	+	+	45358
54:4 TG	+260% ± 103%	+	+	153539
54:5 TG	+198% ± 63%	+	+	207081
54:6 TG	+227% ± 90%	+	+	121766
56:6 TG	+210% ± 96%	+	+	66782
56:7 TG	+272% ± 118%	+	+	106647
56:8 TG	+497% ± 184%	+	+	66880
58:7 TG	+355% ± 156%	+		12801
58:8 TG	+492% ± 161%	+	+	30404
58:9 TG	+831% ± 255%	+	+	15137
58:10 TG	+983% ± 310%	+		7139

[†] Provided as an assessment of relative abundances of trigylceride species in vehicle group. Scale is not identical to that of reported peak areas in other Tables elsewhere.

Figure S2. (above) Change in abundances in liver tissue of all observed triglyceride species (also listed in Table S1) in the 7-day 200 mg/kg/day treatment group relative to the vehicle-administered group. Error bars represent standard error of the mean.

Table S3. All Measured Liver Tissue Phosphatidylcholine (PC) and Lyso-Phosphatidylcholine (LPC) Analytes.

Liver PC or LPC	Seven-day 200 mg/kg/day treatment group change relative to vehicle group (± standard error of mean)	Significance of change ('+' indicates $p_{FDR} < 0.05$)	Median integrated peak area in vehicle group[†] (arb. units)
18:1 LPC	-78% ± 5%	+	43017
32:1 PC	-78% ± 4%	+	862687
33:1 PC	-53% ± 6%	+	48026
34:1 PC	-42% ± 5%	+	2389300
34:3 PC	-38% ± 9%	+	357149
35:1 PC	-47% ± 6%	+	24536
36:2 PC	-36% ± 5%	+	139182
37:4 PC	+117% ± 40%	+	74156
38:4 PC	+55% ± 10%	+	3157790

[†]Provided as an assessment of relative abundances of trigylceride species in vehicle group. Scale is not identical to that of reported peak areas in other Tables elsewhere.

Table S4. Correlation among the three liver peptide measurements that map to the Ugt1a1 protein in liver. There three possible pairwise correlations.

Peptide Pair	correlation value $(r_{partial})^{\dagger}$	p_{FDR} of correlation
AMEIAEALGR and GHEVVVIAPEASIHIK	+0.72	0.007
AMEIAEALGR and SLGSMVSEIPEKK	+0.96	0.001
SLGSMVSEIPEKK and GHEVVVIAPEASIHIK	+0.71	0.008

† Partial correlations controlling for group mean values are appropriate for calculations in order to to avoid trivial correlations driven be group mean differences; see text for details.

Table S5. Correlation among measured the four plasma ornithine ions. There are six possible pairwise correlations.

Ornithine Ion Pair	correlation value $(r_{partial})^{\dagger}$	p_{FDR} of correlation
ornithine (M+) and ornithine_1	+0.98	<0.001
ornithine (M+) and ornithine_2	+0.99	<0.001
ornithine (M+) and ornithine_3	+0.99	<0.001
ornithine_1 and ornithine_2	+0.99	<0.001
ornithine_1 and ornithine_3	+0.98	<0.001
ornithine_2 and ornithine_3	+0.99	<0.001

† Of the four GC/MS peaks identified as ornithine, 'Ornithine (M^+)' is the identified molecular ion; 'ornithine_1' is a fragment ion; 'ornithine_2' is a second fragment ion; 'ornithine_3' is a third fragment ion. As expected, there is a high degree of correlation among these ions.