## Table S2. Pathway branch-points with low and low flux range tolerance.

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| PATHWAY BRANCH | FLUX RANGE | SENSITIVITY RANGE |
| G-6-P to Ribulose-5-P | Upto 30% of total flux into glucose | -0.08 to -0.05 |
| Serine to Glycine | Upto 30% of total flux into serine | -0.00015 to 0.00056 |
| Serine+Homocysteine to Cystathionine | Upto 30% of total flux into serine | 0.00235 to 0.00475 |
| Glutamate to Glutamic semialdehyde | Upto 20% of total flux into glutamate | 0.0032 |
| DAG+Choline to Phosphatidylcholine | Upto 40% of total flux in DAG | 0.015 to 0.031 |
| Cholesterol + USFA CoA to Cholesterol esters | Upto10% of total flux into USFA CoA | -0.02 |
| CholesterolA synthesis | Upto 20% of total flux into acetyl CoA adipocyte | 0.00014 |
| Acetyl CoAT to Malonyl CoAT | Upto 30% of total flux into acetyl CoA tissue | -5.12E-06 to -7.89E-06 |
| CholesterolT synthesis | Upto 20% of total flux into acetyl CoA tissue | 0.000102 |
| DHAP to Gly-3-P | Upto 20% of total flux into DHAP | -0.07 |
| DAG to MAG | Upto 30% of total flux into DAG | -0.1 to -0.04 |

DAG- Diacylglycerol, DHAP- Dihydroxyacetone phosphate, FA- Fatty acids, G-6-P- Glucose-6-phosphate, G-1-P- Glucose-1-phosphate, Gly-3-P- Glycerol-3-phosphate, LPA- Lysophosphatidic acid, MAG- Monoacylglycerol, MUFA- Monounsaturated fatty acids, SFA- Saturated fatty acids, TG- Triglycerides, A- adipose, B- blood/serum, L-liver.