**Supplementary Table 4. Metabolite changes of *S. aureus* infection that is common between samples from humans, mice, and *in vitro*.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Metabolitea | Change in concentrationb | RIc | p-valued | w\*e |
| 3-hydroxybutanoic acid | ↓ | 1176 |  | \* |
| Alpha-Tocopherol | ↑ | 3138 |  | \* |
| Asparagine | ↑ | 1687 |  | \* |
| Carbohydrate | ↑ | 2171 |  | \* |
| Cholesterol | ↑ | 3152 |  | \* |
| Cysteine | ↑ | 1552 |  | \* |
| Erythritol | ↑ | 1503 |  | \* |
| Glucose | ↑ | 1898 | \* | \* |
| Glutamine | ↓ | 1769 |  | \* |
| Glycerol | ↓ | 1280 |  | \* |
| Inositol | ↓ | 2081 |  | \* |
| Inositol-1-phosphate | ↑ | 2401 | \* | \* |
| Linoleic acid | ↓ | 2208 |  | \* |
| Lysine | ↓ | 1921 |  | \* |
| Maltose | ↓ | 2724 | \* | \* |
| Methionine | ↑ | 1516 |  | \* |
| Ornithine | ↓ | 1611 |  | \* |
| Pseudouridine | ↑ | 2324 |  | \* |
| Pyroglutamic acid | ↑ | 1520 |  | \* |
| Ribitol | ↓ | 1697 |  | \* |
| Ribose | ↑ | 1670 |  | \* |
| Serine | ↑ | 1363 |  | \* |
| Threonic acid | ↑ | 1538 |  | \* |
| Threonine | ↑ | 1384 |  | \* |
| Tryptophan | ↑ | 2206 |  | \* |
| Unid Aa | ↓ | 2664 |  | \* |
| Unid Ab | ↑ | 3004 |  | \* |
| Unid C | ↓ | 1341 |  | \* |
| Unid K | ↑ | 1677 |  | \* |
| Unid O | ↓ | 2303 |  | \* |
| Unid Y | ↓ | 1702 |  | \* |
| Uric acid | ↓ | 2093 |  | \* |
| Valine | ↑ | 1223 |  | \* |

aSignificant *S. aureus* metabolites common between *in vitro* experiments, mice infection, and human *S. aureus* or *E. coli* sepsis.

bArrows indicate a change in metabolite concentration in human *S. aureus* sepsis samples compared to human *E. coli* sepsis samples.

cRetention index for all metabolites.

dSignificance regarding p-values is stated with \* for p < 0.05, \*\* for p < 0.01 and \*\*\* for p < 0.001.

eSignificance regarding w\* is stated with \* for -0.04 > w\* > 0.04.