|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Supplementary Table 2.** Changes in single lipid species concentrations in the two treatment groups at the beginning and after 3 months of treatment. | | | | | | | | | | | |
|  | | **Control** | | | **Exenatide** | | | | **Exenatide vs Control** | | |
| **Lipid species (µM)** | **Time** | **baseline** | **3 months *minus* baseline** | ***p vs bas*** | **baseline** | **3 months *minus* baseline** | ***p vs bas*** | ***FDR adj*** | ***p EXE vs CT*** | ***FDR adj*** | ***p\**** |
| **DAG(34:2)** | 0' | 105.86±52.37 | 14.64±52.3 | 0.297 | 129.45±78.03 | -31.24±70.03 | 0.106 | 0.366 | 0.051 | 0.221 | 0.167 |
|  | 180' | 49.91±32.69 | 3.84±32.85 | 0.669 | 54.16±45.78 | -15.49±42.06 | 0.228 | 0.483 | 0.200 | 0.467 | 0.119 |
|  | 360' | 185.52±111.14 | 1.24±70.63 | 0.95 | 191.67±106.41 | -18.34±137.85 | 0.64 | 0.806 | 0.652 | 0.789 | 0.899 |
| **DAG(34:1)** | 0' | 116.88±53.97 | 14.5±32.95 | 0.111 | 133.32±74.41 | -9.14±64.75 | 0.593 | 0.781 | 0.218 | 0.474 | 0.304 |
|  | 180' | 108.03±54.07 | 10.06±74.34 | 0.621 | 110.69±89.89 | -26.54±83.87 | 0.296 | 0.539 | 0.249 | 0.527 | 0.166 |
|  | 360' | 181.25±100.84 | 16.68±58.6 | 0.325 | 182.8±128.67 | -29.21±159.18 | 0.521 | 0.736 | 0.339 | 0.598 | 0.491 |
| **DAG(36:3)** | 0' | 75.51±62.11 | 11.36±36.42 | 0.247 | 84.5±74.06 | -0.78±45.26 | 0.948 | 0.964 | 0.425 | 0.651 | 0.396 |
|  | 180' | 37.13±34.08 | 6.01±24.71 | 0.379 | 41.57±35.03 | -14.29±32.14 | 0.152 | 0.459 | 0.081 | 0.261 | **0.025** |
|  | 360' | 146.13±108.14 | 8.79±58.13 | 0.596 | 143.59±93.07 | -4.15±113.9 | 0.898 | 0.944 | 0.718 | 0.826 | 0.813 |
| **DAG(36:2)** | 0' | 134.55±66.87 | 23.93±45.25 | 0.06 | 158.62±94.44 | -13.33±100.55 | 0.616 | 0.793 | 0.201 | 0.467 | 0.207 |
|  | 180' | 118.15±60.83 | 18.86±110.73 | 0.535 | 114.72±75.46 | -21.35±74.86 | 0.344 | 0.594 | 0.297 | 0.568 | 0.103 |
|  | 360' | 196.27±127.43 | 28.29±62.05 | 0.126 | 198.32±113.14 | -16.61±151.7 | 0.7 | 0.832 | 0.333 | 0.598 | 0.372 |
| ***sum* DAG** | 0' | 432.8±224.07 | 64.43±142.93 | 0.103 | 505.89±300.77 | -54.49±269.08 | 0.446 | 0.692 | 0.141 | 0.382 | 0.212 |
|  | 180' | 313.22±172.97 | 38.77±236.19 | 0.55 | 321.14±243.26 | -77.67±230.17 | 0.267 | 0.507 | 0.217 | 0.474 | 0.098 |
|  | 360' | 709.17±428.03 | 55±236.05 | 0.417 | 716.37±434.38 | -68.3±558.5 | 0.667 | 0.827 | 0.470 | 0.675 | 0.605 |
| **TAG(44:1)** | 0' | 1.99±0.81 | 0.44±1.33 | 0.219 | 2.71±2.25 | -0.16±2.66 | 0.82 | 0.895 | 0.439 | 0.659 | 0.656 |
|  | 180' | 8.34±5.02 | 1.6±5.99 | 0.337 | 12.39±5.28 | -8.66±6.95 | **0.001** | **0.04** | **0.005** | **0.024** | **0.004** |
|  | 360' | 4.48±3.17 | 0.18±2.19 | 0.775 | 4.63±2.69 | -0.66±4.09 | 0.574 | 0.764 | 0.520 | 0.721 | 0.820 |
| **TAG(46:2)** | 0' | 4.98±1.87 | 0.74±2.69 | 0.307 | 6.38±3.91 | -1.22±3.94 | 0.249 | 0.494 | 0.122 | 0.355 | 0.696 |
|  | 180' | 11.68±5.62 | 2.13±6.64 | 0.251 | 16.05±6.06 | -9.67±7.9 | **0.001** | **0.04** | **0.000** | **0.022** | **0.004** |
|  | 360' | 6.98±3.95 | 0.45±2.91 | 0.591 | 7.52±4.34 | -1.18±5.87 | 0.482 | 0.712 | 0.379 | 0.629 | 0.815 |
| **TAG(46:1)** | 0' | 6.12±2.28 | 1.12±3.59 | 0.249 | 6.78±3.48 | -0.93±3.73 | 0.352 | 0.599 | 0.1379 | 0.376 | 0.594 |
|  | 180' | 14.58±7.12 | 2.09±7.78 | 0.334 | 19.44±7.65 | -11.67±9.96 | **0.002** | **0.040** | **0.000** | **0.025** | **0.007** |
|  | 360' | 8.61±4.66 | 0.55±3.47 | 0.578 | 9.06±3.87 | -2.13±5.67 | 0.201 | 0.473 | 0.159 | 0.408 | 0.433 |
| **TAG(46:0)** | 0' | 2.96±1.23 | 0.25±1.8 | 0.594 | 3.25±1.98 | -0.4±2 | 0.457 | 0.699 | 0.358 | 0.622 | 0.991 |
|  | 180' | 7.73±3.43 | 1.42±3.81 | 0.186 | 11.58±4.58 | -7.71±5.51 | **0.001** | **0.04** | **0.000** | **0.007** | **0.001** |
|  | 360' | 5.91±3.39 | 0.05±2.62 | 0.945 | 5.76±3.04 | -1.27±4.28 | 0.307 | 0.552 | 0.353 | 0.616 | 0.602 |
| **TAG(48:2)** | 0' | 17.63±6.45 | 1.54±6.96 | 0.404 | 19.39±7.75 | -2.7±8.1 | 0.217 | 0.476 | 0.134 | 0.371 | 0.551 |
|  | 180' | 32.59±14.18 | 2.62±16.21 | 0.555 | 37.93±12.95 | -16.46±16.94 | **0.006** | 0.079 | **0.007** | 0.115 | **0.024** |
|  | 360' | 20.12±9.34 | 1.65±6.74 | 0.395 | 21.52±7.68 | -4.62±11.89 | 0.187 | 0.473 | 0.111 | 0.341 | 0.396 |
| **TAG(48:1)** | 0' | 19.01±7.22 | -0.5±8.32 | 0.818 | 19.33±7.45 | -2.39±7.72 | 0.251 | 0.494 | 0.526 | 0.721 | 0.796 |
|  | 180' | 34.05±14.25 | 2.58±14.89 | 0.528 | 39.89±12.79 | -18.08±14.76 | **0.001** | **0.04** | **0.001** | **0.049** | **0.019** |
|  | 360' | 20.57±9.24 | 1±7.08 | 0.621 | 21.35±7.96 | -4.48±11.93 | 0.201 | 0.473 | 0.167 | 0.417 | 0.466 |
| **TAG(48:0)** | 0' | 8.03±3.67 | -0.27±3.86 | 0.794 | 8.27±4.23 | -1.34±3.92 | 0.208 | 0.476 | 0.457 | 0.67 | 0.955 |
|  | 180' | 15.63±6.43 | 1.03±5.77 | 0.516 | 20.32±7.44 | -10.48±7.88 | **0.001** | **0.04** | **0.001** | **0.019** | **0.003** |
|  | 360' | 13.48±6.05 | 0.31±4.7 | 0.819 | 13.24±6.46 | -3.1±8.52 | 0.215 | 0.476 | 0.219 | 0.474 | 0.471 |
| **TAG(50:4)** | 0' | 6.15±3.54 | -0.51±3.26 | 0.557 | 6.48±4.59 | -0.71±3.41 | 0.435 | 0.684 | 0.870 | 0.933 | 0.892 |
|  | 180' | 8.15±3.65 | -0.21±3.92 | 0.846 | 9.89±4.21 | -4.53±3.62 | **0.001** | **0.04** | **0.007** | 0.117 | **0.037** |
|  | 360' | 6.25±3.94 | -0.17±2.99 | 0.839 | 6.38±3.87 | 0.12±5.64 | 0.942 | 0.964 | 0.872 | 0.933 | 0.626 |
| **TAG(50:3)** | 0' | 33.7±12.64 | -0.45±8.76 | 0.845 | 35.62±13.37 | -4.04±12.99 | 0.248 | 0.494 | 0.382 | 0.637 | 0.577 |
|  | 180' | 52.37±18.25 | -0.25±17.32 | 0.958 | 56.62±15.06 | -16.91±17.13 | **0.006** | **0.079** | **0.021** | 0.276 | **0.027** |
|  | 360' | 33.76±14.15 | 0.04±9.62 | 0.989 | 35.09±11.87 | -4.02±19.21 | 0.465 | 0.705 | 0.502 | 0.702 | 0.905 |
| **TAG(50:2)** | 0' | 57.32±16.58 | -4.07±12.91 | 0.242 | 58.48±13.93 | -6.3±16.39 | 0.159 | 0.459 | 0.683 | 0.801 | 0.847 |
|  | 180' | 85.52±25.35 | 1.05±24.21 | 0.873 | 89.03±20.24 | -21.03±21.57 | **0.006** | 0.079 | **0.022** | 0.237 | **0.017** |
|  | 360' | 52.71±17.6 | 0.32±11.1 | 0.919 | 54.5±12.75 | -7.06±20.67 | 0.241 | 0.494 | 0.267 | 0.546 | 0.577 |
| **TAG(50:1)** | 0' | 51.34±16.35 | -3.1±13.58 | 0.392 | 51.5±17.41 | -5.9±17.25 | 0.207 | 0.476 | 0.625 | 0.789 | 0.846 |
|  | 180' | 83.2±26.35 | 1.44±23.05 | 0.819 | 88.98±23.71 | -24.46±21.35 | **0.002** | **0.044** | **0.006** | 0.115 | 0.052 |
|  | 360' | 56.73±18.45 | 0.35±12.53 | 0.921 | 56.99±15.73 | -7.38±21.69 | 0.243 | 0.494 | 0.276 | 0.549 | 0.571 |
| **TAG(50:0)** | 0' | 3.62±1.88 | 0.05±1.91 | 0.916 | 4.1±3.16 | -0.83±2.73 | 0.257 | 0.494 | 0.312 | 0.585 | 0.860 |
|  | 180' | 8.69±4.16 | 0.73±2.96 | 0.373 | 12.25±5.63 | -7.01±5.77 | **0.001** | **0.04** | **0.000** | **0.019** | **0.002** |
|  | 360' | 7.54±5.1 | -0.06±3.93 | 0.96 | 7.57±6.46 | -1.98±7.76 | 0.375 | 0.625 | 0.432 | 0.657 | 0.668 |
| **TAG(52:5)** | 0' | 9.58±5.49 | -0.73±5.18 | 0.593 | 10.37±6.29 | -0.8±4.19 | 0.472 | 0.708 | 0.968 | 0.968 | 0.993 |
|  | 180' | 12.14±5.89 | -0.97±5.87 | 0.549 | 15.4±8.38 | -6.55±7.07 | **0.008** | 0.085 | **0.037** | 0.203 | **0.043** |
|  | 360' | 9.48±6.44 | -0.27±4.58 | 0.834 | 9.42±5.55 | 0.95±8.35 | 0.688 | 0.832 | 0.646 | 0.789 | 0.556 |
| **TAG(52:4)** | 0' | 44.75±20.16 | -0.88±15.86 | 0.833 | 46.43±19.29 | -0.16±17.29 | 0.972 | 0.982 | 0.906 | 0.947 | 0.846 |
|  | 180' | 65.87±23.11 | -1.43±18.39 | 0.776 | 76.7±23.44 | -17.66±19.55 | **0.01** | 0.093 | **0.039** | 0.203 | **0.029** |
|  | 360' | 44.26±19.87 | -0.55±13.67 | 0.888 | 46.2±16.77 | 3.69±22.21 | 0.56 | 0.76 | 0.563 | 0.741 | 0.545 |
| **TAG(52:3)** | 0' | 100±30.36 | -5.95±19.82 | 0.264 | 102.17±25.55 | -2.17±28.81 | 0.774 | 0.861 | 0.679 | 0.799 | 0.748 |
|  | 180' | 141.62±34.49 | 1.08±27.53 | 0.885 | 152.57±29.46 | -21.84±23.02 | **0.007** | 0.084 | **0.031** | 0.203 | **0.025** |
|  | 360' | 87.44±27.4 | -0.42±17.22 | 0.932 | 92.12±19.7 | -1.19±28.96 | 0.884 | 0.938 | 0.934 | 0.96 | 0.981 |
| **TAG(52:2)** | 0' | 136.43±29.91 | -5.48±31.67 | 0.513 | 132.64±28.65 | -3.94±28.87 | 0.605 | 0.786 | 0.890 | 0.941 | 0.786 |
|  | 180' | 174.2±38.33 | 2.84±33.41 | 0.756 | 185.68±32.17 | -22.7±26.06 | **0.012** | 0.103 | **0.042** | 0.210 | 0.065 |
|  | 360' | 114.1±25.38 | 2±16 | 0.66 | 117.26±17.23 | -4.22±24.92 | 0.553 | 0.758 | 0.456 | 0.67 | 0.687 |
| **TAG(52:1)** | 0' | 19.55±7.49 | -1.2±5.94 | 0.447 | 19.8±11.18 | -2.77±7.95 | 0.199 | 0.473 | 0.545 | 0.731 | 0.741 |
|  | 180' | 41.02±16.79 | 2.14±11.96 | 0.516 | 47.44±18.75 | -19.32±16.48 | **0.002** | **0.040** | **0.001** | **0.030** | **0.010** |
|  | 360' | 25.24±15.41 | -0.02±10.21 | 0.995 | 27.07±17.03 | -5.55±21.13 | 0.362 | 0.607 | 0.403 | 0.645 | 0.753 |
| **TAG(52:0)** | 0' | 1.47±0.62 | -0.01±0.6 | 0.957 | 1.76±0.8 | -0.16±0.98 | 0.535 | 0.743 | 0.610 | 0.776 | 0.586 |
|  | 180' | 3.12±1.35 | 0.56±0.83 | 0.025 | 4.22±1.64 | -2.17±1.63 | **0.001** | **0.04** | **0.001** | **0.003** | **0.001** |
|  | 360' | 3.83±1.8 | -0.12±1.36 | 0.748 | 3.34±2.31 | -0.58±2.58 | 0.432 | 0.682 | 0.577 | 0.749 | 0.783 |
| **TAG(54:4)** | 0' | 18.4±8.22 | -1.61±6.21 | 0.333 | 18.2±7.39 | 1.31±5.88 | 0.401 | 0.656 | 0.196 | 0.467 | 0.552 |
|  | 180' | 24.03±9.08 | 1.39±9 | 0.574 | 32.07±9.62 | -10.51±9.62 | **0.003** | 0.051 | **0.003** | 0.072 | **0.001** |
|  | 360' | 18.17±9.6 | -0.28±5.78 | 0.865 | 19.46±4.75 | 1.28±6.68 | 0.502 | 0.725 | 0.530 | 0.723 | 0.986 |
| **TAG(54:3)** | 0' | 54.15±16.47 | -0.98±18.61 | 0.841 | 55.95±20.07 | -1.55±16.83 | 0.727 | 0.832 | 0.931 | 0.960 | 0.658 |
|  | 180' | 83.39±22.44 | 2.51±16.86 | 0.587 | 94.09±23.4 | -16.65±15.16 | **0.003** | 0.051 | **0.005** | 0.113 | **0.005** |
|  | 360' | 54.15±20.75 | 1.13±13 | 0.76 | 59.58±16.7 | -2.07±21.23 | 0.731 | 0.832 | 0.647 | 0.789 | 0.539 |
| **TAG(54:2)** | 0' | 27.82±7.84 | -1.91±6.98 | 0.308 | 29.27±9.87 | -1.22±8.38 | 0.583 | 0.774 | 0.808 | 0.892 | 0.733 |
|  | 180' | 53.09±13.84 | 1.45±9.66 | 0.584 | 56.67±14.29 | -12.37±11.15 | **0.003** | 0.051 | **0.002** | 0.063 | **0.009** |
|  | 360' | 34.76±14.05 | 0.23±8.34 | 0.924 | 36.03±12.89 | -2.5±18.46 | 0.634 | 0.802 | 0.631 | 0.789 | 0.783 |
| **TAG(54:1)** | 0' | 3.46±1.18 | -0.31±1.16 | 0.313 | 3.74±1.87 | -0.34±1.4 | 0.356 | 0.599 | 0.946 | 0.965 | 0.293 |
|  | 180' | 9.89±3.38 | 0.37±2.61 | 0.605 | 9.58±4.52 | -3.72±3.56 | **0.004** | 0.064 | **0.002** | 0.063 | **0.028** |
|  | 360' | 5.17±3.49 | -0.31±2.33 | 0.638 | 5.2±3.51 | -0.98±4.4 | 0.44 | 0.687 | 0.634 | 0.789 | 0.887 |
| **TAG(56:6)** | 0' | 3.71±2.64 | -0.62±2.32 | 0.322 | 2.92±1.55 | 0.23±1.19 | 0.471 | 0.708 | 0.221 | 0.474 | 0.469 |
|  | 180' | 4.26±3.02 | -0.84±2.6 | 0.247 | 4.39±2.67 | -1.7±2.68 | 0.050 | 0.253 | 0.415 | 0.645 | 0.394 |
|  | 360' | 4.21±3.21 | -0.66±1.78 | 0.203 | 3.04±1.26 | 0.85±2.25 | 0.198 | 0.473 | 0.069 | 0.249 | 0.220 |
| **TAG(56:3)** | 0' | 4±1.11 | -0.27±1.21 | 0.396 | 4.24±1.73 | -0.05±1.8 | 0.923 | 0.958 | 0.686 | 0.801 | 0.935 |
|  | 180' | 7.02±2.35 | 0.04±2.79 | 0.959 | 7.23±2.15 | -1.37±1.97 | **0.035** | 0.215 | 0.157 | 0.407 | 0.064 |
|  | 360' | 5.03±2.87 | -0.22±1.64 | 0.632 | 5.22±1.87 | -0.09±3.34 | 0.921 | 0.958 | 0.901 | 0.946 | 0.902 |
| ***sum* TAG** | 0' | 636.19±171.41 | -24.7±116.22 | 0.424 | 649.77±181.78 | -38.52±174 | 0.406 | 0.658 | 0.889 | 0.887 | 0.934 |
|  | 180' | 982.18±263.1 | 25.37±228.08 | 0.684 | 1100.42±230.62 | -293.22±207.78 | **0.001** | **0.04** | **0.001** | **0.038** | **0.008** |
|  | 360' | 642.98±223.37 | 5.16±143.98 | 0.899 | 667.56±177.96 | -48.18±279.18 | 0.545 | 0.754 | 0.546 | 0.731 | 0.786 |
| **CER(d18:1/14:0)** | 0' | 0.04±0.01 | 0±0.01 | 0.304 | 0.05±0.02 | -0.01±0.01 | **0.012** | **0.103** | **0.007** | 0.115 | **0.043** |
|  | 180' | 0.03±0.01 | 0±0.01 | 0.754 | 0.04±0.01 | 0±0.01 | 0.81 | 0.89 | 0.966 | 0.968 | 0.402 |
|  | 360' | 0.04±0.01 | 0±0.02 | 0.372 | 0.04±0.02 | -0.01±0.01 | **0.039** | 0.219 | **0.036** | 0.203 | **0.047** |
| **CER(d18:1/16:0)** | 0' | 0.38±0.13 | 0.04±0.11 | 0.209 | 0.48±0.16 | -0.03±0.12 | 0.354 | 0.599 | 0.122 | 0.355 | 0.155 |
|  | 180' | 0.32±0.09 | 0.02±0.09 | 0.318 | 0.35±0.12 | 0.04±0.1 | 0.17 | 0.468 | 0.637 | 0.789 | 0.782 |
|  | 360' | 0.48±0.17 | 0.07±0.19 | 0.206 | 0.48±0.18 | -0.1±0.23 | 0.161 | 0.459 | 0.056 | 0.229 | 0.136 |
| **CER(d18:0/16:0)** | 0' | 0.03±0.02 | 0±0.01 | 0.217 | 0.04±0.01 | 0±0.01 | 0.257 | 0.494 | 0.957 | 0.965 | 0.823 |
|  | 180' | 0.03±0.01 | 0±0.02 | 0.347 | 0.04±0.01 | 0±0.01 | 0.105 | 0.366 | 0.117 | 0.348 | 0.250 |
|  | 360' | 0.04±0.02 | 0.01±0.02 | 0.294 | 0.05±0.02 | -0.01±0.02 | 0.098 | 0.362 | 0.054 | 0.225 | 0.085 |
| **CER(d18:1/18:1)** | 0' | 0.05±0.02 | 0±0.02 | 0.625 | 0.06±0.02 | 0±0.02 | 0.402 | 0.656 | 0.335 | 0.598 | 0.269 |
|  | 180' | 0.04±0.01 | 0±0.01 | 0.599 | 0.04±0.01 | 0±0.01 | 0.263 | 0.503 | 0.638 | 0.789 | 0.894 |
|  | 360' | 0.06±0.02 | 0.01±0.03 | 0.348 | 0.06±0.03 | -0.02±0.03 | 0.073 | 0.321 | **0.046** | 0.219 | 0.074 |
| **CER(d18:1/18:0)** | 0' | 0.17±0.07 | 0.01±0.06 | 0.512 | 0.21±0.06 | -0.01±0.06 | 0.552 | 0.758 | 0.371 | 0.626 | 0.306 |
|  | 180' | 0.16±0.05 | 0±0.05 | 0.736 | 0.17±0.04 | 0±0.03 | 0.729 | 0.832 | 0.932 | 0.96 | 0.857 |
|  | 360' | 0.23±0.09 | 0.03±0.13 | 0.368 | 0.24±0.1 | -0.06±0.12 | 0.101 | 0.366 | 0.067 | 0.248 | 0.102 |
| **CER(d18:0/18:0)** | 0' | 0.04±0.03 | 0±0.03 | 0.602 | 0.04±0.01 | 0±0.02 | 0.721 | 0.832 | 0.523 | 0.721 | 0.270 |
|  | 180' | 0.03±0.02 | 0±0.02 | 0.938 | 0.03±0.01 | 0±0.01 | 0.698 | 0.832 | 0.884 | 0.937 | 0.937 |
|  | 360' | 0.05±0.03 | 0.01±0.05 | 0.412 | 0.05±0.03 | -0.02±0.03 | **0.024** | 0.176 | 0.066 | 0.248 | **0.039** |
| **CER(d18:1/20:0)** | 0' | 0.17±0.06 | 0.02±0.05 | 0.148 | 0.23±0.07 | -0.02±0.05 | 0.102 | 0.366 | **0.027** | 0.203 | **0.042** |
|  | 180' | 0.16±0.04 | 0±0.05 | 0.877 | 0.18±0.05 | 0±0.04 | 0.731 | 0.832 | 0.743 | 0.848 | 0.739 |
|  | 360' | 0.23±0.09 | 0.05±0.13 | 0.146 | 0.25±0.1 | -0.06±0.14 | 0.149 | 0.459 | **0.038** | 0.203 | **0.041** |
| **CER(d18:0/20:0)** | 0' | 0.02±0.01 | 0±0.01 | 0.305 | 0.03±0.01 | 0±0.01 | 0.692 | 0.832 | 0.288 | 0.566 | 0.387 |
|  | 180' | 0.02±0.01 | 0±0.01 | 0.18 | 0.03±0.01 | 0±0.01 | 0.82 | 0.895 | 0.479 | 0.681 | 0.728 |
|  | 360' | 0.02±0.01 | 0.01±0.03 | 0.17 | 0.02±0.01 | -0.01±0.01 | **0.036** | 0.215 | **0.048** | 0.219 | 0.054 |
| **CER(d18:1/22:0)** | 0' | 0.8±0.28 | 0.13±0.35 | 0.163 | 0.95±0.37 | -0.09±0.23 | 0.158 | 0.459 | **0.049** | 0.219 | **0.040** |
|  | 180' | 0.89±0.26 | 0.14±0.43 | 0.257 | 0.93±0.23 | 0.03±0.27 | 0.708 | 0.832 | 0.470 | 0.675 | 0.883 |
|  | 360' | 1.06±0.35 | 0.36±0.61 | 0.056 | 1.1±0.45 | -0.23±0.58 | 0.178 | 0.472 | **0.018** | 0.192 | **0.023** |
| **CER(d18:0/22:0)** | 0' | 0.13±0.08 | 0.02±0.07 | 0.206 | 0.15±0.04 | 0±0.03 | 0.589 | 0.779 | 0.163 | 0.415 | 0.188 |
|  | 180' | 0.1±0.04 | 0.01±0.04 | 0.402 | 0.1±0.03 | 0±0.03 | 0.855 | 0.916 | 0.439 | 0.659 | 0.682 |
|  | 360' | 0.16±0.08 | 0.05±0.15 | 0.234 | 0.17±0.08 | -0.05±0.09 | 0.060 | 0.287 | **0.042** | 0.210 | **0.045** |
| **CER(d18:1/24:1)** | 0' | 1.4±0.56 | 0.15±0.6 | 0.339 | 1.56±0.54 | 0.05±0.45 | 0.675 | 0.83 | 0.594 | 0.765 | 0.451 |
|  | 180' | 1.49±0.55 | 0.14±0.55 | 0.353 | 1.54±0.46 | 0.07±0.36 | 0.505 | 0.725 | 0.717 | 0.826 | 0.806 |
|  | 360' | 1.85±0.74 | 0.43±0.79 | 0.076 | 1.89±0.72 | -0.27±0.89 | 0.300 | 0.542 | **0.046** | 0.219 | 0.231 |
| **CER(d18:1/24:0)** | 0' | 1.56±0.65 | 0.24±0.73 | 0.232 | 1.64±0.43 | 0.01±0.33 | 0.896 | 0.944 | 0.286 | 0.566 | 0.353 |
|  | 180' | 1.85±0.57 | 0.2±0.7 | 0.317 | 1.81±0.34 | -0.01±0.38 | 0.926 | 0.958 | 0.374 | 0.626 | 0.979 |
|  | 360' | 2.63±0.89 | 0.53±1.07 | 0.097 | 2.47±0.87 | -0.4±1.26 | 0.274 | 0.514 | 0.052 | 0.223 | 0.231 |
| **CER(d18:0/24:0)** | 0' | 0.18±0.1 | 0.03±0.08 | 0.126 | 0.22±0.06 | 0±0.05 | 0.72 | 0.832 | 0.131 | 0.369 | 0.500 |
|  | 180' | 0.19±0.08 | 0.04±0.09 | 0.165 | 0.21±0.07 | 0.02±0.04 | 0.212 | 0.476 | 0.488 | 0.688 | 0.844 |
|  | 360' | 0.26±0.13 | 0.12±0.27 | 0.118 | 0.27±0.11 | -0.07±0.13 | 0.08 | 0.341 | **0.027** | 0.203 | **0.031** |
| **CER(d18:1/25:0)** | 0' | 0.47±0.15 | 0.09±0.23 | 0.142 | 0.58±0.25 | 0.06±0.15 | 0.163 | 0.459 | 0.610 | 0.776 | 0.987 |
|  | 180' | 0.55±0.16 | 0.1±0.27 | 0.203 | 0.59±0.23 | 0.09±0.13 | **0.039** | 0.219 | 0.928 | 0.96 | 0.702 |
|  | 360' | 0.69±0.22 | 0.24±0.39 | 0.047 | 0.72±0.24 | -0.04±0.33 | 0.653 | 0.814 | 0.058 | 0.23 | 0.218 |
| **CER(d18:1/26:0)** | 0' | 0.12±0.05 | 0.02±0.06 | 0.232 | 0.15±0.06 | 0.01±0.05 | 0.488 | 0.716 | 0.602 | 0.772 | 0.557 |
|  | 180' | 0.14±0.06 | 0.02±0.07 | 0.358 | 0.14±0.05 | 0.03±0.02 | **0.001** | **0.04** | 0.538 | 0.728 | 0.471 |
|  | 360' | 0.17±0.06 | 0.06±0.1 | 0.047 | 0.18±0.05 | -0.01±0.07 | 0.523 | 0.736 | **0.038** | 0.203 | **0.041** |
| **CER(d18:0/26:0)** | 0' | 0.03±0.02 | 0±0.02 | 0.65 | 0.03±0.01 | 0±0.01 | 0.557 | 0.759 | 0.873 | 0.933 | 0.915 |
|  | 180' | 0.03±0.02 | 0±0.01 | 0.393 | 0.04±0.02 | 0±0.01 | 0.997 | 0.997 | 0.548 | 0.731 | 0.776 |
|  | 360' | 0.03±0.01 | 0.01±0.02 | 0.213 | 0.04±0.01 | -0.01±0.01 | **0.024** | 0.176 | **0.021** | 0.200 | **0.033** |
| ***sum* CER** | 0' | 5.59±2.05 | 0.78±2.11 | 0.175 | 6.43±1.82 | -0.04±1.35 | 0.899 | 0.944 | 0.213 | 0.471 | 0.290 |
|  | 180' | 6.01±1.8 | 0.67±2.22 | 0.276 | 6.22±1.4 | 0.27±1.12 | 0.423 | 0.675 | 0.573 | 0.749 | 0.950 |
|  | 360' | 8±2.67 | 2±3.69 | 0.074 | 8.04±2.64 | -1.36±3.8 | 0.223 | 0.477 | **0.031** | 0.203 | 0.121 |
| ***sum* dhCER** | 0' | 0.42±0.25 | 0.07±0.17 | 0.147 | 0.52±0.12 | -0.01±0.12 | 0.829 | 0.899 | 0.173 | 0.427 | 0.310 |
|  | 180' | 0.4±0.17 | 0.06±0.17 | 0.228 | 0.45±0.13 | 0.01±0.08 | 0.601 | 0.782 | 0.411 | 0.645 | 0.989 |
|  | 360' | 0.55±0.27 | 0.21±0.52 | 0.166 | 0.6±0.23 | -0.16±0.27 | 0.055 | 0.271 | **0.030** | 0.203 | **0.043** |
| **PC aa(30:0)** | 0' | 1.92±1.19 | 0.27±1.54 | 0.509 | 2.14±0.88 | -0.14±0.92 | 0.574 | 0.765 | 0.388 | 0.633 | 0.997 |
|  | 180' | 2±1.36 | -0.16±1.26 | 0.639 | 1.85±0.7 | -0.38±1.05 | 0.24 | 0.494 | 0.643 | 0.789 | 0.395 |
|  | 360' | 2.15±1.43 | 0.45±1.41 | 0.277 | 2.05±1.06 | -0.64±1.37 | 0.121 | 0.399 | 0.059 | 0.231 | 0.208 |
| **PC aa(32:2)** | 0' | 1.37±0.69 | 0.12±0.99 | 0.639 | 1.49±0.72 | -0.16±0.49 | 0.228 | 0.483 | 0.332 | 0.598 | 0.961 |
|  | 180' | 1.42±0.74 | 0.07±1.04 | 0.809 | 1.32±0.4 | -0.14±0.71 | 0.503 | 0.725 | 0.558 | 0.739 | 0.573 |
|  | 360' | 1.31±0.64 | 0.32±0.73 | 0.146 | 1.3±0.67 | -0.29±0.88 | 0.255 | 0.494 | 0.067 | 0.248 | 0.302 |
| **PC aa(32:1)** | 0' | 13.27±6.53 | 0.75±6.96 | 0.681 | 14.04±6.29 | -3.23±4.79 | **0.021** | 0.167 | 0.078 | 0.263 | 0.271 |
|  | 180' | 14.07±8.02 | -1.28±6.28 | 0.458 | 12.06±4.75 | -2.41±5.87 | 0.183 | 0.473 | 0.643 | 0.789 | 0.555 |
|  | 360' | 13.19±7.11 | 1.54±6.26 | 0.393 | 12.25±4.87 | -3.62±6.32 | 0.061 | 0.288 | **0.047** | 0.219 | **0.043** |
| **PC aa(32:0)** | 0' | 7.65±2.49 | 0.72±2.76 | 0.33 | 8.54±2.61 | -0.12±2.22 | 0.836 | 0.899 | 0.366 | 0.625 | 0.509 |
|  | 180' | 8.28±2.59 | 0.05±2.86 | 0.947 | 7.91±1.6 | 0.24±1.77 | 0.654 | 0.814 | 0.848 | 0.923 | 0.508 |
|  | 360' | 8.07±2.81 | 0.91±3.29 | 0.338 | 7.96±2.78 | -1.46±3.3 | 0.137 | 0.438 | 0.079 | 0.261 | 0.138 |
| **PC(16:0/18:2)** | 0' | 3.13±1.06 | 0.36±1.12 | 0.239 | 3.06±1.41 | 0.2±0.83 | 0.377 | 0.625 | 0.659 | 0.795 | 0.988 |
|  | 180' | 3.29±1.17 | 0.34±1.76 | 0.477 | 3.16±1.16 | -0.3±1.32 | 0.447 | 0.692 | 0.308 | 0.582 | 0.363 |
|  | 360' | 3.11±1.25 | 0.71±1.33 | 0.08 | 2.91±1.62 | -0.51±1.33 | 0.19 | 0.473 | **0.028** | 0.203 | 0.061 |
| **PC aa(34:4)** | 0' | 0.2±0.15 | -0.02±0.15 | 0.667 | 0.16±0.08 | 0.03±0.07 | 0.125 | 0.406 | 0.269 | 0.546 | 0.099 |
|  | 180' | 0.14±0.07 | -0.01±0.08 | 0.642 | 0.15±0.07 | -0.05±0.09 | 0.086 | 0.347 | 0.293 | 0.567 | 0.784 |
|  | 360' | 0.2±0.14 | 0.02±0.1 | 0.519 | 0.17±0.1 | 0±0.15 | 0.93 | 0.958 | 0.673 | 0.798 | 0.739 |
| **PC aa(34:3)** | 0' | 1.22±0.48 | 0.07±0.44 | 0.547 | 1.21±0.54 | 0.03±0.49 | 0.802 | 0.885 | 0.822 | 0.903 | 0.922 |
|  | 180' | 1.31±0.76 | 0.09±1.05 | 0.759 | 1.12±0.33 | -0.06±0.56 | 0.712 | 0.832 | 0.663 | 0.795 | 0.918 |
|  | 360' | 1.12±0.39 | 0.05±0.35 | 0.619 | 1.1±0.46 | -0.13±0.56 | 0.415 | 0.67 | 0.333 | 0.598 | 0.557 |
| **PC aa(34:2)** | 0' | 175.35±40.47 | 7.39±44.46 | 0.53 | 182.26±47.77 | 1.84±25.26 | 0.783 | 0.866 | 0.677 | 0.799 | 0.736 |
|  | 180' | 149.07±23.53 | 11.86±34.38 | 0.219 | 155.49±19.2 | -8.77±19.87 | 0.155 | 0.459 | 0.079 | 0.26 | 0.177 |
|  | 360' | 192.5±42.29 | 17.2±45.56 | 0.199 | 205.94±60.92 | -31.84±66.81 | 0.111 | 0.38 | 0.038 | 0.203 | 0.057 |
| **PC aa(34:1)** | 0' | 122.76±27.61 | 4.17±25.67 | 0.539 | 134.22±31.06 | -5.64±22.33 | 0.344 | 0.594 | 0.273 | 0.547 | 0.548 |
|  | 180' | 119.88±31.14 | 4.47±30.1 | 0.587 | 122.36±21.62 | -4.12±20.38 | 0.499 | 0.725 | 0.410 | 0.645 | 0.608 |
|  | 360' | 147.01±39.47 | 7.71±26.38 | 0.313 | 151.5±40.2 | -22.59±47.94 | 0.115 | 0.388 | 0.057 | 0.229 | 0.100 |
| **PC(16:0/20:4)** | 0' | 2.01±1.12 | -0.22±0.9 | 0.355 | 1.62±0.7 | 0.47±0.69 | **0.020** | 0.167 | 0.025 | 0.203 | **0.031** |
|  | 180' | 1.64±0.8 | -0.03±0.94 | 0.897 | 1.68±0.73 | -0.32±0.9 | 0.241 | 0.494 | 0.433 | 0.657 | 0.231 |
|  | 360' | 2.48±1.45 | 0±0.94 | 0.994 | 2.11±1.06 | 0.15±1.01 | 0.598 | 0.782 | 0.691 | 0.803 | 0.634 |
| **PC(18:0/18:3)** | 0' | 2.86±1.59 | -0.19±1.22 | 0.557 | 2.6±1.18 | 0.92±1.54 | **0.036** | 0.215 | **0.036** | 0.203 | 0.094 |
|  | 180' | 2.81±1.47 | -0.08±1.37 | 0.838 | 3.04±1.52 | -0.66±1.68 | 0.205 | 0.473 | 0.338 | 0.598 | 0.235 |
|  | 360' | 3.55±2.17 | 0.35±1.67 | 0.458 | 3.04±1.38 | 0.27±2.34 | 0.683 | 0.832 | 0.917 | 0.956 | 0.869 |
| **PC aa(36:5)** | 0' | 1.77±2.23 | -0.35±2.39 | 0.576 | 0.94±0.72 | 0.28±0.61 | 0.096 | 0.361 | 0.328 | 0.598 | 0.465 |
|  | 180' | 1.45±1.6 | -0.48±1.52 | 0.255 | 1.34±1.49 | -0.74±1.38 | 0.091 | 0.351 | 0.664 | 0.795 | 0.744 |
|  | 360' | 1.87±1.86 | -0.14±2.03 | 0.807 | 1.15±0.88 | 0±1.14 | 0.988 | 0.991 | 0.835 | 0.912 | 0.855 |
| **PC aa(36:4)** | 0' | 26.75±13.78 | -3.53±9.35 | 0.165 | 21.9±8.23 | 7.12±8.57 | **0.006** | 0.079 | **0.003** | 0.069 | **0.013** |
|  | 180' | 20.72±8.79 | -1.12±9.62 | 0.67 | 23.64±8.12 | -4.47±11.42 | 0.202 | 0.473 | 0.424 | 0.651 | 0.322 |
|  | 360' | 35.68±16.7 | -2.43±8.75 | 0.336 | 33.67±13.19 | 1.04±17.77 | 0.836 | 0.899 | 0.532 | 0.723 | 0.576 |
| **PC aa(36:3)** | 0' | 52.58±16.58 | -0.05±14.58 | 0.99 | 52.34±17 | 4.11±12.2 | 0.213 | 0.476 | 0.404 | 0.645 | 0.317 |
|  | 180' | 51.46±15.39 | 0.83±19.17 | 0.874 | 56.56±12.94 | -10.42±21.19 | 0.116 | 0.388 | 0.167 | 0.417 | 0.243 |
|  | 360' | 70.47±26.49 | 5.11±20.71 | 0.391 | 69.36±28.6 | -10.94±39.49 | 0.338 | 0.593 | 0.206 | 0.467 | 0.370 |
| **PC aa(36:2)** | 0' | 93.73±26.1 | 6.32±26.25 | 0.367 | 107.55±19.12 | 0.86±15.85 | 0.836 | 0.899 | 0.496 | 0.695 | 0.868 |
|  | 180' | 97.03±26.86 | 10.03±27.64 | 0.197 | 115.62±16.75 | -14.09±23.84 | 0.065 | 0.296 | **0.026** | 0.203 | **0.039** |
|  | 360' | 115.03±30.59 | 15.52±33.49 | 0.121 | 137.7±42.48 | -27.13±47.06 | 0.06 | 0.287 | **0.013** | 0.157 | **0.045** |
| **PC aa(36:1)** | 0' | 28.29±10.66 | 3.32±8.92 | 0.172 | 33.01±9.18 | -2.66±9.03 | 0.273 | 0.514 | 0.079 | 0.266 | 0.348 |
|  | 180' | 37.2±16.79 | 0.18±14.52 | 0.964 | 38.54±11.11 | -5.35±16.58 | 0.287 | 0.529 | 0.373 | 0.626 | 0.902 |
|  | 360' | 39.82±18.28 | 4.9±14.81 | 0.256 | 41.79±18.12 | -10.59±26.44 | 0.174 | 0.471 | 0.077 | 0.260 | 0.236 |
| **PC aa(38:6)** | 0' | 6.46±5.85 | -1.72±4.64 | 0.173 | 3.61±2.87 | 2.33±3.65 | **0.027** | 0.187 | **0.012** | 0.154 | **0.016** |
|  | 180' | 5.84±4.77 | -1.25±3.96 | 0.259 | 6.73±7.12 | -3.1±7.4 | 0.174 | 0.471 | 0.424 | 0.651 | 0.349 |
|  | 360' | 8.62±7.58 | -1.23±5.2 | 0.409 | 5.78±5.32 | 0.61±5.68 | 0.707 | 0.832 | 0.397 | 0.644 | 0.703 |
| **PC aa(38:5)** | 0' | 2.73±1.54 | -0.29±1.21 | 0.364 | 2.2±1.01 | 0.72±0.95 | **0.011** | 0.102 | **0.016** | 0.177 | **0.028** |
|  | 180' | 2.01±1.05 | -0.07±1.27 | 0.838 | 2.54±1.84 | -0.79±1.87 | 0.168 | 0.467 | 0.252 | 0.527 | 0.185 |
|  | 360' | 3.66±2.33 | -0.34±1.22 | 0.334 | 3.31±1.31 | 0.28±1.73 | 0.563 | 0.76 | 0.296 | 0.568 | 0.450 |
| **PC aa(38:4)** | 0' | 13.63±6.89 | -1.45±4.7 | 0.252 | 13.06±4.54 | 2.4±4.02 | **0.036** | 0.215 | **0.022** | 0.200 | **0.036** |
|  | 180' | 12.52±5.73 | -0.15±5.85 | 0.923 | 16.79±7.59 | -4.34±8.08 | 0.09 | 0.351 | 0.139 | 0.378 | 0.174 |
|  | 360' | 18.1±8.79 | -0.6±5.32 | 0.693 | 19.47±7.22 | -0.77±8.36 | 0.744 | 0.838 | 0.949 | 0.965 | 0.764 |
| **PC aa(38:3)** | 0' | 15.74±7.77 | -1.23±5.75 | 0.422 | 16.63±8.35 | -1.33±4.64 | 0.285 | 0.527 | 0.956 | 0.965 | 0.639 |
|  | 180' | 17.41±7.35 | -0.61±7.87 | 0.775 | 21.83±9.63 | -7.63±10.65 | **0.03** | 0.203 | 0.065 | 0.248 | 0.176 |
|  | 360' | 21.06±11.65 | 0.82±8.91 | 0.746 | 23.53±15.71 | -8.27±18.94 | 0.142 | 0.447 | 0.130 | 0.369 | 0.337 |
| **PC aa(40:6)** | 0' | 2.51±2.14 | -0.67±1.73 | 0.154 | 1.72±1.25 | 0.66±1.14 | **0.042** | 0.220 | **0.019** | 0.190 | **0.040** |
|  | 180' | 2.32±1.72 | -0.47±1.38 | 0.229 | 3.21±3.55 | -1.78±3.47 | 0.103 | 0.366 | 0.203 | 0.467 | 0.238 |
|  | 360' | 3.47±2.88 | -0.52±1.97 | 0.355 | 2.71±2.25 | -0.04±2.42 | 0.959 | 0.972 | 0.576 | 0.749 | 0.654 |
| **PC aa(40:5)** | 0' | 0.41±0.31 | -0.07±0.29 | 0.374 | 0.35±0.21 | 0.03±0.15 | 0.514 | 0.735 | 0.271 | 0.546 | 0.343 |
|  | 180' | 0.33±0.21 | -0.03±0.22 | 0.624 | 0.47±0.48 | -0.25±0.46 | 0.084 | 0.347 | 0.121 | 0.355 | 0.143 |
|  | 360' | 0.54±0.44 | -0.06±0.33 | 0.531 | 0.51±0.29 | -0.04±0.37 | 0.729 | 0.832 | 0.873 | 0.933 | 0.739 |
| **PC aa(40:4)** | 0' | 0.36±0.22 | -0.04±0.17 | 0.386 | 0.33±0.18 | -0.02±0.11 | 0.475 | 0.71 | 0.721 | 0.826 | 0.557 |
|  | 180' | 0.35±0.18 | 0±0.23 | 0.995 | 0.44±0.23 | -0.2±0.22 | **0.009** | 0.087 | **0.033** | 0.203 | **0.045** |
|  | 360' | 0.42±0.31 | -0.03±0.25 | 0.71 | 0.44±0.3 | -0.14±0.36 | 0.194 | 0.473 | 0.366 | 0.625 | 0.632 |
| ***sum* PC** | 0' | 576.72±137.98 | 13.66±128.64 | 0.687 | 605.01±120.42 | 8.69±86.78 | 0.704 | 0.832 | 0.902 | 0.946 | 0.623 |
|  | 180' | 552.55±131.19 | 22.17±136.34 | 0.553 | 597.85±79.07 | -70.14±121.22 | 0.07 | 0.315 | 0.082 | 0.261 | 0.210 |
|  | 360' | 693.41±187.27 | 50.24±166.8 | 0.299 | 729.76±206.43 | -116.63±276.97 | 0.155 | 0.459 | 0.075 | 0.259 | 0.169 |
| **LPC(14:0)** | 0' | 0.61±0.22 | 0.05±0.35 | 0.551 | 0.67±0.19 | -0.1±0.2 | 0.081 | 0.341 | 0.154 | 0.403 | 0.937 |
|  | 180' | 0.73±0.33 | 0±0.36 | 0.993 | 0.72±0.16 | -0.16±0.23 | **0.039** | 0.219 | 0.212 | 0.471 | 0.896 |
|  | 360' | 0.76±0.35 | 0.09±0.29 | 0.31 | 0.71±0.17 | -0.12±0.24 | 0.105 | 0.366 | 0.065 | 0.248 | 0.429 |
| **LPC(16:1)** | 0' | 1.71±0.36 | 0±0.37 | 0.989 | 1.87±0.35 | -0.25±0.31 | **0.007** | 0.084 | 0.054 | 0.225 | 0.281 |
|  | 180' | 2.06±0.49 | -0.05±0.52 | 0.73 | 2.05±0.35 | -0.34±0.37 | **0.008** | 0.085 | 0.115 | 0.346 | 0.360 |
|  | 360' | 2.33±0.46 | 0.03±0.36 | 0.8 | 2.23±0.35 | -0.22±0.55 | 0.181 | 0.472 | 0.194 | 0.467 | 0.557 |
| **LPC(16:0)** | 0' | 62.91±9 | -1.1±8.85 | 0.638 | 63.74±12.44 | -3.09±4.87 | 0.028 | 0.188 | 0.451 | 0.669 | 0.964 |
|  | 180' | 58.67±5.78 | 3.62±15.24 | 0.39 | 61.01±6 | -2.53±6.45 | 0.201 | 0.473 | 0.205 | 0.467 | 0.196 |
|  | 360' | 84.28±9.16 | -1.11±4.25 | 0.364 | 85.9±10.16 | -7.25±14.14 | 0.089 | 0.351 | 0.147 | 0.391 | 0.111 |
| **LPC(18:2)** | 0' | 19.4±4.17 | 1.35±6.33 | 0.421 | 20.95±3.92 | 0.79±4.05 | 0.463 | 0.705 | 0.773 | 0.866 | 0.552 |
|  | 180' | 16.8±4.72 | 1.97±4.03 | 0.091 | 18.82±3.9 | -2.94±4.92 | 0.062 | 0.288 | **0.010** | 0.136 | **0.017** |
|  | 360' | 25.07±4.37 | 1.97±3.79 | 0.086 | 26.97±5.5 | -1.72±4.69 | 0.210 | 0.476 | **0.037** | 0.203 | **0.042** |
| **LPC(18:1)** | 0' | 21.39±4.31 | 1.11±3 | 0.175 | 23.9±3.12 | -0.97±2.51 | 0.157 | 0.459 | **0.049** | 0.219 | **0.031** |
|  | 180' | 21.6±4.86 | 1.33±4.6 | 0.298 | 23.72±3.39 | -1.78±2.1 | **0.014** | 0.116 | **0.041** | 0.21 | **0.039** |
|  | 360' | 28.37±4.9 | 1.08±2.91 | 0.205 | 29.08±4.45 | -2.16±5.47 | 0.18 | 0.472 | 0.071 | 0.249 | 0.112 |
| **LPC(18:0)** | 0' | 41.53±9.58 | 1.27±7.49 | 0.524 | 49.34±8.41 | -5.43±5.48 | **0.002** | **0.04** | **0.009** | 0.132 | **0.001** |
|  | 180' | 47.73±7.9 | 2.31±9.74 | 0.39 | 53.99±6.47 | -5.03±7.5 | **0.04** | 0.22 | **0.044** | 0.213 | **0.036** |
|  | 360' | 58.57±8.05 | 1.74±8.34 | 0.467 | 63.23±10.46 | -10.03±11.36 | **0.008** | 0.085 | **0.006** | 0.113 | **0.004** |
| **LPC(20:4)** | 0' | 4.45±1.78 | -0.5±1.54 | 0.228 | 4.26±1.33 | 0.57±0.94 | **0.034** | 0.215 | **0.029** | 0.203 | **0.027** |
|  | 180' | 3.43±1.33 | 0.08±1.36 | 0.835 | 3.88±1.51 | -0.42±1.44 | 0.335 | 0.592 | 0.375 | 0.626 | 0.334 |
|  | 360' | 6.43±2.51 | -0.7±1.19 | 0.057 | 6.15±2.11 | 0.08±1.76 | 0.866 | 0.925 | 0.198 | 0.467 | 0.160 |
| **LPC(20:3)** | 0' | 3.07±0.85 | -0.35±0.82 | 0.122 | 3.29±1.2 | -0.3±0.76 | 0.149 | 0.459 | 0.867 | 0.933 | 0.497 |
|  | 180' | 2.2±0.76 | -0.04±0.8 | 0.855 | 2.63±0.94 | -0.65±0.92 | **0.032** | 0.208 | 0.082 | 0.261 | 0.080 |
|  | 360' | 4.24±1.44 | -0.17±0.87 | 0.503 | 4.46±1.55 | -0.77±1.25 | **0.047** | 0.242 | 0.168 | 0.417 | 0.365 |
| **LPC(22:6)** | 0' | 0.79±0.45 | -0.14±0.34 | 0.137 | 0.7±0.2 | 0.13±0.27 | 0.092 | 0.351 | **0.025** | 0.203 | **0.029** |
|  | 180' | 0.61±0.31 | -0.02±0.21 | 0.716 | 0.75±0.49 | -0.13±0.45 | 0.327 | 0.583 | 0.407 | 0.645 | 0.302 |
|  | 360' | 1.15±0.62 | -0.14±0.45 | 0.298 | 1.03±0.33 | 0.04±0.31 | 0.672 | 0.83 | 0.265 | 0.546 | 0.629 |
| ***sum* LPC** | 0' | 155.86±21.25 | 1.7±23.84 | 0.786 | 168.73±21.07 | -8.65±13.2 | **0.024** | 0.176 | 0.152 | 0.401 | 0.732 |
|  | 180' | 153.83±17.69 | 9.2±27.83 | 0.238 | 167.57±12.1 | -13.99±11.35 | **0.001** | **0.04** | **0.012** | 0.154 | **0.032** |
|  | 360' | 211.19±14.3 | 2.79±13.74 | 0.478 | 219.76±19.39 | -22.14±30.12 | **0.021** | 0.167 | **0.012** | 0.154 | **0.047** |
| **PE(34:2)** | 0' | 6.39±1.79 | 0.58±4.29 | 0.608 | 6.29±2.92 | 0.37±3.03 | 0.642 | 0.806 | 0.877 | 0.934 | 0.896 |
|  | 180' | 7.67±3.88 | -1.76±3.95 | 0.118 | 5.19±3.45 | -0.43±4.82 | 0.762 | 0.852 | 0.446 | 0.666 | 0.376 |
|  | 360' | 4.78±0.88 | 0.19±2.17 | 0.756 | 4.79±1.9 | -0.92±2.04 | 0.131 | 0.422 | 0.192 | 0.465 | 0.339 |
| **PE(36:2)** | 0' | 2.94±1.22 | 0.3±1.61 | 0.481 | 3.07±1.14 | 0.61±1.26 | 0.081 | 0.341 | 0.559 | 0.739 | 0.190 |
|  | 180' | 4.45±1.57 | 0.48±2.35 | 0.459 | 5.39±1.92 | -1.06±2.69 | 0.202 | 0.473 | 0.133 | 0.371 | 0.385 |
|  | 360' | 2.1±0.86 | 0.29±1.03 | 0.324 | 2.11±1.3 | -0.24±1.67 | 0.611 | 0.791 | 0.335 | 0.598 | 0.764 |
| **PE(38:4)** | 0' | 0.51±0.32 | -0.04±0.29 | 0.562 | 0.38±0.16 | 0.21±0.24 | **0.005** | 0.072 | **0.014** | 0.163 | **0.015** |
|  | 180' | 0.56±0.24 | 0±0.32 | 0.981 | 0.71±0.45 | -0.21±0.51 | 0.176 | 0.472 | 0.206 | 0.467 | 0.356 |
|  | 360' | 0.45±0.28 | -0.04±0.18 | 0.407 | 0.35±0.18 | 0.05±0.35 | 0.635 | 0.801 | 0.412 | 0.645 | 0.260 |
| **PE(38:3)** | 0' | 1.34±0.28 | -0.1±0.4 | 0.352 | 1.29±0.28 | 0.11±0.33 | 0.216 | 0.476 | 0.128 | 0.368 | **0.035** |
|  | 180' | 1.45±0.38 | 0.06±0.45 | 0.642 | 1.8±0.59 | -0.43±0.68 | 0.051 | 0.253 | 0.038 | 0.203 | 0.102 |
|  | 360' | 0.91±0.26 | 0.02±0.26 | 0.817 | 1±0.36 | -0.12±0.43 | 0.342 | 0.594 | 0.343 | 0.603 | 0.506 |
| **PE(38:2)** | 0' | 7.91±2.94 | 0.86±3.28 | 0.327 | 8.7±2.92 | 1.99±3.42 | **0.041** | 0.22 | 0.364 | 0.625 | 0.165 |
|  | 180' | 14.82±6.94 | 0.83±7.21 | 0.672 | 17.81±5.86 | -2.77±8.48 | 0.282 | 0.526 | 0.253 | 0.527 | 0.420 |
|  | 360' | 6.51±3.2 | 0.97±3.1 | 0.28 | 6.53±3.69 | -0.49±5.13 | 0.734 | 0.832 | 0.385 | 0.633 | 0.664 |
| **PE(38:1)** | 0' | 6.97±2.61 | 0.23±1.67 | 0.597 | 6.93±2.13 | 0.87±1.87 | 0.092 | 0.351 | 0.333 | 0.598 | 0.233 |
|  | 180' | 12.91±6.13 | -1.17±4.75 | 0.376 | 12.71±3.28 | -1.27±4.36 | 0.335 | 0.592 | 0.954 | 0.965 | 0.739 |
|  | 360' | 5.01±3.05 | 0.51±2.55 | 0.484 | 4.43±2.18 | -0.47±3.38 | 0.628 | 0.801 | 0.413 | 0.645 | 0.601 |
| ***sum* PE** | 0' | 26.05±6.49 | 1.83±8.57 | 0.422 | 26.67±6.76 | 4.16±8.64 | 0.083 | 0.347 | 0.464 | 0.673 | 0.267 |
|  | 180' | 41.86±15.15 | -1.56±14.65 | 0.697 | 43.61±12.37 | -6.17±17.71 | 0.253 | 0.494 | 0.474 | 0.677 | 0.782 |
|  | 360' | 19.76±7.03 | 1.94±7.58 | 0.374 | 19.21±8.49 | -2.19±12.13 | 0.528 | 0.736 | 0.308 | 0.582 | 0.567 |
| **SM(d16:1/18:1) or** | 0' | 14.84±3.94 | 1.02±3.92 | 0.33 | 16.11±4.26 | -0.02±3.7 | 0.985 | 0.991 | 0.461 | 0.672 | 0.680 |
| **SM(d18:2/16:0)** | 180' | 17.15±4.43 | 0.45±5.96 | 0.781 | 16.94±4.04 | -0.32±3.38 | 0.746 | 0.838 | 0.693 | 0.803 | 0.778 |
|  | 360' | 15.89±3.59 | 1.78±4.48 | 0.178 | 15.7±5.13 | -2.16±6.04 | 0.222 | 0.477 | 0.071 | 0.249 | 0.182 |
| **SM(d18:0/16:0)** | 0' | 3.75±1.13 | 0.71±1.2 | 0.038 | 4.55±1.1 | 0.27±0.94 | 0.293 | 0.537 | 0.269 | 0.546 | 0.335 |
|  | 180' | 4.06±1.1 | 0.51±1.03 | 0.088 | 4.35±0.76 | 0.4±0.54 | **0.025** | 0.18 | 0.755 | 0.855 | 0.988 |
|  | 360' | 4.27±1.21 | 0.9±1.54 | 0.057 | 4.61±1.37 | -0.58±1.68 | 0.241 | 0.494 | **0.028** | 0.203 | 0.067 |
| **SM(d16:1/22:0)** | 0' | 13.38±3.19 | 1.03±2.83 | 0.179 | 14.75±2.93 | -1±2.62 | 0.164 | 0.459 | 0.051 | 0.221 | 0.208 |
|  | 180' | 15.44±2.54 | 0.44±4.2 | 0.704 | 15.3±2.47 | -0.45±2.39 | 0.528 | 0.736 | 0.524 | 0.721 | 0.997 |
|  | 360' | 16.06±4.32 | 2.42±5.6 | 0.146 | 15.33±4.15 | -2.23±5.24 | 0.151 | 0.459 | **0.039** | 0.203 | 0.166 |
| **SM(d18:2/22:1)** | 0' | 1.37±0.33 | -0.06±0.31 | 0.436 | 1.45±0.37 | 0.05±0.47 | 0.708 | 0.832 | 0.452 | 0.669 | 0.784 |
|  | 180' | 1.43±0.27 | -0.02±0.26 | 0.774 | 1.36±0.29 | 0.03±0.35 | 0.735 | 0.832 | 0.647 | 0.789 | 0.731 |
|  | 360' | 1.76±0.42 | 0.08±0.45 | 0.518 | 1.72±0.5 | -0.13±0.59 | 0.453 | 0.698 | 0.318 | 0.593 | 0.228 |
| **SM(d16:1/24:1) or** | 0' | 19.28±4.17 | 0.85±4.09 | 0.433 | 20.03±4.03 | -0.77±4.2 | 0.489 | 0.716 | 0.293 | 0.567 | 0.488 |
| **SM (d18:1/22:1) or** | 180' | 23.11±4.13 | 0.16±6.4 | 0.925 | 21.51±3.19 | -0.72±3.43 | 0.48 | 0.712 | 0.671 | 0.798 | 0.942 |
| **SM(d18:2/22:0)** | 360' | 21.91±5.1 | 2.52±6.61 | 0.194 | 20.7±5.76 | -2.57±7.1 | 0.216 | 0.476 | 0.070 | 0.249 | 0.255 |
| **SM(d16:1/24:0)** | 0' | 18.27±5.74 | 1.23±4.55 | 0.312 | 19.35±4.3 | -1.28±3.88 | 0.222 | 0.477 | 0.114 | 0.346 | 0.395 |
|  | 180' | 23.88±4.84 | 0.44±8.52 | 0.851 | 22.29±3.18 | -0.33±3.9 | 0.775 | 0.861 | 0.777 | 0.867 | 0.683 |
|  | 360' | 20.21±6.94 | 3.53±7.26 | 0.105 | 18.98±6.18 | -3.11±8.07 | 0.19 | 0.473 | **0.037** | 0.203 | 0.176 |
| **SM(d17:1/24:1) or** | 0' | 7.77±1.97 | 0.27±1.92 | 0.592 | 8.1±1.87 | 0.04±2.13 | 0.941 | 0.964 | 0.758 | 0.855 | 0.784 |
| **SM(d18:2/23:0)** | 180' | 10.02±1.92 | 0.19±3.27 | 0.832 | 9.4±1.82 | -0.04±1.9 | 0.946 | 0.964 | 0.833 | 0.912 | 0.999 |
|  | 360' | 8.47±2.26 | 1.19±2.83 | 0.156 | 8.03±2.37 | -0.79±3.25 | 0.401 | 0.656 | 0.111 | 0.341 | 0.222 |
| **SM(d18:2/24:1)** | 0' | 21.48±5.54 | 0.52±4.54 | 0.665 | 23.01±5.88 | 1.22±7.1 | 0.518 | 0.736 | 0.750 | 0.853 | 0.860 |
|  | 180' | 26.52±5.39 | -0.04±6.85 | 0.982 | 25.24±6.38 | 0.6±5.72 | 0.725 | 0.832 | 0.800 | 0.887 | 0.662 |
|  | 360' | 25.06±6.04 | 2.67±7.26 | 0.21 | 24.3±8.31 | -1.46±8.96 | 0.567 | 0.763 | 0.208 | 0.468 | 0.188 |
| **SM(d18:2/24:0)** | 0' | 36.95±10.99 | 1.72±9.85 | 0.51 | 38.42±8.94 | 3.11±14.61 | 0.423 | 0.675 | 0.761 | 0.856 | 0.870 |
|  | 180' | 49.19±11.04 | 0.05±15.58 | 0.99 | 44.43±8.28 | 3.86±11.03 | 0.251 | 0.494 | 0.486 | 0.688 | 0.863 |
|  | 360' | 42.61±12.61 | 6.42±14.58 | 0.138 | 39.84±13.88 | -2.62±19.06 | 0.629 | 0.801 | 0.186 | 0.455 | 0.177 |
| ***sum* SM** | 0' | 137.09±33.24 | 7.29±30.23 | 0.366 | 145.76±29.89 | 1.62±37.4 | 0.87 | 0.925 | 0.651 | 0.789 | 0.647 |
|  | 180' | 170.8±31.9 | 2.18±48.95 | 0.87 | 160.84±24.57 | 3.02±27.14 | 0.707 | 0.832 | 0.958 | 0.965 | 0.992 |
|  | 360' | 156.23±39.07 | 21.51±47.47 | 0.128 | 149.2±43.94 | -15.63±57.69 | 0.348 | 0.596 | 0.085 | 0.268 | 0.166 |
| False Discovery Rate (FDR) was calculated for changes in EXE vs baseline and EXE vs CT (not shown for CT vs baseline as none of the changes were significant). \*p value adjusted for changes in body weight (3 months *minus* baseline). DAG: diacylglycerol; CER: ceramide; dhCER: dihydroceramide; PC: phosphatidylcholine; LPC: lysophosphatidylcholine; PE: phosphatidylethanolamine; SM: sphingomyelin; TAG: triacylglycerol. | | | | | | | | | | | |