Table 1S. The number of samples of three biological fluids (maternal blood plasma, cord blood plasma and amniotic fluid) taken from 234 patients at the stage of delivery, whose lipid was determined by HPLC-MS/MS.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Жидкость** | Control (n=59) | Ia group (n=41) | Ib group (n=67) | Ic group (n=67) |
|
| mother plasma | 51 | 27 | 51 | 50 |
| Cord plasma | 47 | 28 | 50 | 49 |
| amniotic fluid | 50 | 27 | 52 | 50 |

Table 2S. Maternal plasma, cord blood, and amniotic fluid lipids, with statistically significant changes in history of Covid 19 infection, compared with controls.

|  |  |  |  |
| --- | --- | --- | --- |
| Lipid | Control | Infection | P |
| Maternal plasma, 1st trimester, positive ion regimen | | | |
| LPC 20:4 | 8.6e5(6.3e5;1.2e6) | 1.1e6(8.6e5;1.3e6) | 0.03 |
| OxLPC 18:3(OOO) | 2.1e5(1.6e5;2.6e5) | 2.6e5(2.2e5;3.1e5) | 0.03 |
| OxTG 16:0\_18:1\_16:1(CHO) | 2.2e5(1.5e5;2.8e5) | 1.5e5(1.3e5;2.3e5) | 0.03 |
| OxTG 18:0\_18:1\_16:1(COOH) | 1.9e5(1.7e5;2.1e5) | 2.1e5(1.9e5;2.5e5) | 0.03 |
| LPC O-16:0 | 1.7e5(1.4e5;2.2e5) | 2.1e5(1.7e5;2.6e5) | 0.03 |
| PC O-20:1/18:1 | 2.5e6(1.7e6;3.8e6) | 1.6e6(1.0e6;2.9e6) | 0.04 |
| Maternal blood plasma, 1st trimester, negative ion regimen | | | |
| LPC 16:0 | 2.9e6(2.4e6;4.1e6) | 3.9e6(2.9e6;4.4e6) | 0.02 |
| LPC 18:2 | 4.6e5(3.5e5;5.9e5) | 5.3e5(4.7e5;6.3e5) | 0.04 |
| LPC 20:4 | 1.1e5(7.7e4;1.7e5) | 1.6e5(1.1e5;1.9e5) | 0.03 |
| PI 16:0\_16:0 | 6.4e4(4.1e4;9.4e4) | 4.1e4(3.3e4;5.1e4) | 0.009 |
| PI 16:0\_18:1 | 2.8e5(2.1e5;4.1e5) | 2.1e5(1.6e5;2.7e5) | 0.009 |
| PI 18:0\_18:2 | 9.2e5(7.7e5;1.1e6) | 7.4e5(6.1e5;9.2e5) | 0.03 |
| PI 18:0\_20:3 | 2.7e5(2.2e5;3.4e5) | 2.0e5(1.7e5;2.6e5) | 0.004 |
| PI 18:0\_20:4 | 1.5e6(1.2e6;1.8e6) | 1.2e6(1.0e6;1.5e6) | 0.04 |
| PMeOH 18:0\_22:4 | 5.7e4(4.5e4;6.4e4) | 4.9e4(3.5e4;5.5e4) | 0.01 |
| SM d20:0/16:0 | 2.1e5(1.1e5;3.1e5) | 1.0e5(3.9e4;2.7e5) | 0.03 |
| Maternal blood plasma, 2nd trimester, positive ion regimen | | | |
| PE 18:0\_20:1 | 5.4e5(3.4e5;8.6e5) | 8.1e5(5.1e5;9.9e5) | 0.04 |
| SM d18:1/18:1 | 2.4e6(2.1e6;3.1e6) | 2.3e6(2.0e6;2.6e6) | 0.049 |
| SM d18:1/18:3 | 5.8e6(5.2e6;6.3e6) | 5.5e6(4.8e6;5.9e6) | 0.03 |
| SM d18:1/24:0 | 7.8e6(4.6e6;9.1e6) | 9.6e6(5.8e6;1.3e7) | 0.02 |
| TG 14:1\_18:2\_18:3 | 2.6e5(1.9e5;3.4e5) | 3.2e5(2.3e5;4.1e5) | 0.03 |
| TG 16:0\_16:1\_20:1 | 2.2e5(1.5e5;4.5e5) | 3.43e5(2.03e5;7e5) | 0.03 |
| TG 16:1\_18:1\_18:4 | 1.1e5(8.3e4;1.4e5) | 1.2e5(8.9e4;1.6e5) | 0.04 |
| TG 16:1\_18:2\_18:3 | 1.7e6(1.3e6;2.1e6) | 1.9e6(1.6e6;2.6e6) | 0.02 |
| TG 18:0\_18:3\_18:4 | 1.6e5(1.1e5;1.9e5) | 1.8e5(1.3e5;2.25e5) | 0.04 |
| Maternal blood plasma, 2nd trimester, negative ion regimen | | | |
| LPC 20:4 | 1.1e5(7.7e4;1.7e5) | 1.6e5(9.5e4;2.0e5) | 0.03 |
| LPE 16:0 | 7.3e4(5.8e4;9.8e4) | 1.0e5(6.3e4;1.3e5) | 0.01 |
| LPE 18:1 | 2.9e4(1.7e4;5.2e4) | 4.6e4(3.1e4;6.6e4) | 0.01 |
| LPE 20:4 | 4.6e4(3.5e4;5.9e4) | 5.4e4(4.3e4;8.2e4) | 0.01 |
| LPE 22:6 | 5.9e4(3.6e4;8.2e4) | 7.8e4(4.0e4;1.1e5) | 0.04 |
| MGDG 18:2\_22:6 | 3.0e6(2.8e6;3.4e6) | 3.2e6(2.9e6;3.4e6) | 0.04 |
| MGDG 20:4\_22:6 | 1.5e4(4.1e3;2.5e4) | 2.2e4(1.0 e4;3.8e4) | 0.04 |
| PC 16:1\_18:2 | 7.6e5(6.6e5;8.6e5) | 8.4e5(7.0e5;1.0e6) | 0.01 |
| PC 18:0\_20:3 | 8.2e4(7.1e4;9.6e4) | 7.4e4(6.5e4;8.3e4) | 0.009 |
| PI 16:0\_18:1 | 2.8e5(2.1e5;4.1e5) | 2.4e5(1.9e5;3.2e5) | 0.03 |
| PI 18:0\_18:2 | 9.2e5(7.7e5;1.1e6) | 7.4e5(6.0e5;9.9e5) | 0.02 |
| PI 18:0\_20:3 | 2.7e5(2.2e5;3.4e5) | 2.4e5(1.9e5;2.9e5) | 0.04 |
| PI 18:0\_20:4 | 1.5e6(1.2e6;1.8e6) | 1.2e6(1.0e6;1.7e6) | 0.04 |
| PC O-18:0/18:2 | 2.1e4(1.5e4;3.0e4) | 3.2e4(1.7e4;7.0e4) | 0.01 |
| PC O-20:0/20:4 | 3.9e4(2.8e4;6.3e4) | 5.9e4(4.0e4;7.6e4) | 0.01 |
| Maternal plasma, 3rd trimester, positive ion regimen | | | |
| LPC 16:0 | 1.5e7(9.9e6;2.4e7) | 2.4e7(1.6e7;3.2e7) | 0.005 |
| LPC 18:0 | 5.8e6(4.1e6;8.2e6) | 8.2e6(5.4e6;1.0e7) | 0.003 |
| LPC 18:1 | 2.8e6(2.1e6;3.9e6) | 3.6e6(2.8e6;5.0e6) | 0.006 |
| LPC 18:2 | 3.3e6(2.6e6;4.8e6) | 4.0e6(3.4e6;5.4e6) | 0.03 |
| LPC 20:3 | 3.3e5(2.6e5;4.2e5) | 4.1e5(3.2e5;5.5e5) | 0.002 |
| LPC 20:4 | 8.6e5(6.3e5;1.2e6) | 1.3e6(9.6e5;1.6e6) | 0.000 |
| LPC 22:6 | 4.9e5(4.1e5;6.8e5) | 6.3e5(5.3e5;8.2e5) | 0.001 |
| OxLPC 18:3(OOO) | 2.1e5(1.6e5;2.8e5) | 2.9e5(2.4e5;3.8e5) | 0.000 |
| OxTG 16:0\_18:1\_16:1(CHO) | 2.2e5(1.5e5;2.8e5) | 1.5e5(1.2e5;2.4e5) | 0.03 |
| LPC O-16:0 | 1.7e5(1.4e5;2.2e5) | 2.1e5(1.8e5;2.8e5) | 0.001 |
| TG 16:1\_18:1\_18:4 | 1.1e5(8.3e4;1.4e5) | 1.2e5(9.9e4;1.5e5) | 0.03 |
| TG 18:0\_18:3\_18:4 | 1.6e5(1.1e5;1.9e5) | 1.8e5(1.3e5;2.6e5) | 0.02 |
| Maternal blood plasma, 3rd trimester, negative ion regimen | | | |
| LPC 16:0 | 2.9e6(2.4e6;4.1e6) | 3.7e6(3.3e6;4.8e6) | 0.001 |
| LPC 18:0 | 7.2e5(5.1e5;1.0e6) | 9.3e5(7.6e5;1.4e6) | 0.003 |
| LPC 18:1 | 4.3e5(3.0e5;5.8e5) | 4.9e5(3.6e5;7.3e5) | 0.02 |
| LPC 20:4 | 1.1e5(7.7e4;1.7e5) | 1.8e5(1.3e5;2.3e5) | <0.001 |
| LPC 22:6 | 3.9e4(2.9e4;5.9e4) | 5.4e4(3.7e4;8.1e4) | 0.02 |
| LPE 16:0 | 7.3e4(5.8e4;9.8e4) | 1.0e5(7.9e4;1.3e5) | <0.001 |
| LPE 20:4 | 4.6e4(3.5e4;5.9e4) | 6.3e4(4.2e4;8.6e4) | 0.007 |
| LPE 22:6 | 5.9e4(3.6e4;8.2e4) | 7.9e4(5.6e4;1.3e5) | 0.004 |
| OxCL 18:1(OH)\_18:1 (OH)\_22:6\_22:6 | 1.2e5(9.9e4;1.4e5) | 1.0e5(8.8e4;1.2e5) | 0.03 |
| OxPC 18:0\_18:4(OO) | 2.2e4(1.2e4;4.5e4) | 3.0e4(1.5e4;9.9e4) | 0.03 |
| OxPC 18:2\_14:1(COOH) | 1.2e6(1.0e6;1.5e6) | 1.0e6(8.2e5;1.3e6) | 0.01 |
| OxPC 20:4\_16:1(COOH) | 4.3e6(3.6e6;4.9e6) | 4.9e6(4.3e6;5.9e6) | 0.01 |
| PC O-16:0/22:4 | 3.5e5(6.0e4;4.5e5) | 1.2e5(6.9e4;3.5e5) | 0.01 |
| Cord blood plasma, 1st trimester, positive ion regimen | | | |
| LPC 20:3 | 6.3e5(5.0e5;7.3e5) | 7.1e5(5.7e5;7.9e5) | 0.04 |
| PC 16:0\_22:6 | 3.8e7(3.2e7;4.3e7) | 4.3e7(3.8e7;4.8e7) | 0.03 |
| PC 18:0\_22:6 | 1.5e7(1.3e7;1.8e7) | 2.0e7(1.5e7;2.0e7) | 0.02 |
| PE 18:0\_20:4 | 1.1e6(8.2e5;1.4e6) | 8.6e5(6.2e5;1.1e6) | 0.03 |
| TG 14:0\_18:2\_22:6 | 8.0e5(5.7e5;1.0e6) | 1.0e6(7.3e5;1.2e6) | 0.049 |
| TG 16:0\_18:1\_20:5 | 5.1e5(4.0e5;5.6e5) | 5.8e5(4.5e5;6.9e5) | 0.04 |
| TG 16:0\_18:2\_22:6 | 5.1e6(4.2e6;6.5e6) | 7.0e6(5.4e6;8.1e6) | 0.01 |
| TG 16:0\_20:4\_22:6 | 1.6e6(1.3e6;2.2e6) | 2.4e6(1.5e6;2.8e6) | 0.04 |
| TG 16:1\_18:2\_22:6 | 1.3e6(9.0e5;1.5e6) | 1.6e6(1.4e6;2.0e6) | 0.02 |
| TG 16:1\_18:3\_22:6 | 1.9e5(1.3e5;2.5e5) | 2.6e5(1.8e5;3.1e5) | 0.02 |
| TG 18:0\_18:4\_20:5 | 1.4e5(1.0e5;1.7e5) | 1.8e5(1.2e5;2.0e5) | 0.03 |
| TG 18:1\_18:2\_20:5 | 4.0e5(3.4e5;5.0e5) | 5.2e5(3.8e5;6.0e5) | 0.03 |
| Cord blood plasma, 1st trimester, negative ion regimen | | | |
| PC 16:0\_22:6 | 6.0e6(5.1e6;7.1e6) | 7.1e6(6.1e6;7.8e6) | 0.03 |
| PC 18:0\_22:6 | 2.4e6(2.0e6;3.0e6) | 3.2e6(2.5e6;3.5e6) | 0.008 |
| LPE O-18:0 | 6.9e4(3.8e4;1.2e5) | 4.7e4(2.3e4;6.5e4) | 0.049 |
| PE P-16:0/20:4 | 2.9e5(1.9e5;4.1e5) | 2.0e5(1.3e5;2.5e5) | 0.02 |
| SM d20:0/18:0 | 2.9e4(1e3;2.95e5) | 1.0e3(1.0e3;4.0e4) | 0.046 |
| SM d20:0/20:1 | 4.29e5(1e3;7.93e5) | 6.3e5(2.7e5;1.5e6) | 0.04 |
| SM d22:0/22:5 | 1.2e6(1.1e6;1.6e6) | 1.6e6(1.3e6;1.8e6) | 0.02 |
| Cord blood plasma, 2nd trimester, positive ion regimen | | | |
| LPC 16:0 | 6.9e5(5.5e5;8.8e5) | 8.5e5(7.1e5;9.6e5) | 0.01 |
| LPC 18:0 | 7.1e6(6.3e6;8.1e6) | 7.8e6(7.1e6;8.8e6) | 0.01 |
| LPE 22:6 | 2.9e5(2.4e5;3.3e5) | 3.3e5(2.5e5;3.9e5) | 0.03 |
| PC 16:0\_22:6 | 3.8e7(3.2e7;4.3e7) | 4.4e7(3.8e7;4.9e7) | 0.002 |
| PC 18:0\_20:4 | 7.26e7(6.64e7;8e7) | 8.0e7(6.9e7;9.0e7) | 0.03 |
| PC 18:0\_22:6 | 1.5e7(1.3e7;1.8e7) | 1.8e7(1.5e7;2.1e7) | <0.001 |
| PC 20:1\_20:5 | 6.1e6(5.0e6;7.1e6) | 7.0e6(6.2e6;7.9e6) | <0.001 |
| TG 16:0\_18:1\_20:5 | 5.1e5(4.0e5;5.6e5) | 5.6e5(4.6e5;6.5e5) | 0.01 |
| TG 16:0\_18:1\_22:5 | 5.1e6(4.1e6;5.5e6) | 5.5e6(4.8e6;6.4e6) | 0.01 |
| TG 16:0\_18:1\_22:6 | 6.9e6(6.1e6;8.3e6) | 7.8e6(6.6e6;9.7e6) | 0.03 |
| TG 16:0\_18:2\_20:4 | 7.1e6(5.6e6;8.0e6) | 8.2e6(6.6e6;9.4e6) | 0.02 |
| TG 16:0\_18:2\_22:6 | 5.1e6(4.2e6;6.5e6) | 6.0e6(4.5e6;8.5e6) | 0.03 |
| TG 16:0\_20:4\_22:6 | 1.6e6(1.3e6;2.2e6) | 2.2e6(1.4e6;2.8e6) | 0.007 |
| TG 16:1\_18:2\_22:6 | 1.3e6(9.0e5;1.5e6) | 1.5e6(1.1e6;2.2e6) | 0.02 |
| TG 16:1\_20:4\_22:6 | 4.2e5(3.0e5;5.7e5) | 5.7e5(3.3e5;8.4e5) | 0.03 |
| TG 18:0\_18:4\_20:5 | 1.4e5(1.0e5;1.7e5) | 1.7e5(1.2e5;2.2e5) | 0.01 |
| TG 18:1\_18:1\_22:6 | 2.2e6(1.9e6;2.5e6) | 2.4e6(2.0e6;2.9e6) | 0.04 |
| TG 18:1\_18:2\_20:3 | 2.9e5(2.5e5;3.4e5) | 3.2e5(2.8e5;3.5e5) | 0.02 |
| TG 18:1\_18:2\_20:5 | 4.0e5(3.4e5;5.0e5) | 4.8e5(3.6e5;6.0e5) | 0.02 |
| TG 18:1\_18:2\_22:6 | 2.3e6(1.9e6;2.8e6) | 2.9e6(2.1e6;3.4e6) | 0.01 |
| TG 18:1\_20:4\_20:5 | 1.6e5(1.2e5;2.0e5) | 2.0e5(1.4e5;2.6e5) | 0.01 |
| TG 18:1\_20:4\_22:6 | 1.1e6(8.1e5;1.3e6) | 1.2e6(9.1e5;1.8e6) | 0.01 |
| TG 18:2\_20:4\_22:6 | 8.0e5(6.0e5;1.1e6) | 1.1e6(6.2e5;1.7e6) | 0.02 |
| Cord blood plasma, 2nd trimester, negative ion mode | | | |
| CL 18:0\_18:0\_20:4\_22:6 | 2.5e5(1.1e5;3.9e5) | 1.2e5(8.7e4;2.3e5) | 0.009 |
| LPC 18:0 | 1.8e6(1.6e6;2.0e6) | 2.0e6(1.7e6;2.2e6) | 0.03 |
| LPC 22:6 | 2.9e5(2.3e5;3.8e5) | 3.6e5(2.8e5;4.3e5) | 0.02 |
| LPE 22:6 | 5.2e5(4.1e5;6.0e5) | 6.1e5(4.5e5;7.2e5) | 0.02 |
| OxCL 18:1\_18:3(OOH)2\_18:3(OOH)2\_20:3 | 3.8e4(2.6e4;5.2e4) | 5.0e4(3.6e4;6.6e4) | 0.03 |
| OxLPE 16:1(CHO) | 2.9e4(2.3e4;4.0e4) | 2.1e4(1.3e4;4.5e4) | 0.047 |
| OxPC 16:0\_20:3(1O) | 3.6e5(2.6e5;4.8e5) | 4.1e5(3.4e5;5.3e5) | 0.048 |
| OxPC 20:2\_16:1(COOH) | 5.2e5(3.7e5;6.4e5) | 6.0e5(4.8e5;6.9e5) | 0.04 |
| OxPC 22:4\_16:1(Ke,OH) | 2.7e4(7.3e3;1.2e5) | 4.2e4(2.5e4;2.6e5) | 0.04 |
| OxPC 22:6\_16:1(COOH) | 1.8e5(1.6e5;2.0e5) | 2.0e5(1.7e5;2.1e5) | 0.009 |
| PC 16:0\_22:6 | 6.0e6(5.1e6;7.1e6) | 6.9e6(5.9e6;8.1e6) | 0.004 |
| PC 18:0\_22:6 | 2.4e6(2.0e6;3.0e6) | 3.1e6(2.5e6;3.4e6) | 0.001 |
| PI 16:0\_18:2 | 5.9e4(3.2e4;7.6e4) | 7.3e4(5.6e4;8.9e4) | 0.01 |
| PC O-16:1/20:4 | 5.3e5(2.3e5;6.5e5) | 6.1e5(4.4e5;7.7e5) | 0.04 |
| PC O-22:1/22:6 | 1.7e6(1.4e6;2.1e6) | 2.1e6(1.8e6;2.4e6) | 0.001 |
| PE P-18:1/22:6 | 6.8e4(5.9e4;8.4e4) | 7.7e4(6.7e4;9.2e4) | 0.03 |
| SM d22:0/22:5 | 1.2e6(1.1e6;1.6e6) | 1.6e6(1.4e6;1.8e6) | 0.001 |
| Cord blood plasma, 3rd trimester, positive ion regimen | | | |
| LPE 22:6 | 2.9e5(2.4e5;3.3e5) | 3.2e5(2.4e5;3.8e5) | 0.03 |
| PC 18:1\_20:5 | 1.0e7(7.9e6;1.3e7) | 1.2e7(9.4e6;1.4e7) | 0.049 |
| TG 16:0\_18:1\_22:6 | 6.9e6(6.1e6;8.3e6) | 8.0e6(6.5e6;9.4e6) | 0.04 |
| TG 16:0\_20:4\_22:6 | 1.6e6(1.3e6;2.2e6) | 1.9e6(1.4e6;2.6e6) | 0.04 |
| TG 16:1\_20:4\_22:6 | 4.2e5(3.0e5;5.7e5) | 5.0e5(3.9e5;7.5e5) | 0.04 |
| TG 18:0\_18:1\_18:1 | 2.1e6(1.4e6;3.86) | 1.4e6(1.1e6;2.5e6) | 0.03 |
| TG 18:0\_18:4\_20:5 | 1.4e5(1.0e5;1.7e5) | 1.5e5(1.2e5;1.9e5) | 0.03 |
| TG 18:1\_18:1\_22:6 | 2.2e6(1.9e6;2.5e6) | 2.4e6(2.1e6;2.8e6) | 0.02 |
| TG 18:1\_18:2\_22:6 | 2.3e6(1.9e6;2.8e6) | 2.7e6(2.1e6;3.3e6) | 0.02 |
| TG 18:1\_20:4\_22:6 | 1.1e6(8.1e5;1.3e6) | 1.2e6(8.9e5;1.7e6) | 0.03 |
| TG 18:2\_20:4\_22:6 | 8.0e5(6.0e5;1.1e6) | 9.8e5(7.3e5;1.4e6) | 0.03 |
| Cord blood plasma, 3rd trimester, negative ion mode | | | |
| CL 18:0\_18:0\_20:4\_22:6 | 2.5e5(1.1e5;3.9e5) | 1.2e5(9.9e4;3.0e5) | 0.047 |
| LPC 18:2 | 1.7e6(1.2e6;2.4e6) | 2.1e6(1.4e6;3.0e6) | 0.02 |
| LPC 20:3 | 5.1e5(3.6e5;6.1e5) | 6.1e5(4.3e5;7.3e5) | 0.04 |
| LPC 20:5 | 2.6e4(2.0e4;3.8e4) | 3.2e4(2.4e4;5.5e4) | 0.048 |
| LPC 22:6 | 2.9e5(2.3e5;3.8e5) | 3.7e5(2.7e5;4.3e5) | 0.01 |
| LPE 18:2 | 1.9e5(1.5e5;2.4e5) | 2.2e5(1.7e5;2.6e5) | 0.04 |
| LPE 20:4 | 5.0e5(4.2e5;6.0e5) | 5.9e5(4.8e5;7.0e5) | 0.008 |
| LPE 22:6 | 5.2e5(4.1e5;6.0e5) | 6.5e5(5.1e5;7.6e5) | 0.001 |
| OxPC 20:2\_16:1(COOH) | 5.2e5(3.7e5;6.4e5) | 5.9e5(4.5e5;7.6e5) | 0.02 |
| OxPC 22:6\_16:1(COOH) | 1.8e5(1.6e5;2.0e5) | 2.0e5(1.7e5;2.1e5) | 0.04 |
| OxPE 18:2\_16:1(COOH) | 3.2e5(2.0e5;4.3e5) | 3.9e5(2.8e5;5.1e5) | 0.045 |
| PC 16:0\_20:4 | 9.3e6(5.8e6;1.2e7) | 1.0e7(8.5e6;1.2e7) | 0.04 |
| PEtOH 16:0\_22:4 | 3.8e4(2.3e4;8.1e4) | 2.3e4(9.9e3;5.6e4) | 0.047 |
| PC O-16:0/20:4 | 1.3e5(9.8e4;1.6e5) | 1.6e5(1.3e5;2.0e5) | 0.006 |
| PC O-22:1/22:6 | 1.7e6(1.4e6;2.1e6) | 1.9e6(1.6e6;2.3e6) | 0.04 |
| PC O-24:0/20:4 | 5.3e5(2.7e5;8.0e5) | 7.6e5(5.5e5;9.9e5) | 0.005 |
| PE P-18:1/22:6 | 6.8e4(5.9e4;8.4e4) | 7.6e4(6.6e4;9.7e4) | 0.04 |
| SM d20:1/16:1 | 2.9e4(1.0e3;5.0e4) | 5.3e4(1.0e3;1.4e5) | 0.02 |
| SM d24:1/18:1 | 7.6e4(3.8e4;1.0e5) | 8.6e4(6.8e4;1.2e5) | 0.02 |
| Amniotic Fluid 1st Trimester Positive Ion Mode | | | |
| PC O-16:0/20:4 | 8.1e5(5.3e5;1.2e6) | 1.1e6(7.7e5;2.0e6) | 0.045 |
| Amniotic Fluid 1st Trimester Negative Ion Mode | | | |
| PI 18:1\_20:4 | 1.5e5(9.0e4;3.1e5) | 2.8e5(1.9e5;5.2e5) | 0.04 |
| PE P-20:0/18:2 | 3.0e4(2.0e4;7.1e4) | 5.4e4(3.4e4;1.3e5) | 0.01 |
| Amniotic Fluid 2nd Trimester Positive Ion Mode | | | |
| PC 16:0\_18:1 | 6.6e7(4.7e7;9.3e7) | 5.0e7(2.2e7;7.9e7) | 0.03 |
| SM d22:5/22:1 | 5.8e5(3.6e5;1.1e6) | 1.0e6(5.8e5;1.5e6) | 0.049 |
| TG 16:0\_22:2\_26:0 | 5.1e5(3.1e5;1.1e6) | 4.2e5(2.8e5;5.8e5) | 0.03 |
| Amniotic Fluid 2nd Trimester Negative Ion Mode | | | |
| LPG 16:0 | 1.6e5(1.0e3;5.4e5) | 2.9e4(1.0e3;1.6e5) | 0.03 |
| PC 18:1\_18:1 | 1.1e6(5.5e5;2.9e6) | 4.8e5(1.0e3;2.2e6) | 0.04 |
| PI 16:0\_18:1 | 4.5e5(2.2e5;8.7e5) | 2.1e5(5.3e4;7.4e5) | 0.01 |
| PI 18:1\_22:5 | 2.0e5(1.1e5;3.2e5) | 1.3e5(5.8e4;2.6e5) | 0.03 |
| Amniotic Fluid 3rd Trimester Positive Ion Mode | | | |
| PC 14:1\_16:0 | 3.9e6(2.0e6;7.0e6) | 3.1e6(1.4e6;4.5e6) | 0.049 |
| PG 18:0\_18:1 | 5.6e5(3.8e5;8.1e5) | 3.5e5(2.2e5;5.4e5) | 0.002 |
| PC O-18:0/16:1 | 6.1e5(3.1e5;9.2e5) | 8.9e5(4.2e5;1.5e6) | 0.04 |
| SM d22:6/18:2 | 5.1e5(4.3e5;7.6e5) | 4.5e5(3.3e5;6.6e5) | 0.02 |
| Amniotic Fluid 3rd Trimester Negative Ion Mode | | | |
| LPG 16:0 | 1.6e5(1.0e3;5.4e5) | 6.7e3(1.0e3;1.6e5) | 0.03 |
| MGDG 16:0\_18:0 | 1.7e4(5.5e3;3.0e4) | 2.6e4(1.8e4;1.2e5) | 0.006 |
| PC 18:1\_18:1 | 1.1e6(5.5e5;2.9e6) | 9.1e5(1.0e3;1.8e6) | 0.02 |

Table 3S. Model variables for determining whether a child will be healthy in the control group according to the plasma metabolomic profile

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | β | DI β | Wald criterion | P |
| Free term | 21,57 | 10,21 - 42,35 | 2,80 | 0,005 |
| PC 16:0\_16:0 \*TG 14:0\_16:1\_18:2 | -5,43\*10-12 | -1,09\*10-11 - -2,58\*10-12 | -2,75 | 0,006 |
| OxLPC 18:4(OOO) \* PC 16:0\_18:2 | -5,91\*10-13 | -1,20\*10-12 - -2,60\*10-13 | -2,63 | 0,009 |
| PC P-16:0/18:2 \* TG 16:0\_16:0\_18:1 | 3,85\*10-13 | 1,61\*10-13 - 8,01\*10-13 | 2,52 | 0,01 |
| PC 16:0\_20:5 \* OxPC 18:2\_16:1(COOH) | -1,88\*10-14 | -3,89\*10-14 - -6,57\*10-15 | -2,42 | 0,02 |

Table 4S. Model variables for determining whether a baby will be healthy in a cohort of patients infected with COVID-19 during the first trimester of pregnancy by plasma metabolomic profile.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | β | DI β | Wald criterion | P |
| Free term | 4,53 | 0,97 - 10,77 | 1,93 | 0,05 |
| PC 16:1\_18:0 \* LPC 16:1 | -1,17\*10-12 | -2,56\*10-12 - -3,88\*10-13 | -2,24 | 0,03 |

Table 5S. Model variables for determining whether a baby will be healthy in a cohort of patients infected with COVID-19 during the second trimester of pregnancy by plasma metabolomic profile.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | β | DI β | Wald criterion | P |
| Free term | 15,22 | 6,97 - 28,60 | 2,80 | 0,005 |
| PC 16:0\_20:1 \* TG 16:0\_16:1\_18:0 | -2,95\*10-13 | -5,67\*10-13 - -1,27\*10-13 | -2,69 | 0,007 |
| SM d18:0/22:0 \* TG 18:1\_22:5\_8:0 | -2,09\*10-13 | -3,82\*10-13 - -9,74\*10-14 | -2,93 | 0,003 |
| MGDG 16:0\_20:0 \* SM d18:0/22:0 | 4,48\*10-13 | 1,32\*10-13 - 9,27\*10-13 | 2,28 | 0,02 |
| PC 18:1\_18:3 \*  OxPC 18:2\_16:1(COOH) | -3,36\*10-14 | -6,84\*10-14 - -9,99\*10-15 | -2,31 | 0,02 |

Table 6S. Model variables for determining whether a baby will be healthy in a cohort of patients infected with COVID-19 during the third trimester of pregnancy by plasma metabolomic profile.

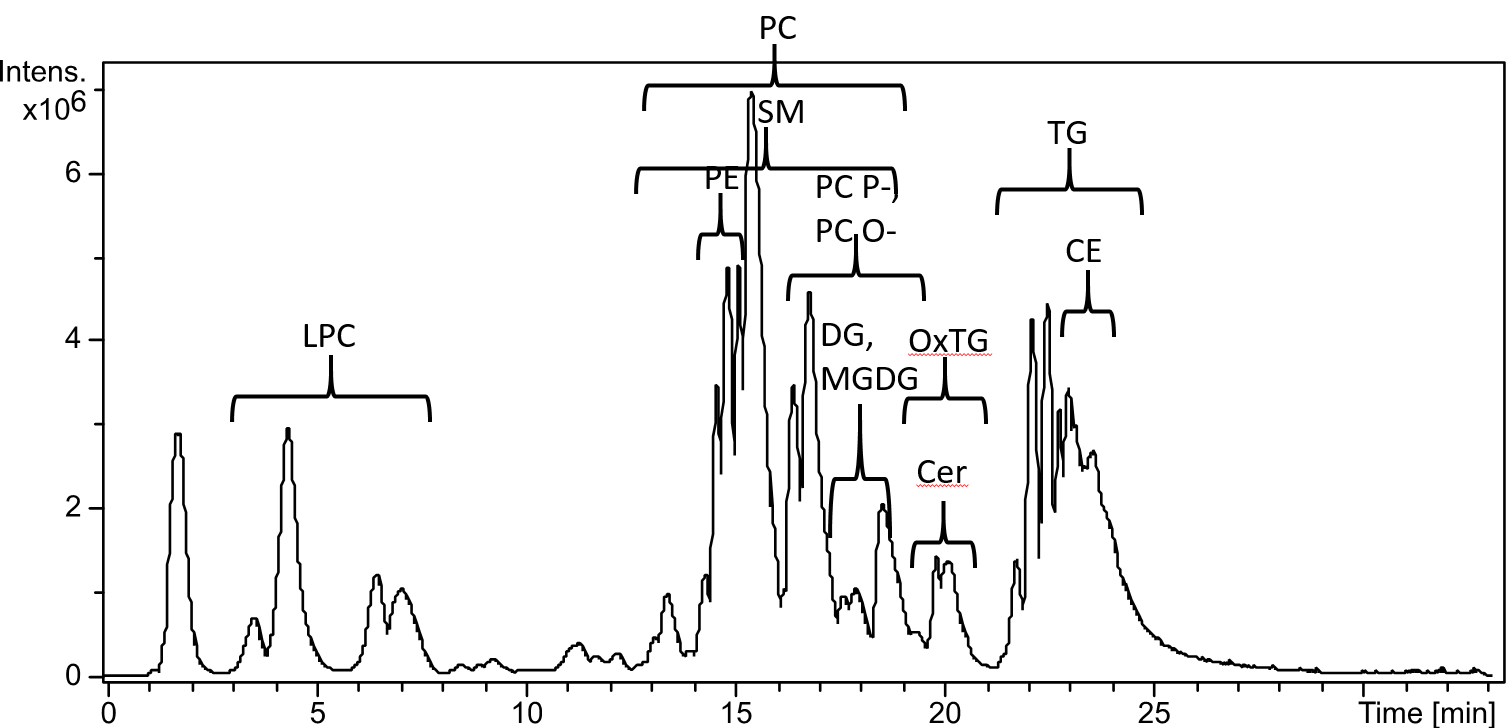
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | β | DI β | Wald criterion | P |
| Free term | 6,22 | 1,88 - 12,82 | 2,33 | 0,02 |
| SM d18:1/24:1 \* PC 18:1\_20:1 | -2,01\*10-13 | -4,05\*10-13 - -3,00\*10-14 | -2,55 | 0,01 |
| PC 16:0\_22:6 \* PC O-16:0/20:4 | -5,41\*10-13 | -1,04\*10-12 - - 2,39\*10-13 | -2,74 | 0,006 |
| PC 16:1\_22:6 \* PC 16:0\_22:6 | 2,36\*10-13 | 9,42\*10-14 -4,67\*10-13 | 2,59 | 0,01 |
| LPC 16:0 \* PC P-20:1/18:1 | -6,50\*10-14 | -1,39\*10-13 - -2,00\*10-14 | -2,15 | 0,03 |

Table 7S. Model variables for the determination of MPS in a child, in a group of patients infected with COVID-19 during the second trimester of pregnancy according to the plasma metabolomic profile.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | β | DI β | Wald criterion | P |
| Free term | 4,26 | 0,14 - 9,98 | 1,77 | 0,08 |
| CE 16:0 \* TG 18:1\_22:5\_8:0 | 3,42\*10-13 | 1,70\*10-13 - 6,01\*10-13 | 3,22 | 0,001 |
| LPC 16:0 \* PE 18:0\_20:1 | -1,65\*10-13 | -3,01\*10-13 - -6,79\*10-14 | -2,86 | 0,004 |
| PC 16:0\_20:3 \* TG 18:1\_18:1\_20:1 | -8,28\*10-14 | -1,77\*10-13 - -1,86\*10-14 | -2,06 | 0,04 |
| PC 16:0\_16:0 \* SM d18:1/18:3 | -1,31\*10-13 | -2,63\*10-13 - -3,11\*10-14 | -2,29 | 0,02 |

Table 8S. Model variables for determining MPS in a child, in a control group of patients according to the plasma metabolomic profile.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | β | DI β | Wald criterion | P |
| Free term | -20,04 | -42,68 - -7,67 | -2,29 | 0,02 |
| PC 18:2\_18:2 \*  OxCL 18:2\_22:6\_18:3\_22:5(OOH)2 | 3,33\*10-13 | 1,32\*10-13 -- 6,98\*10-13 | 2,36 | 0,02 |
| PC 18:0\_18:2 \* PC O-18:0/18:1 | -1,81\*10-13 | -3,90\*10-13 - -6,21\*10-14 | -2,31 | 0,02 |

****

# Figure 1S. LC-MS chromatogram for lipid extract of the sample with marked regions for each lipid class detected.



**В**

**А**

Figure 2S. Lipids characterizing differences in the time of infection in maternal plasma (mode of positive (A) and negative (B) ions).



**А**



**В**

Figure 3S. Lipids characterizing differences in the time of infection in umbilical cord plasma (mode of positive (A) and negative (B) ions).