**A**

**B**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| *Tukey's multiple comparisons test :Pla1a* | *Mean Diff.* | *95% CI of diff.* | *Significant?* | *Summary* |
|  |  |  |  |  |
| *E14.25 vs. E15.25*  | *-1.761* | *-168.4 to 164.9* | *No* | *ns* |
| *E14.25 vs. E17.25*  | *1.148* | *-165.5 to 167.8* | *No* | *ns* |
| *E14.25 vs. E20* | *-581.8* | *-748.5 to -415.1* | *Yes* | *\*\*\*\** |
| *E15.25 vs. E17.25*  | *2.909* | *-163.8 to 169.6* | *No* | *ns* |
| *E15.25 vs. E20* | *-580.0* | *-746.7 to -413.4* | *Yes* | *\*\*\*\** |
| *E17.25 vs. E20* | *-582.9* | *-749.6 to -416.3* | *Yes* | *\*\*\*\** |
|  |  |  |  |  |
| *Tukey's multiple comparisons test :Pla2g2a* | *Mean Diff.* | *95% CI of diff.* | *Significant?* | *Summary* |
|  |  |  |  |  |
| *E14.25 vs. E15.25*  | *117.3* | *-31.25 to 265.9* | *No* | *ns* |
| *E14.25 vs. E17.25*  | *0.6701* | *-147.9 to 149.3* | *No* | *ns* |
| *E14.25 vs. E20* | *-343.6* | *-492.1 to -195.0* | *Yes* | *\*\*\*\** |
| *E15.25 vs. E17.25*  | *-116.7* | *-265.3 to 31.92* | *No* | *ns* |
| *E15.25 vs. E20* | *-460.9* | *-609.5 to -312.3* | *Yes* | *\*\*\*\** |
| *E17.25 vs. E20* | *-344.2* | *-492.8 to -195.6* | *Yes* | *\*\*\*\** |
| *Tukey's multiple comparisons test :Pla2g4a* | *Mean Diff.* | *95% CI of diff.* | *Significant?* | *Summary* |
|  |  |  |  |  |
| *E14.25 vs. E15.25*  | *36.35* | *3.597 to 69.10* | *Yes* | *\** |
| *E14.25 vs. E17.25*  | *104.4* | *71.63 to 137.1* | *Yes* | *\*\*\*\** |
| *E14.25 vs. E20* | *89.31* | *56.56 to 122.1* | *Yes* | *\*\*\*\** |
| *E15.25 vs. E17.25*  | *68.03* | *35.28 to 100.8* | *Yes* | *\*\*\*\** |
| *E15.25 vs. E20* | *52.96* | *20.21 to 85.71* | *Yes* | *\*\** |
| *E17.25 vs. E20* | *-15.07* | *-47.82 to 17.68* | *No* | *ns* |
| *Tukey's multiple comparisons test :Pla2g7* | *Mean Diff.* | *95% CI of diff.* | *Significant?* | *Summary* |
|  |  |  |  |  |
| *E14.25 vs. E15.25*  | *7.641* | *-67.56 to 82.84* | *No* | *ns* |
| *E14.25 vs. E17.25*  | *-7.541* | *-82.74 to 67.66* | *No* | *ns* |
| *E14.25 vs. E20* | *-134.7* | *-209.9 to -59.45* | *Yes* | *\*\*\** |
| *E15.25 vs. E17.25*  | *-15.18* | *-90.39 to 60.02* | *No* | *ns* |
| *E15.25 vs. E20* | *-142.3* | *-217.5 to -67.09* | *Yes* | *\*\*\** |
| *E17.25 vs. E20* | *-127.1* | *-202.3 to -51.91* | *Yes* | *\*\*\** |
| *Tukey's multiple comparisons test :Pla2g1b* | *Mean Diff.* | *95% CI of diff.* | *Significant?* | *Summary* |
|  |  |  |  |  |
| *E14.25 vs. E15.25*  | *4.197* | *-9.747 to 18.14* | *No* | *ns* |
| *E14.25 vs. E17.25*  | *5.874* | *-8.071 to 19.82* | *No* | *ns* |
| *E14.25 vs. E20* | *-9.658* | *-23.60 to 4.287* | *No* | *ns* |
| *E15.25 vs. E17.25*  | *1.677* | *-12.27 to 15.62* | *No* | *ns* |
| *E15.25 vs. E20* | *-13.85* | *-27.80 to 0.08962* | *No* | *ns* |
| *E17.25 vs. E20* | *-15.53* | *-29.48 to -1.587* | *Yes* | *\** |
| *Tukey's multiple comparisons test :Ptges* | *Mean Diff.* | *95% CI of diff.* | *Significant?* | *Summary* |
|  |  |  |  |  |
| *E14.25 vs. E15.25*  | *-17.10* | *-315.4 to 281.2* | *No* | *ns* |
| *E14.25 vs. E17.25*  | *-194.4* | *-492.7 to 103.9* | *No* | *ns* |
| *E14.25 vs. E20* | *-847.2* | *-1145 to -548.9* | *Yes* | *\*\*\*\** |
| *E15.25 vs. E17.25*  | *-177.3* | *-475.6 to 121.0* | *No* | *ns* |
| *E15.25 vs. E20* | *-830.1* | *-1128 to -531.8* | *Yes* | *\*\*\*\** |
| *E17.25 vs. E20* | *-652.8* | *-951.1 to -354.5* | *Yes* | *\*\*\*\** |
| *Tukey's multiple comparisons test :Tbxas1* | *Mean Diff.* | *95% CI of diff.* | *Significant?* | *Summary* |
|  |  |  |  |  |
| *E14.25 vs. E15.25*  | *3.172* | *-16.93 to 23.27* | *No* | *ns* |
| *E14.25 vs. E17.25*  | *4.283* | *-15.82 to 24.38* | *No* | *ns* |
| *E14.25 vs. E20* | *-36.77* | *-56.87 to -16.66* | *Yes* | *\*\*\** |
| *E15.25 vs. E17.25*  | *1.111* | *-18.99 to 21.21* | *No* | *ns* |
| *E15.25 vs. E20* | *-39.94* | *-60.04 to -19.84* | *Yes* | *\*\*\** |
| *E17.25 vs. E20* | *-41.05* | *-61.15 to -20.95* | *Yes* | *\*\*\*\** |
| *Tukey's multiple comparisons test :Akr1b1* | *Mean Diff.* | *95% CI of diff.* | *Significant?* | *Summary* |
|  |  |  |  |  |
| *E14.25 vs. E15.25*  | *1179* | *-90.49 to 2448* | *No* | *ns* |
| *E14.25 vs. E17.25*  | *1542* | *272.7 to 2812* | *Yes* | *\** |
| *E14.25 vs. E20* | *-1416* | *-2685 to -146.1* | *Yes* | *\** |
| *E15.25 vs. E17.25*  | *363.2* | *-906.3 to 1633* | *No* | *ns* |
| *E15.25 vs. E20* | *-2595* | *-3864 to -1325* | *Yes* | *\*\*\*\** |
| *E17.25 vs. E20* | *-2958* | *-4227 to -1688* | *Yes* | *\*\*\*\** |
| *Tukey's multiple comparisons test :Ptgis* | *Mean Diff.* | *95% CI of diff.* | *Significant?* | *Summary* |
|  |  |  |  |  |
| *E14.25 vs. E15.25*  | *264.9* | *-167.4 to 697.2* | *No* | *ns* |
| *E14.25 vs. E17.25*  | *1124* | *691.5 to 1556* | *Yes* | *\*\*\*\** |
| *E14.25 vs. E20* | *1120* | *687.4 to 1552* | *Yes* | *\*\*\*\** |
| *E15.25 vs. E17.25*  | *858.9* | *426.6 to 1291* | *Yes* | *\*\*\** |
| *E15.25 vs. E20* | *854.8* | *422.5 to 1287* | *Yes* | *\*\*\** |
| *E17.25 vs. E20* | *-4.094* | *-436.4 to 428.2* | *No* | *ns* |

**Supplemental Figure S1**. **A)** Differential expression of other genes related to the endocannabinoid pathway *Pla1a, Pla2g2a, Pla2g4a, Pla2g7, Pla2g1b* (Phospholipase A group, involved upstream in synthesis of Arachidonic acid) and *Ptges, Tbxas1, Akr1b1, Ptgis* (Downstream genes involved in metabolism of PGH2 derivatives) screened in Microarray (RatRef-12 arrays Illumina). X- Axes depict Gestational Ages E14.25, E15.25, E17.25 and E20. Y-Axes are the Microarray Hybridization Signals. **B)** Statistical Analyses by One way ANOVA –Multiple Comparisons between all four gestational age groups E14.25, E15.25, E17.25 and E20. Significance was ascribed where gene expression was changed by < 2 (∗

𝑃 < 0.05;∗∗ 𝑃 < 0.005; ∗∗∗ 𝑃 < 0.001; ∗∗∗∗ 𝑃 < 0.0001; and ns 𝑃 > 0.05).



**Supplemental Figure S2:** Primer testing on PCR prior to qPCR experiments using Shimadzu MULTINA™.