# *Supplementary Material*

# Supplementary Tables

**Supplementary Table S1.** Functional evaluation - score grading.

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| --- | --- |
| **Variables** | **Score** |
| **Posture** | 0: Lays supine  1: Lays on the side  2: Cannot maintain prone position, wobbly  3: The prone position with legs coiled |
| **Righting reflex** | Number of times the animal turns |
| **Tone** | 0: No increase in tone  1: Slight increase in tone when limb is moved  2: Marked increase in tone but limb is easily flexed  3: Increase in tone, passive movement difficult  4: Limb rigid in flexion or extension |
| **Circular motion** | 0: No movement  1: Slight movement, slight jump  2: Good range of motion, maintains for 1 or 2 steps occasional jump  3: Entire range of motion, at least 3 steps, rapid jumps |
| **Hind limbs locomotion** | 0: No movement  1: Slight movement  2: Distinct movement  3: Rapid movement |
| **Intensity** | 0: No movement  1: Slight activity  2: Distinct forceful movements  3: Rapid forceful movements |
| **Duration** | 0: No movement  1: activity <20 seconds  2: activity 20-40 seconds  3: activity 40-60 seconds |
| **Lineal movement** | Number of times crosses perpendicular line |
| **Fore-hind paw distance** | Measurement (millimeters) |
| **Sucking and swallowing** | 0: No movement of jaw, all milk dribbles out  1: Some movement of jaw, most of milk dribbles out  2: Definite suck and swallow, some milk in nose  3: Good suck and swallow, no milk in nose |
| **Head turning** | 0: No movement  1: Slight occasional movement of the head  2: Distinct movement of the head  3: Rapid forceful movement of the head and body |
| **Olfaction** | 0: No  1: Subtle  2: Low response  3: Correct |
| **Olfaction time** | Latency time (seconds) |

General motor skills, tone, reflexes, and olfactory sensitivity scores grading following previous methodology described by Derrick et al. (2004).

**Supplementary Table S2.** Dendritic arborization.

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| **Variables** | **Control**  **n=40** | **IUGR**  **n=40** | **p value** |
| **Total dendritic Length (µm)** | 676.20 (289.28) | 623.01(173.31) | p=0.32 |
| **Total Dendrites (numb)** | 20.45 (7.55) | 22.38 (6.19) | p=0.22 |
| **Area of Soma (µm2)** | 337.50 (79.48) | 366.97 (76.68) | p=0.10 |
| **Total intersections (numb)** | 50.25 (20.75) | 47.03 (13.43) | p=0.35 |
| **Primary dendrites (numb)** | 7.20 (2.13) | 6.83 (1.71) | p=0.39 |
| **Secondary dendrites (numb)** | 8.33 (3.22) | 7.65 (2.17) | p=0.28 |
| **Tertiary dendrites (numb)** | 3.53 (2.62) | 4.75 (2.30) | p=0.03\* |
| **Quaternary dendrites (numb)** | 1.10 (1.50) | 2.10 (2.35) | p=0.03\* |
| **Quinary dendrites (numb)** | 0.20 (0.61) | 0.75 (1.26) | p=0.02\* |
| **Senary dendrites (numb)** | 0.10 (0.63) | 0.30 (0.97) | p=0.28 |

Results are expressed as mean and standard deviation. Statistical comparisons between groups were performed by a multiple linear regression. Statistical significance was declared when p<0.05 between Control and IUGR (\*).

*IUGR=intrauterine growth restriction*

**Supplementary Table S3.** Mean difference and its 95% confidence interval for the most relevant reported variables

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| --- | --- |
| **Variables** | **Control vs. IUGR**  **(n= 8 and 8)** |
| **Total dendritic Length (µm)** | 53.19 (-53.13 to 159.5) |
| **Total Dendrites (numb)** | -1.93 (-5.00 to 1.15) |
| **Area of Soma (µm2)** | -29.47 (-64.29 to 5.35) |
| **Total intersections (numb)** | 3.23 (-4.57 to 11.02) |
| **Primary dendrites (numb)** | 0.38 (-0.49 to 1.24) |
| **Secondary dendrites (numb)** | 0.68 (-0.55 to 1.90) |
| **Tertiary dendrites (numb)** | -1.23 (-2.32 to -0.13) |
| **Quaternary dendrites (numb)** | -1.00 (-1.88 to -0.12) |
| **Quinary dendrites (numb)** | -0.55 (-0.99 to -0.11) |
| **Senary dendrites (numb)** | -0.20 (-0.56 to 0.16) |
| **O4-OL (cells/mm2)** | 0.19 (-0.07 to 0.45) |
| **Microglia (cells/mm2)** | -0.02 (-0.08 to 0.05) |
| **Astrocytes (cells/mm2)** | 0.19 (-0.15 to 0.52) |
| **Placenta Ischemia (%)** | 79 (43 to 113) |

Results are expressed as mean difference and its 95% confidence interval for the most relevant reported variables.

*IUGR=intrauterine growth restriction; O4-OL= O4 Immunoreactive oligodendrocytes*

# Supplementary Figures

**Supplementary Fig. 1.** Number of intersections per each sholl ring.

Picture 1Intersections were counted at 20µm intervals from the soma center to a radius of 200µm. Analyses were performed in the frontal cortex in Control and IUGR. Statistical significance was declared when p<0.05 (\*).

*IUGR=intrauterine growth restriction*