| Figure 2A: Hippocampal *Il1b* mRNA 48 h | | | | |
|---|---|---|---|---|
| **Analysis: 3-way ANOVA** | **% of total variation** | **F (DFn, DFd)** | **P value** | **Summary** |
| Age | 26.35 | $F_{(1, 23)} = 21.29$ | 0.0001 | *** |
| Sex | 0.1369 | $F_{(1, 23)} = 0.1106$ | 0.7425 | ns |
| LPS | 5.149 | $F_{(1, 23)} = 4.161$ | 0.053 | ns |
| Age x Sex | 1.174 | $F_{(1, 23)} = 0.9485$ | 0.3402 | ns |
| Age x LPS | 14.39 | $F_{(1, 23)} = 11.63$ | 0.0024 | ** |
| Sex x LPS | 7.89 | $F_{(1, 23)} = 6.376$ | 0.0189 | * |
| Age x Sex x LPS | 16.49 | $F_{(1, 23)} = 13.32$ | 0.0013 | ** |
| | | | | |
| **Posthoc: Šídák's multiple comparisons test** | **t** | **DF** | **Adjusted P value** | **Summary** |
| Adult:Male Saline vs. Aged:Male Saline | 0.7009 | 23 | 0.9997 | ns |
| Adult:Male LPS vs. Aged:Male LPS | 6.023 | 23 | <0.0001 | **** |
| Adult:Female Saline vs. Aged:Female Saline | 1.996 | 23 | 0.5112 | ns |
| Adult:Female LPS vs. Aged:Female LPS | 1.844 | 23 | 0.6232 | ns |
| Adult:Male Saline vs. Adult:Male LPS | 1.188 | 23 | 0.9667 | ns |
| Adult:Female Saline vs. Adult:Female LPS | 0.1331 | 23 | >0.9999 | ns |
| Aged:Male Saline vs. Aged:Male LPS | 5.536 | 23 | 0.0001 | *** |
| Aged:Female Saline vs. Aged:Female LPS | 0.373 | 23 | >0.9999 | ns |
| Adult:Male Saline vs. Adult:Female Saline | 0.09346 | 23 | >0.9999 | ns |
| Adult:Male LPS vs. Adult:Female LPS | 1.211 | 23 | 0.9618 | ns |
| Aged:Male Saline vs. Aged:Female Saline | 2.635 | 23 | 0.1637 | ns |
| Aged:Male LPS vs. Aged:Female LPS | 3.506 | 23 | 0.0226 | * |
| | | | | |
| Figure 2B: Hippocampal IL1-β protein 48 h | | | | |
| **Analysis: 3-way ANOVA** | **% of total variation** | **F (DFn, DFd)** | **P value** | **Summary** |
| Age | 7.53 | $F_{(1, 24)} = 5.650$ | 0.0258 | * |
| Sex | 0.02267 | $F_{(1, 24)} = 0.01701$ | 0.8973 | ns |
| LPS | 19.55 | $F_{(1, 24)} = 14.67$ | 0.0008 | *** |
| Age x Sex | 13.97 | $F_{(1, 24)} = 10.49$ | 0.0035 | ** |
| Age x LPS | 1.936 | $F_{(1, 24)} = 1.453$ | 0.2398 | ns |
| Sex x LPS | 2.287 | $F_{(1, 24)} = 1.716$ | 0.2027 | ns |
| Age x Sex x LPS | 22.66 | $F_{(1, 24)} = 17.00$ | 0.0004 | *** |
| | | | | |
| **Posthoc: Šídák's multiple comparisons test** | **t** | **DF** | **Adjusted P value** | **Summary** |
| Adult:Male Saline vs. Aged:Male Saline | 0.1337 | 24 | >0.9999 | ns |
| Adult:Male LPS vs. Aged:Male LPS | 5.517 | 24 | 0.0001 | *** |
| Adult:Female Saline vs. Aged:Female Saline | 1.093 | 24 | 0.9822 | ns |
| Adult:Female LPS vs. Aged:Female LPS | 1.905 | 24 | 0.5749 | ns |
| Adult:Male Saline vs. Adult:Male LPS | 0.09532 | 24 | >0.9999 | ns |
| Adult:Female Saline vs. Adult:Female LPS | 2.742 | 24 | 0.1282 | ns |
| Aged:Male Saline vs. Aged:Male LPS | 4.886 | 24 | 0.0007 | *** |
| Aged:Female Saline vs. Aged:Female LPS | 0.2115 | 24 | >0.9999 | ns |
| Adult:Male Saline vs. Adult:Female Saline | 0.2798 | 24 | >0.9999 | ns |
| Adult:Male LPS vs. Adult:Female LPS | 3.117 | 24 | 0.0549 | ns |
| Aged:Male Saline vs. Aged:Female Saline | 1.135 | 24 | 0.9761 | ns |
| Aged:Male LPS vs. Aged:Female LPS | 4.306 | 24 | 0.0029 | ** |

| Figure 2C: *Il1b* mRNA time course | | | | |
|---|---|---|---|---|
| **Analysis: 3-way ANOVA** | **% of total variation** | **F (DFn, DFd)** | **P value** | **Summary** |
| LPS | 42.08 | F (3, 46) = 16.45 | <0.0001 | **** |
| Sex | 2.293 | F (1, 46) = 2.689 | 0.1079 | ns |
| Age | 3.748 | F (1, 46) = 4.395 | 0.0416 | * |
| LPS x Sex | 2.863 | F (3, 46) = 1.119 | 0.3512 | ns |
| LPS x Age | 2.122 | F (3, 46) = 0.8293 | 0.4846 | ns |
| Sex x Age | 3.615 | F (1, 46) = 4.239 | 0.0452 | * |
| LPS x Sex x Age | 1.703 | F (3, 46) = 0.6656 | 0.5775 | ns |

| Figure 2C: *Il1b* mRNA time course - males | | | | |
|---|---|---|---|---|
| **Analysis: 2-way ANOVA** | **% of total variation** | **F (DFn, DFd)** | **P value** | **Summary** |
| Interaction | 4.686 | F (3, 22) = 0.8260 | 0.4936 | ns |
| LPS | 43.83 | F (3, 22) = 7.727 | 0.001 | ** |
| Age | 9.274 | F (1, 22) = 4.905 | 0.0375 | * |

| Figure 2C: *Il1b* mRNA time course - females | | | | |
|---|---|---|---|---|
| **Analysis: 2-way ANOVA** | **% of total variation** | **F (DFn, DFd)** | **P value** | **Summary** |
| Interaction | 0.5072 | F (3, 24) = 0.1070 | 0.9552 | ns |
| LPS | 61.58 | F (3, 24) = 12.99 | <0.0001 | **** |
| Age | 0.003287 | F (1, 24) = 0.002080 | 0.964 | ns |

| Figure 2D: *Bdnf* time course | | | | |
|---|---|---|---|---|
| **Analysis: 3-way ANOVA** | **% of total variation** | **F (DFn, DFd)** | **P value** | **Summary** |
| LPS | 17.39 | F (3, 48) = 5.837 | 0.0018 | ** |
| Sex | 6.565 | F (1, 48) = 6.609 | 0.0133 | * |
| Age | 8.807 | F (1, 48) = 8.866 | 0.0045 | ** |
| LPS x Sex | 2.174 | F (3, 48) = 0.7297 | 0.5394 | ns |
| LPS x Age | 3.387 | F (3, 48) = 1.137 | 0.3437 | ns |
| Sex x Age | 7.032 | F (1, 48) = 7.079 | 0.0106 | * |
| LPS x Sex x Age | 6.535 | F (3, 48) = 2.193 | 0.101 | ns |

| Figure 2D: *Bdnf* time course - males | | | | |
|---|---|---|---|---|
| **Analysis: 2-way ANOVA** | **% of total variation** | **F (DFn, DFd)** | **P value** | **Summary** |
| Interaction | 13.68 | F (3, 23) = 2.056 | 0.1341 | ns |
| LPS | 9.98 | F (3, 23) = 1.499 | 0.2412 | ns |
| Age | 23.56 | F (1, 23) = 10.62 | 0.0035 | ** |

| Figure 2D: *Bdnf* time course - females | | | | |
|---|---|---|---|---|
| **Analysis: 2-way ANOVA** | **% of total variation** | **F (DFn, DFd)** | **P value** | **Summary** |
| Interaction | 2.32 | F (3, 25) = 0.3843 | 0.7652 | ns |
| LPS | 47.04 | F (3, 25) = 7.792 | 0.0008 | *** |
| Age | 0.1781 | F (1, 25) = 0.08850 | 0.7686 | ns |