**Table S1**. Mean (±SD) mole percent fatty acids in prefrontal cortex membranes of adult rhesus macaques (n=9)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Nuclear** | **Myelin** | **Neuronal** | **Mitochondrial** |
| *Total SFA* | 48.53 ± 1.52a | 51.14 ± 3.21b | 51.28 ± 1.01b | 43.98 ± 3.28c |
| *Total MUFA* | 27.61 ± 1.70a | 20.10 ± 1.37b | 20.28 ± 0.57b | 21.79 ± 0.98c |
| *Total PUFAn-6* | 15.25 ± 0.34a | 15.30 ± 1.84a,b | 15.07 ± 0.57b | 20.13 ± 2.25c |
| 18:2n-6 (LA) | 0.78 ± 0.09a | 1.04 ± 0.70b | 0.95 ± 0.09b | 2.71 ± 0.75c |
| 18:3n-6 (GLA) | 0.20 ± 0.28a | 0.38 ± 0.35a | 0.32 ± 0.42a | 0.47 ± 0.50a |
| 20:2n-6 | 0.16 ± 0.03a | 0.09 ± 0.03b | 0.09 ± 0.04b | 0.12 ± 0.01c |
| 20:3n-6 (DGLA) | 1.49 ± 0.24a | 1.08 ± 0.31b | 1.03 ± 0.15b | 1.31 ± 0.53a |
| 20:4n-6 (AA) | 6.69 ± 0.35a | 7.72 ± 1.50b | 7.40 ± 0.28b | 11.62 ± 1.69c |
| 22:2n-6 | 0.09 ± 0.05a | 0.03 ± 0.01b | 0.03 ± 0.01b | 0.02 ± 0.01b |
| 22:4n-6 | 5.21 ± 0.40a | 3.88 ± 0.47b | 4.15 ± 0.19c | 2.86 ± 0.51d |
| 22:5n-6 | 0.64 ± 0.23a | 1.08 ± 0.16b | 1.10 ± 0.15b | 1.03 ± 0.12b |
| *Total PUFAn-3* | 8.27 ± 0.75a | 13.06 ± 0.59b | 13.07 ± 0.42b | 13.74 ± 0.56c |
| 18:3n-3 (ALA) | 0.06 ± 0.12a | 0.06 ± 0.09a | 0.08 ± 0.11a | 0.04 ± 0.03a |
| 18:4n-3 (SDA) | 0.25 ± 0.24a | 0.12 ± 0.06a | 0.16 ± 0.09a | 0.08 ± 0.08a |
| 20:5n-3 (EPA) | 0.02 ± 0.02a | 0.02 ± 0.01a | 0.03 ± 0.01a | 0.03 ± 0.01a |
| 22:5n-3 (DPA) | 0.30 ± 0.14a | 0.29 ± 0.07a | 0.28 ± 0.07a | 0.20 ± 0.05b |
| 22:6n-3 (DHA) | 7.63 ± 0.55a | 12.57 ± 0.57b | 12.53 ± 0.49b | 13.39 ± 0.51c |
| *Total Trans* | 0.34 ± 0.12a | 0.40 ± 0.14a | 0.31 ± 0.13a | 0.35 ± 0.05a |

Means with different superscripts across membrane types are significantly different according to Tukey’s HSD test (P<0.05).

SFA: saturated fatty acids, MUFA: monounsaturated fatty acids, PUFAn6: n-6 polyunsaturated fatty acids, LA: linoleic acid, GLA: gamma-linolenic acid, DGLA: dihomo-gamma-linolenic acid, AA: arachidonic acid, PUFAn3: n-3 polyunsaturated fatty acids, ALA: α-linolenic acid, SDA: stearidonic acid, EPA: eicosapentaenoic acid, DPA: docosapentaenoic acid, DHA: docosahexaenoic acid, *trans*: *trans* fatty acids

**Table S2**. Mean (±SD) mole percent fatty acids in cerebellar membranes of adult rhesus macaques (n=9)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Nuclear** | **Myelin** | **Neuronal** | **Mitochondrial** |
| *Total SFA* | 49.01 ± 2.02a | 51.68 ± 0.38b | 50.94 ± 0.95c | 43.57 ± 1.43d |
| *Total MUFA* | 29.02 ± 1.26a | 22.66 ± 1.01b,c | 21.83 ± 1.34b | 23.13 ± 0.79c |
| *Total PUFAn-6* | 12.93 ± 1.01a | 12.37 ± 0.96b | 13.22 ± 0.63a | 17.53 ± 0.85c |
| 18:2n-6 (LA) | 0.96 ± 0.13a | 1.05 ± 0.13a | 1.27 ± 0.11b | 3.16 ± 0.28c |
| 18:3n-6 (GLA) | 0.38 ± 0.29a | 0.56 ± 0.24a | 0.48 ± 0.29a | 0.65 ± 0.42a |
| 20:2n-6 | 0.31 ± 0.24a | 0.17 ± 0.02b | 0.17 ± 0.02b | 0.22 ± 0.03a |
| 20:3n-6 (DGLA) | 2.06 ± 0.28a | 1.50 ± 0.20b | 1.57 ± 0.22b | 2.41 ± 0.36a |
| 20:4n-6 (AA) | 5.65 ± 0.58a | 6.35 ± 0.97b | 6.82 ± 0.51b | 8.71 ± 0.55c |
| 22:2n-6 | 0.14 ± 0.05a | 0.04 ± 0.02b | 0.04 ± 0.01b | 0.05 ± 0.02b |
| 22:4n-6 | 3.07 ± 0.44a | 2.22 ± 0.17b | 2.34 ± 0.17b | 1.79 ± 0.13c |
| 22:5n-6 | 0.36 ± 0.07a | 0.47 ± 0.09b | 0.52 ± 0.12b | 0.53 ± 0.09b |
| *Total PUFAn-3* | 8.56 ± 0.65a | 13.03 ± 0.40b | 13.76 ± 1.01c | 15.38 ± 0.63d |
| 18:3n-3 (ALA) | 0.01 ± 0.01a | 0.08 ± 0.13b | 0.02 ± 0.01a | 0.09 ± 0.11b |
| 18:4n-3 (SDA) | 0.30 ± 0.13a | 0.08 ± 0.07b | 0.11 ± 0.06b | 0.05 ± 0.04b |
| 20:5n-3 (EPA) | 0.05 ± 0.03a | 0.05 ± 0.01a | 0.05 ± 0.01a | 0.07 ± 0.02b |
| 22:5n-3 (DPA) | 0.41 ± 0.08a | 0.33 ± 0.03b | 0.34 ± 0.04b | 0.28 ± 0.04c |
| 22:6n-3 (DHA) | 7.78 ± 0.60a | 12.49 ± 0.40b | 13.24 ± 1.07c | 14.88 ± 0.62d |
| *Total Trans* | 0.48 ± 0.68a,b | 0.27 ± 0.04b | 0.25 ± 0.05b | 0.39 ± 0.08a |

Means with different superscripts across membrane types are significantly different according to Tukey’s HSD test (P<0.05).

SFA: saturated fatty acids, MUFA: monounsaturated fatty acids, PUFAn6: n-6 polyunsaturated fatty acids, LA: linoleic acid, GLA: gamma-linolenic acid, DGLA: dihomo-gamma-linolenic acid, AA: arachidonic acid, PUFAn3: n-3 polyunsaturated fatty acids, ALA: α-linolenic acid, SDA: stearidonic acid, EPA: eicosapentaenoic acid, DPA: docosapentaenoic acid, DHA: docosahexaenoic acid, *trans*: *trans* fatty acids

**Table S3**. Mean (±SD) mole percent fatty acids in striatal membranes of adult rhesus macaques (n=9)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Nuclear** | **Myelin** | **Neuronal** | **Mitochondrial** |
| *Total SFA* | 48.11 ± 2.45a | 52.30 ± 0.73b | 49.69 ± 0.90a | 45.93 ± 7.10c |
| *Total MUFA* | 29.40 ± 2.66a | 19.89 ± 1.08b | 22.24 ± 1.47c | 21.41 ± 2.35c |
| *Total PUFAn-6* | 15.42 ± 1.00a | 15.19 ± 0.48a | 16.37 ± 0.42b | 19.10 ± 3.23b |
| 18:2n-6 (LA) | 0.62 ± 0.12a | 0.55 ± 0.08a | 0.77 ± 0.12b | 2.06 ± 0.41c |
| 18:3n-6 (GLA) | 0.25 ± 0.33a | 0.22 ± 0.32a | 0.16 ± 0.29a | 0.16 ± 0.41a |
| 20:2n-6 | 0.30 ± 0.45a | 0.10 ± 0.02b | 0.11 ± 0.02b,c | 0.30 ± 0.53a,c |
| 20:3n-6 (DGLA) | 1.75 ± 0.30a | 1.14 ± 0.21b | 1.43 ± 0.18b | 1.99 ± 0.70a |
| 20:4n-6 (AA) | 6.81 ± 0.91a | 7.76 ± 0.48b | 8.35 ± 0.48b | 11.21 ± 2.35c |
| 22:2n-6 | 0.08 ± 0.03a | 0.02 ± 0.01b | 0.04 ± 0.02b | 0.03 ± 0.02b |
| 22:4n-6 | 5.06 ± 0.54a | 4.46 ± 0.23b | 4.67 ± 0.15b | 2.63 ± 0.51c |
| 22:5n-6 | 0.54 ± 0.18a | 0.93 ± 0.15b | 0.84 ± 0.17b,c | 0.73 ± 0.17c |
| *Total PUFAn-3* | 6.59 ± 1.29a | 12.37 ± 0.52b | 11.41 ± 0.66c | 12.93 ± 2.71b |
| 18:3n-3 (ALA) | 0.03 ± 0.02a | 0.01 ± 0.01b | 0.01 ± 0.01b | 0.05 ± 0.06a |
| 18:4n-3 (SDA) | 0.24 ± 0.18a | 0.10 ± 0.05a | 0.11 ± 0.10a | 0.07 ± 0.05a |
| 20:5n-3 (EPA) | 0.04 ± 0.01a | 0.05 ± 0.02b | 0.05 ± 0.02b | 0.06 ± 0.02b |
| 22:5n-3 (DPA) | 0.48 ± 0.08a | 0.37 ± 0.10b | 0.43 ± 0.07a,b | 0.21 ± 0.05c |
| 22:6n-3 (DHA) | 5.80 ± 1.33a | 11.85 ± 0.49b | 10.81 ± 0.68c | 12.55 ± 2.75b |
| *Total Trans* | 0.48 ± 0.53a,c | 0.25 ± 0.05b | 0.29 ± 0.06a,b | 0.64 ± 0.80c |

Means with different superscripts across membrane types are significantly different according to Tukey’s HSD test (P<0.05).

SFA: saturated fatty acids, MUFA: monounsaturated fatty acids, PUFAn6: n-6 polyunsaturated fatty acids, LA: linoleic acid, GLA: gamma-linolenic acid, DGLA: dihomo-gamma-linolenic acid, AA: arachidonic acid, PUFAn3: n-3 polyunsaturated fatty acids, ALA: α-linolenic acid, SDA: stearidonic acid, EPA: eicosapentaenoic acid, DPA: docosapentaenoic acid, DHA: docosahexaenoic acid, *trans*: *trans* fatty acids

**Table S4**. Mean (±SD) mole percent fatty acids in hippocampal membranes of adult rhesus macaques (n=9)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Nuclear** | **Myelin** | **Neuronal** | **Mitochondrial** |
| *Total SFA* | 44.10 ± 0.79a | 51.53 ± 1.88b | 49.99 ± 3.01b | 44.37 ± 3.35a |
| *Total MUFA* | 31.02 ± 1.16a | 20.25 ± 0.83b | 22.23 ± 0.69c | 23.49 ± 0.36d |
| *Total PUFAn-6* | 17.18 ± 0.73a | 16.60 ± 1.50a | 16.79 ± 1.92a | 21.38 ± 2.12b |
| 18:2n-6 (LA) | 0.74 ± 0.11a | 1.20 ± 1.75a | 0.82 ± 0.35a | 2.23 ± 0.22b |
| 18:3n-6 (GLA) | 0.09 ± 0.21a,b | 0.09 ± 0.09a,b | 0.06 ± 0.04a | 0.10 ± 0.05b |
| 20:2n-6 | 0.13 ± 0.03a | 0.12 ± 0.10a | 0.12 ± 0.14a | 0.12 ± 0.07a |
| 20:3n-6 (DGLA) | 1.58 ± 0.21a | 0.85 ± 0.17b | 1.01 ± 0.18b | 1.55 ± 0.23a |
| 20:4n-6 (AA) | 8.21 ± 0.52a,b | 8.05 ± 0.41a | 8.69 ± 0.98b | 12.59 ± 1.48c |
| 22:2n-6 | 0.05 ± 0.03a | 0.04 ± 0.09a,b | 0.02 ± 0.02b | 0.02 ± 0.02b |
| 22:4n-6 | 4.97 ± 0.40a | 4.23 ± 0.41b | 4.28 ± 0.62b | 2.89 ± 0.33c |
| 22:5n-6 | 1.41 ± 0.30a | 2.03 ± 0.49b | 1.79 ± 0.27b | 1.88 ± 0.67a,b |
| *Total PUFAn-3* | 7.10 ± 0.73a | 10.97 ± 1.78b | 10.34 ± 0.95b | 10.02 ± 2.04b |
| 18:3n-3 (ALA) | 0.01 ± 0.01a | 0.01 ± 0.02a | 0.01 ± 0.02a | 0.01 ± 0.01a |
| 18:4n-3 (SDA) | 0.01 ± 0.01a | 0.01 ± 0.01a | 0.02 ± 0.03a | 0.02 ± 0.03a |
| 20:5n-3 (EPA) | 1.54 ± 0.77a | 0.54 ± 0.69b | 0.68 ± 0.43b | 0.75 ± 0.92b |
| 22:5n-3 (DPA) | 0.30 ± 0.26a | 0.21 ± 0.17a | 0.17 ± 0.04a | 0.17 ± 0.09a |
| 22:6n-3 (DHA) | 5.25 ± 0.67a | 10.19 ± 1.36b | 9.46 ± 1.07b | 9.06 ± 1.73b |
| *Total Trans* | 0.54 ± 0.48a | 0.56 ± 0.26a | 0.59 ± 0.29a | 0.62 ± 0.31a |

Means with different superscripts across membrane types are significantly different according to Tukey’s HSD test (P<0.05).

SFA: saturated fatty acids, MUFA: monounsaturated fatty acids, PUFAn6: n-6 polyunsaturated fatty acids, LA: linoleic acid, GLA: gamma-linolenic acid, DGLA: dihomo-gamma-linolenic acid, AA: arachidonic acid, PUFAn3: n-3 polyunsaturated fatty acids, ALA: α-linolenic acid, SDA: stearidonic acid, EPA: eicosapentaenoic acid, DPA: docosapentaenoic acid, DHA: docosahexaenoic acid, *trans*: *trans* fatty acids