**Additional file 4: Contrast enhancement in the CVOs and normal-appearing brain matter**

Table 4.1. Median and interquartile range (25th – 75th percentile) of 1-minute and 10-minute area under the curve (AUC1 and AUC10) measured in various regions-of-interest (ROIs).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ROI | AUC1[μM⋅min] | 25th – 75th percentile | AUC10[μM⋅min] | 25th – 75th percentile |
| Secretory | 418† ‡ | 260 – 534 | 2947† ‡ | 1991 – 3482 |
| NH | 638†‡ | 438 – 802 | 4589†‡ | 2898 – 5394 |
| ME | 148† | 82 – 230 | 940† | 597 – 1304 |
| PG | 192† | 111 – 270 | 1224† | 763 – 1778 |
| Sensory | 38‡ | 4 – 55 | 223‡ | 46 – 302 |
| SFO | 17‡ | 2 – 50 | 119‡ | 34 – 160 |
| OVLT | 69‡ | 31 – 113 | 410‡ | 207 – 654 |
| AP | 17‡ | 0 – 63 | 112‡ | 9 – 370 |
| White matter | 41 | 23 – 48 | 176 | 91 – 234 |
| Gray matter | 155 | 77 – 198 | 937 | 469 – 1218 |

† significantly (p<.05) different from white matter, ‡ significantly (p<.05) different from gray matter. Abbreviations: NH = neurohypophysis; ME = median eminence; PG = pineal gland; SFO = subfornical organ; OVLT = organum vasculosum of the lamina terminalis; AP = area postrema; AUC = area under the curve.

For the secretory CVOs, the 1-minute and 10-minute AUCs were significantly larger than for the white and gray matter (Table 4.1., all p-values < .001). Post-hoc analyses demonstrated that all secretory CVOs had significantly higher values than the white matter (all p-values < .001), while the difference with the gray matter was only due to the NH (all p-values < .001).

For the sensory CVOs, the 1-minute and 10-minute AUCs were not significantly different compared to the white matter, and were actually smaller than for the gray matter (Table 4.1., all p-values < .001).

*Age effect*

We found no significant differences between the older and middle-aged group in any of the brain regions (secretory CVOs; sensory CVOs, white matter; gray matter) for the 1-minute or 10-minute AUC (all p-values ≥ .165).