**Supplementary file 1.** Animals used in this study.

(a) Neuroscience Institute Cavalieri Ottolenghi (NICO); (b) School of Biological and Chemical Sciences, Queen Mary University of London, London; (c) Institute of Anatomy, University of Zurich; (d) INRA research center, Nouzilly, France; (e) University of Teramo (slaughter house); (f) Department of Comparative Biomedicine and Food Science, University of Padova; (g) National Chimpanzee Brain Resource, USA (www.chimpanzeebrain.org, supported by NIH grant NS092988). PMI: postmortem interval; CA, carotid artery; IC, intra-cardiac; PFA, paraformaldehyde solution. **¶** Only used for qualitative analysis.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Species** | **Source** | **Specimens** | **Age** | **Fixation** | **Fixative** | **PMI** |
| **Mouse** | (a) | 4 | 10 days | Immersion | 4% PFA | A few minutes |
| 3 months | Perfusion (IC) | None |
| 6 months |
| 12 months |
| **NMR** | (b) | 2 months | Immersion | A few minutes |
| 2 years | Perfusion (IC) | None |
| 10 years |
| **WE bat** | (c) | Adults | Perfusion (IC) | 4% PAF  15% picric acid |
| **SC bat** | (c) | Adults | Perfusion (IC) |
| **Marmoset** | (c) | Adults | Immersion | 1 hour |
| **Rabbit** | (a) | 3 months | Perfusion (IC) | 4% PFA | None |
| 3 years |
| **Fox** | (c) | 7-8 months | Perfusion (CA) |
| **Sheep** | (d) | 4 months | Perfusion (CA) |
| 2 years |
| (e) | 8 – 10 years | Immersion | 10% formalin | 20 minutes |
| **Cat** | (f) | 1,5 years | Immersion | 4% formalin | Less than 1 hour |
| > 2 years |
| **Chimpanzee** | (g) | 19 – 27 years | Immersion | 10% formalin | Less than 14 hour |
| 40 – 48 years |
| **Sengi ¶** | (c) | 2 | 9 – 10 months | Perfusion (IC) | 4% PAF  15% picric acid | None |
| **Horse ¶** | (f) | Adults | Immersion | 4% formalin | Less than 20 minutes |