CNS Delivery and Anti-Inflammatory Effects of Intranasally Administered Cyclosporine-A in Cationic Nanoemulsion Formulations.

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Journal Title – The Journal of Pharmacology and Experimental Therapeutics

13. Supplementary figures

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<th>Formulation</th>
<th>Composition</th>
<th>CsA Initial Loading Conc. (mg/ml)</th>
<th>Hydrodynamic Diameter of Oil Droplet (nm)</th>
<th>Polydispersity Index</th>
<th>Zeta Potential (mV)</th>
<th>Percent CsA Encapsulation</th>
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<tbody>
<tr>
<td>CsA-Encapsulated Anionic Nanoemulsion (NE-T)</td>
<td>Lipoid E80, Tween 80 and Flax-seed Oil</td>
<td>25</td>
<td>232±10*</td>
<td>0.25±0.06</td>
<td>-33±12</td>
<td>88±10</td>
</tr>
<tr>
<td>CsA-Encapsulated Cationic Nanoemulsion (NE-SA)</td>
<td>Lipoid E80, Tween 80, Stearylamine, and Flax-seed Oil</td>
<td>30</td>
<td>272±12</td>
<td>0.3±0.09</td>
<td>57±10</td>
<td>88±13</td>
</tr>
</tbody>
</table>

Table 1: Composition and characterization properties of Anionic (NE-T) and Cationic (NE-SA) Nanoemulsion formulation of Cyclosporine-A (CsA).
**Supplementary figure 1**: Schematic representation of a nanoemulsion (NE) complexed with DTPA-PE-Gd3+.  

A: *Surface arrangement of phosphatidylcholine molecules with lipophilic tail embedded within the oily droplet while polar head groups positioning on the interface of the oil and water phase.*  

B: *Association of DTPA-PE-Gd3+ molecules with the oily droplet in analogous manner to phosphatidylcholine*
**Supplementary Figure 2:** *In vitro* MRI (Magnetic Resonance Imaging) relaxation rate plot of NE (nanoemulsion) and Magnevist (R1= 1/T1) as function of concentration of DTPA-PE-Gd3+.

**Supplementary Figure 3** (a) Brain atlas overlays of axial registration, (b) coronal view segmentation and (c) sagittal view segmentation