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Galantamine-loaded PLGA nanoparticles, from nano-emulsion templating, as novel advanced drug delivery systems to treat neurodegenerative diseases

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Supplementary information

Table S1: Mass balance of the Rhodamine 6G fluorescent dye found in each fraction: the original nanoparticles (total encapsulated compound amount); non-filtered nanoparticles (encapsulated compound) and filtered dispersant (non-encapsulated compound).

Fraction measured	mg of encapsulated fluorescent dye	Percentage of encapsulated dye
Original NP	340,57	100%
Filtered fraction (no NP)	0	0%
Non-filtered fraction (NP)	320,13	93,99%

As Table S1 shows, 320 mg of the initial 340 mg encapsulated compound, were recovered in the non-filtrated fraction, which represent almost 94% of encapsulated compound. Therefore, using this methodology, most of the encapsulated compound is found after the experimental procedure, thus confirming that this methodology can be useful for the encapsulation efficiency determination.

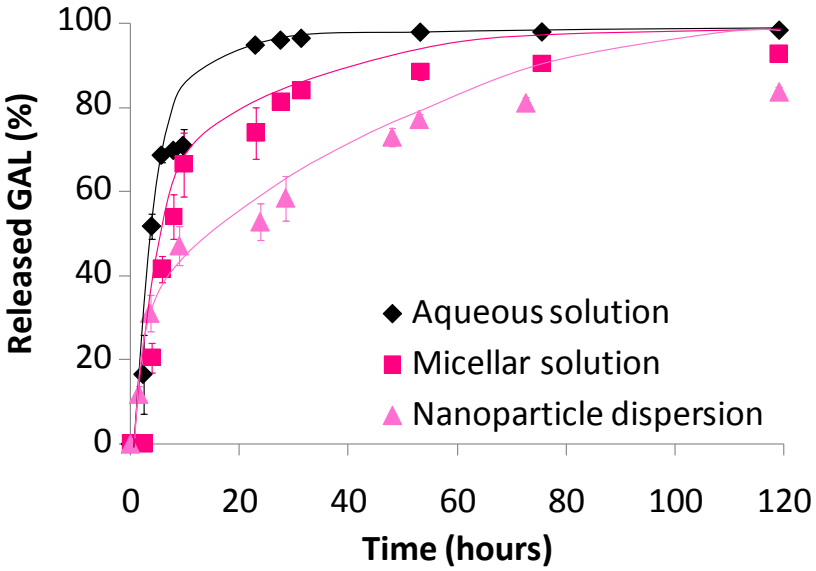

Figure S2: GAL release from a) an aqueous solution; b) a micellar solution with 3 wt. % surfactant and c) a nanoparticle dispersion. Symbols represent experimental results and solid lines the fittings of the experimental points to the theoretical Fick's law of diffusion.

Table S3: Solubility (in μg/mL) of galantamine and dexamethasone drugs in an aqueous solution.

Drug	Solubility in water
Galantamine	≈ 60 μg/mL
Dexamethasone	≈ 9 μg/mL