Supplementary Information

Amyloid-β Peptides in interaction with raft-mime model membranes: a neutron reflectivity insight.

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Table S1: Theoretical SLD values of the individual chemical species

Compound	SLD [a]	Compound	SLD [a]	Compound	SLD [a]
H_2O	-0.56	DSPC d-chains	7.91	Cholesterol	0.22
D_2O	6.35	DSPC d-heads	4.87	Aβ1-42	1.50
Si	2.07	GM1 chains	-0.41	Aβ1-6	1.75
SiO_2	3.41	GM1 heads	2.23	4-Match Water	4

[a] SLD values (10^{-6}Å^{-2}) for lipids have been calculated from Refs s1, s2 and s3, and for Aβ peptides from Ref. s4 and assuming a density of 1.5 g/cm^3

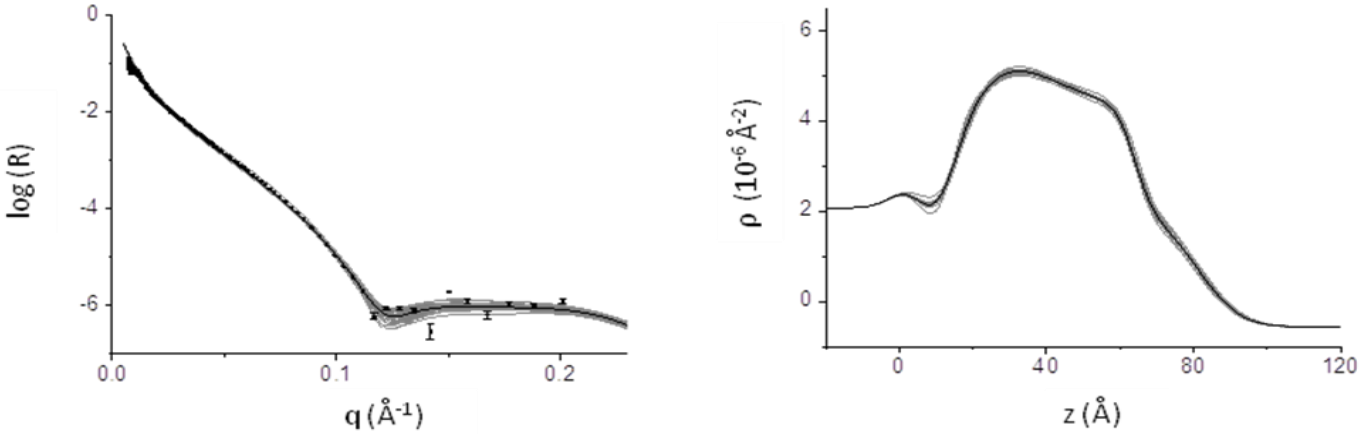

Figure S1. Neutron reflectivity spectrum (left panel) and contrast profile (right panel) of membrane A after the interaction with Aβ1-42 structured-oligomers in H_2O at T = 22°C. In the ***left panel*** dots are the experimental points. In black the best fit, giving the minimum χ^2, is reported, together with the curves, in grey, obtained by varying the fitting parameters within the errors. Errors on the fitting parameters, reported in the footnotes of Tables 1, 2 and 3 in the manuscript, have been estimated by varying each parameter until the quality of the fit was no more acceptable. On the ***right panel*** the contrast profile coming by the best fit is reported in black, together with the contrast profiles corresponding to the grey curves of left panel, thus representing a sort of error band to the best contrast profile.

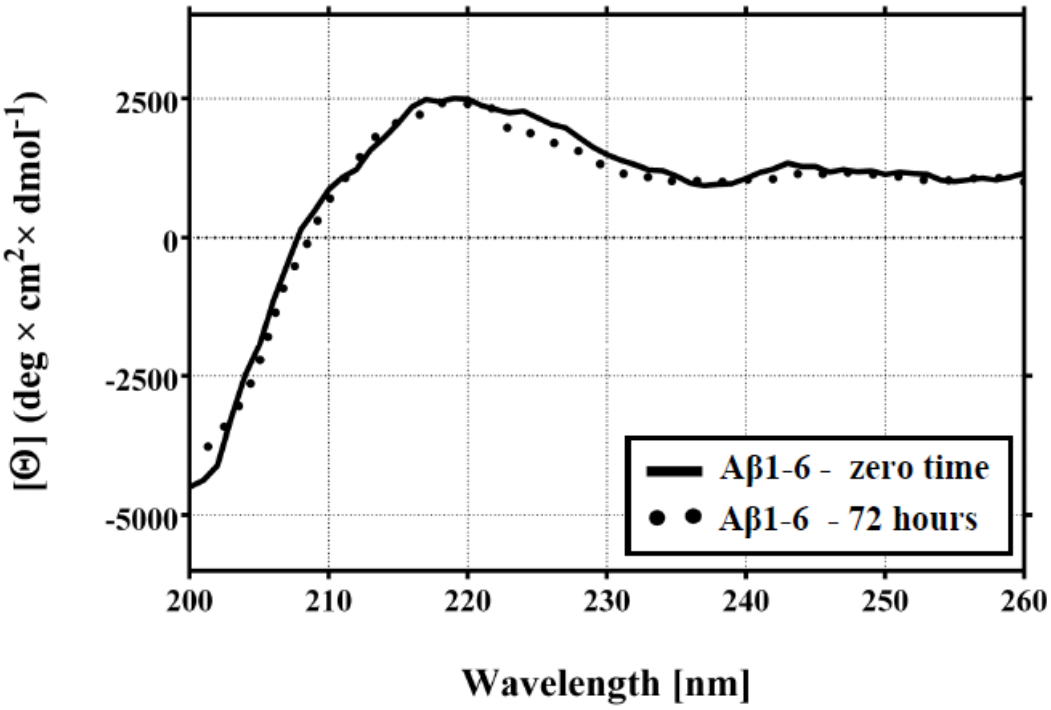

Figure S2. Secondary structure analysis of Aβ1-6. 100 μM Aβ1-6 peptide in 50 mM phosphate buffer containing 150 mM NaCl, pH 7.4, were analyzed at zero time and after 72-hours incubation. CD analysis showed that Aβ1-6 did not form β-sheet secondary structure, suggesting a no aggregation propensity and a high stability in solution

References

(s1) Nagle, J. F.; Wiener, M. C. Relations for Lipid Bilayers. *Biophysical Journal* **1989**, *55*, 309–313.

(s2) Greenwood, A. I.; Tristram-Nagle, S.; Nagle, J. F. Partial Molecular Volumes of Lipids and Cholesterol. *Chemistry and physics of lipids* **2006**, *143*, 1–10.

(s3) M. Boretta, L. Cantu, M. Corti, E. D. F. Cubic Phases of Gangliosides in Water: Possible Role of the Conformational Bistability of the Headgroup. *Physica* **1997**, *236*, 162–176.

(s4**)** http://it.sw3c.com/chemical/properties/cas-107761-42-2.html