

Biophysical Journal, Volume 114

Supplemental Information

Binding Modes of Phthalocyanines to Amyloid β Peptide and Their Effects on Amyloid Fibril Formation

Ariel A. Valiente-Gabioud, Dietmar Riedel, Tiago F. Outeiro, Mauricio A. Menacho-Márquez, Christian Griesinger, and Claudio O. Fernández

Supplementary Figure 1

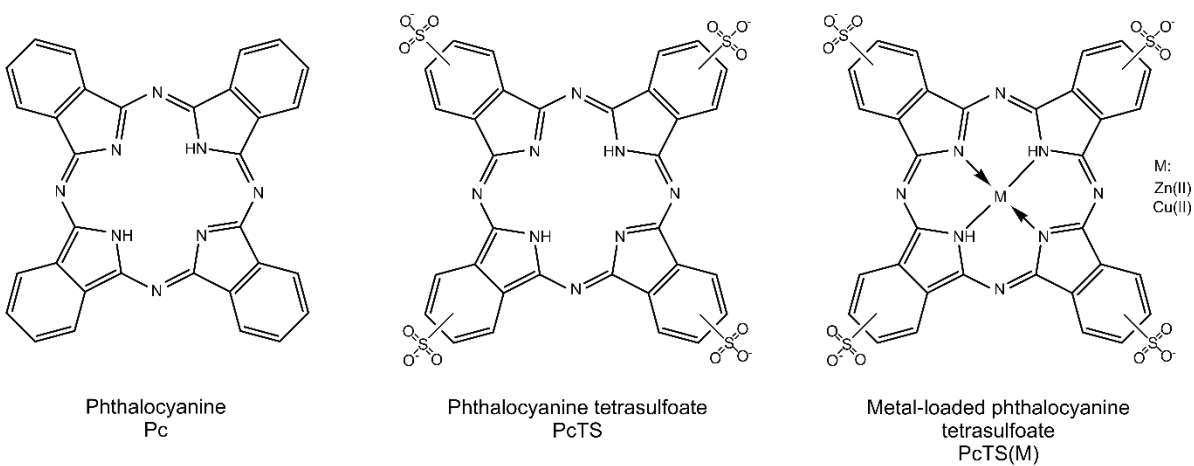


Figure S1: Schematic representation of Phthalocyanine structure. The basic backbone is presented (Pc), as well as the tetrasulfoate form (PcTS) and the metal derivatives studied in this work (PcTS(M)).

Supplementary Figure 2

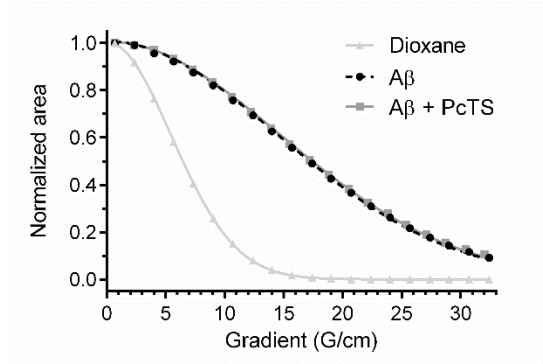


Figure S2: NMR signal decay observed for the free (black circles) and PcTS-complexed (dark grey squares) states of $A\beta_{40}$ at 15 °C in pulsed field gradient NMR experiments. To estimate the hydrodynamic radius, the signal decay of dioxane was also recorded (light grey triangles). The data shows that free and PcTS-bound $A\beta_{40}$ have identical diffusion coefficients, in agreement with a similar assembly state.

Supplementary Figure 3

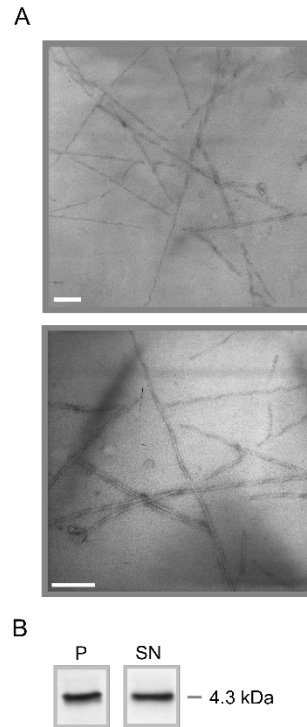


Figure S3: Analysis of PcTS[Cu(II)] effects on A β ₄₀ amyloid assembly. (A) Representative negative-stain EM images of A β ₄₀ aggregates (50 μ M A β ₄₀ samples) generated in the presence of 150 μ M PcTS(Cu(II)) (Scale bars, 100 nm). (B) SDS/PAGE analysis of A β ₄₀ peptide soluble (SN) and insoluble (P) fractions of the end point of the aggregation assays in the presence of 3 equivalents of PcTS(Cu(II)).

Supplementary Figure 4

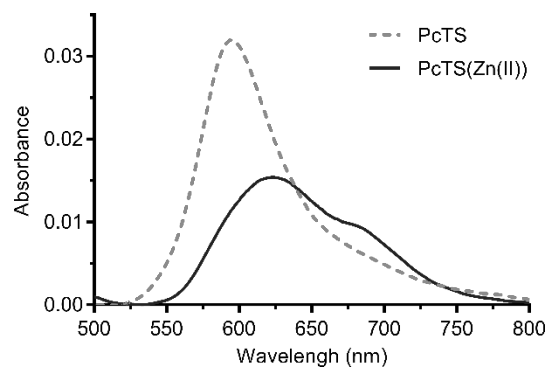


Figure S4: Electronic absorption spectra corresponding to the pellet fraction of 50 μM Aβ₄₀ aggregations obtained in the presence of 150 μM PcTS(Zn(II)) (continuous line) or PcTS (dashed line).