Supporting information

Ruthenium complexes bearing glucosyl ligands are able to inhibit the amyloid aggregation of short Histidine-peptides

Daniele Florio[1], Sara La Manna[1], Alfonso Annunziata[b], Ilaria Iacobucci[3,4], Vittoria Monaco[3,4], Concetta Di Natale[5,] Valentina Mollo[6], Francesco Ruffo[3], Maria Monti[3,4,] and Daniela Marasco[1,]*

[1]Department of Pharmacy, University of Naples Federico II, 80131, Naples, Italy

[3]Department of Chemical Sciences, University of Naples Federico II, 80126, Naples, Italy

[4]CEINGE Biotecnologie Avanzate "Franco Salvatore" S.c.a r.l., 80131, Naples, Italy

[5]Interdisciplinary Research Centre on Biomaterials (CRIB), Department of Ingegneria Chimica del Materiali e della Produzione Industriale (DICMAPI), University Federico II, 80125 Naples, Italy

[6]Center for Advanced Biomaterials for Healthcare, Istituto Italiano di Tecnologia (IIT), Largo Barsanti e Matteucci 53, Naples 80125, Italy.

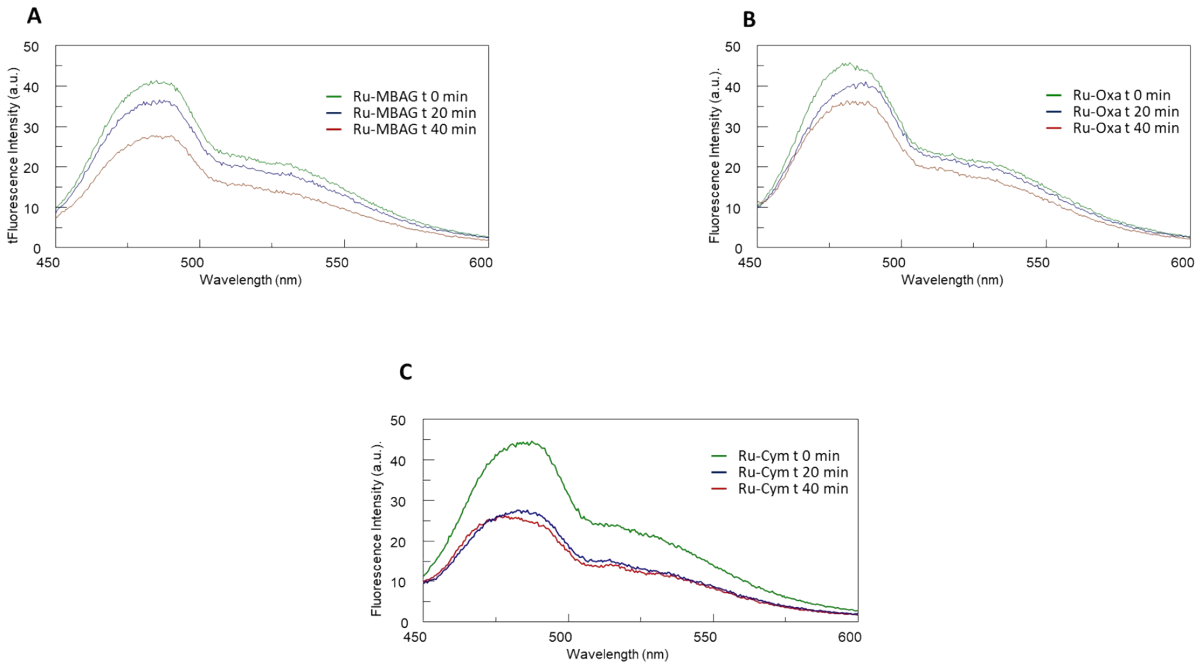


Fig. S1 Overlay of ThT fluorescence emission intensity of Ru-MBAG (A), Ru-Oxa (B) and Ru-Cym (C) complexes at indicated time.

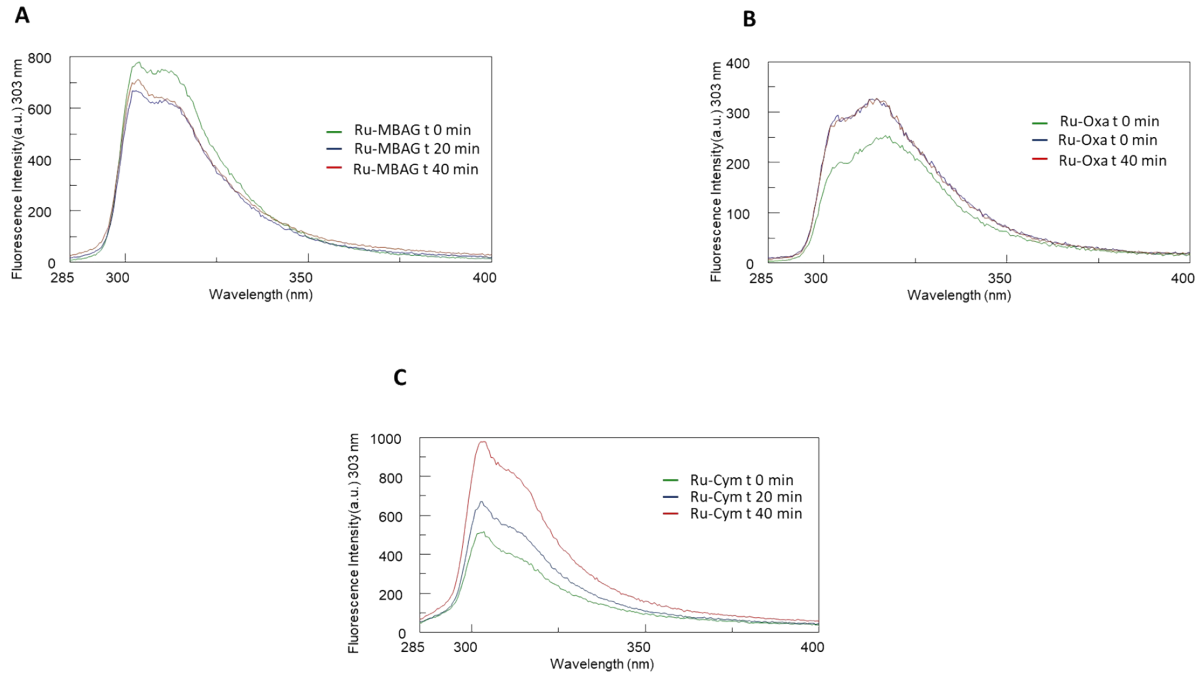


Fig. S2 Overlay of aromatic intrinsic fluorescence assay of Ru-MBAG (A), Ru-Oxa (B) and Ru-Cym complexes (C) at indicated time.

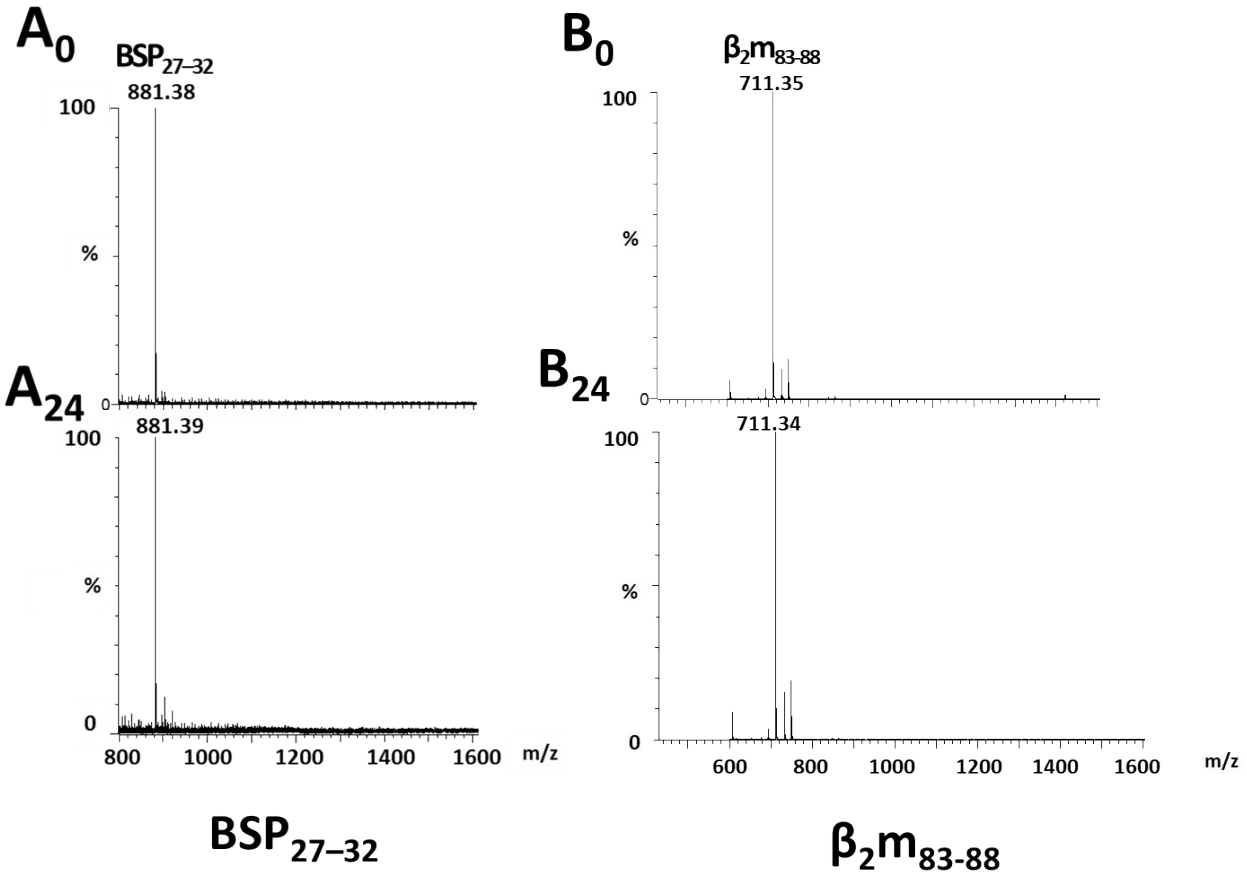


Figure S3. ESI-MS spectra of isolated BSP $_{27–32}$ (A0, A24 panels) and β_2m_{83-88} (B0, B24 panels) at 0 and 24h

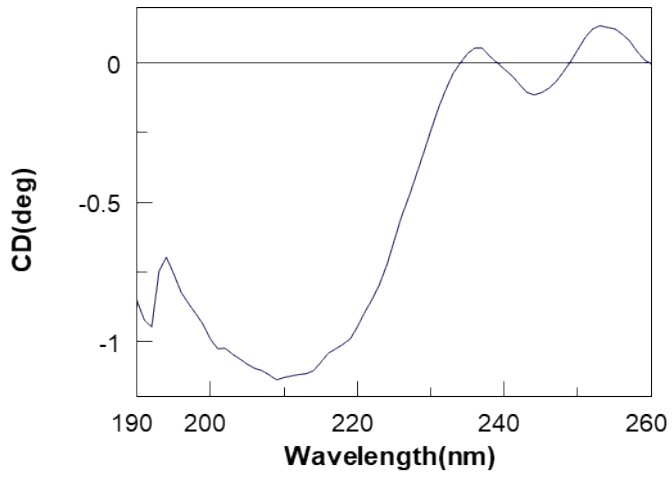


Figure S4. Conformational analysis of BSP_{27-37} at 1mM, phosphate buffer 10mM.

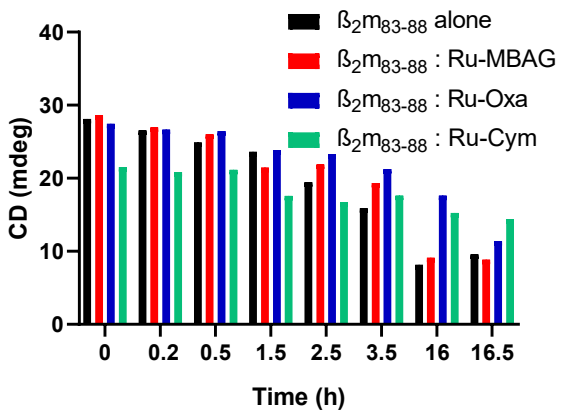
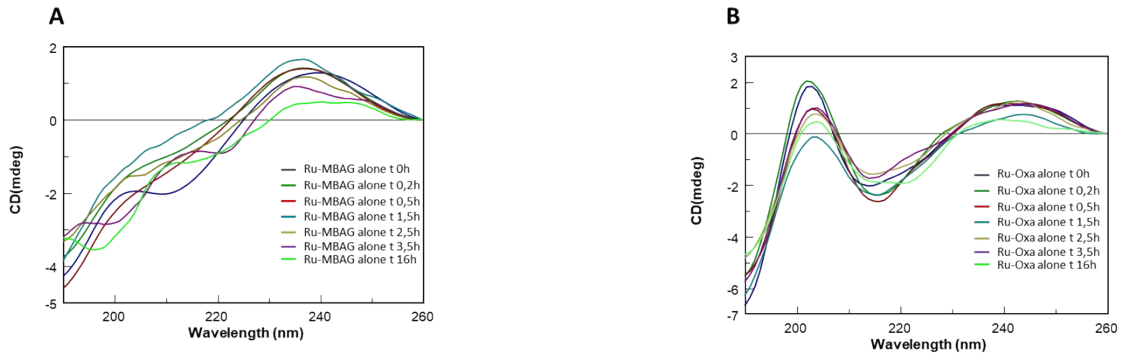
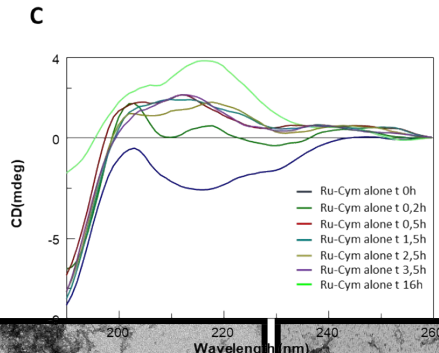


Figure S5. Histogram of CD absolute values of $\beta_2m_{83\text{-}88}$ at indicated times.





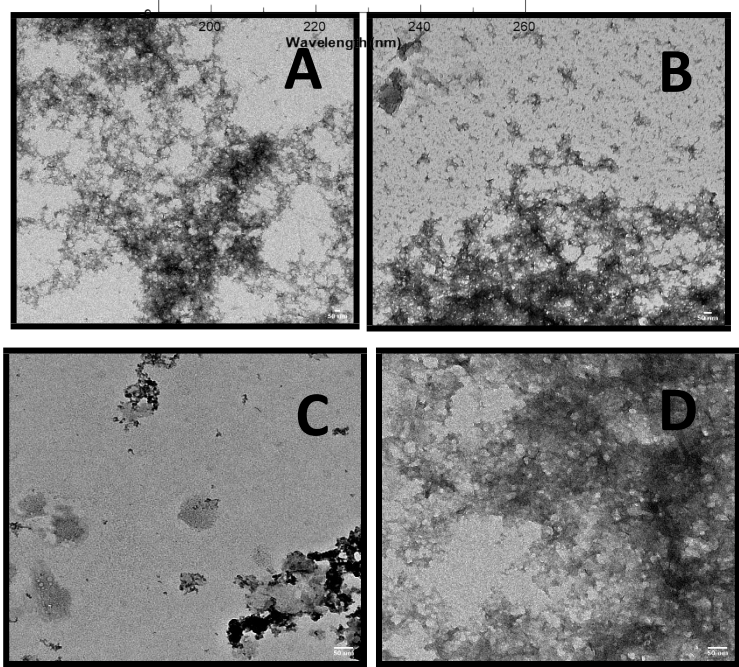


Fig. S6 Conformational analysis of Ru(II)-arene complexes. (A) Ru-MBAG alone (400µM), (B) Ru-Oxa alone (400µM) and (C) Ru-Cym alone (400µM).

Figure S7. TEM analysis at t=4 d of $BSP_{27–32}$ peptide (A) alone, and in presence of (B) Ru-Cym, (C) Ru-MBAG and (D) Ru-Oxa.

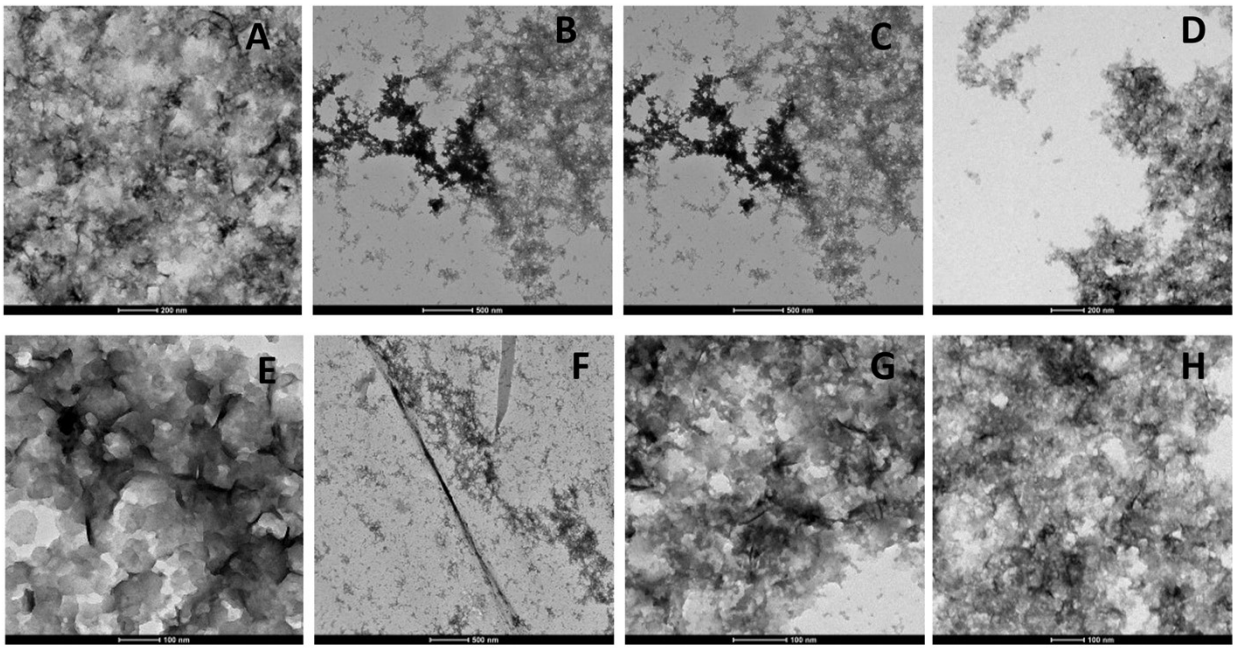


Fig. S8 TEM analysis of $\beta 2m_{83-88}$ peptide alone at t 0 and 4 d (A and E) and in presence of Ru-Cym, Ru-MBAG and Ru-Oxa (B-D, t=0), (F-H, t= 4 d).