

The small molecule inhibitor anle145c thermodynamically traps human islet amyloid polypeptide in the form of non-cytotoxic oligomers

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Supplementary tables

Table S1. Overall particle size distribution analyzed by DLS.

(based on the results from Fig.4A and Fig.S3)

Incubation time of hIAPP before anle145c addition	Total incubation time	Final particle size of hIAPP+anle145c
0	16 h	~ 10 nm
15 min	16 h	~ 10-12 nm
1 h	16 h	~ 12-50 nm
4 h	16 h	~ 20-50 nm
16 h	39 h	~ 10-20 nm

Table S2. Individual height distribution analyzed by AFM

(based on the results from Fig.S4)

Incubation time of hIAPP before anle145c addition	Total incubation time	Final height of oligomers
15 min	16 h	~ 2.7 ± 0.7 nm
1 h	21 h	~ 1.5 ± 0.7 nm
4 h	21 h	~ 1.4 ± 0.7 nm
16 h	39 h	~ 1.3 ± 0.7 nm

Supplementary data

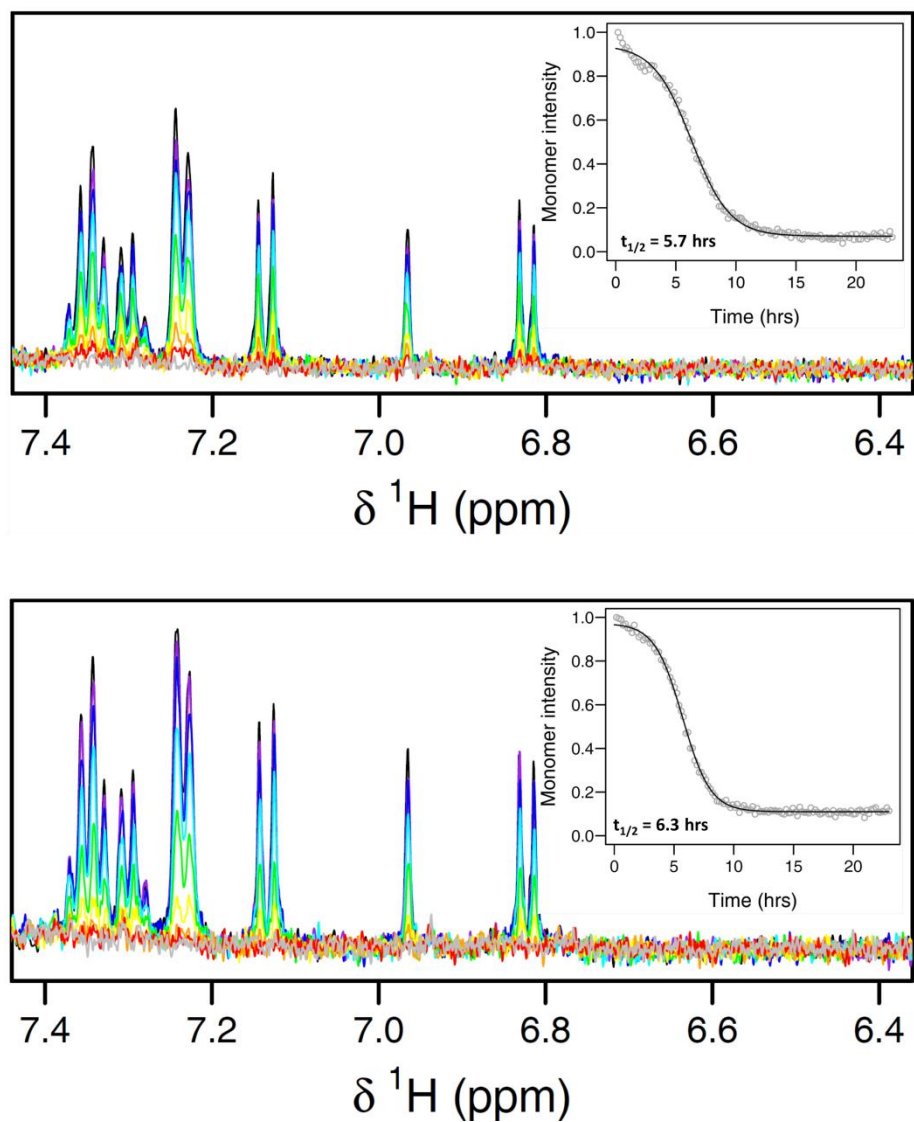


Figure S1. ^1H NMR spectra of the aromatic region of hIAPP in time in the absence (A) and in the presence of anle145c (B). The insert shows the integrated intensity of the peaks as function of aggregation time, corresponding to depletion of monomers and possibly small oligomers. The half-times of the depletion are rather similar. The peptide concentration is $50\ \mu\text{M}$ and the anle145c concentration $10\ \mu\text{M}$. For further details see Materials and Methods section.

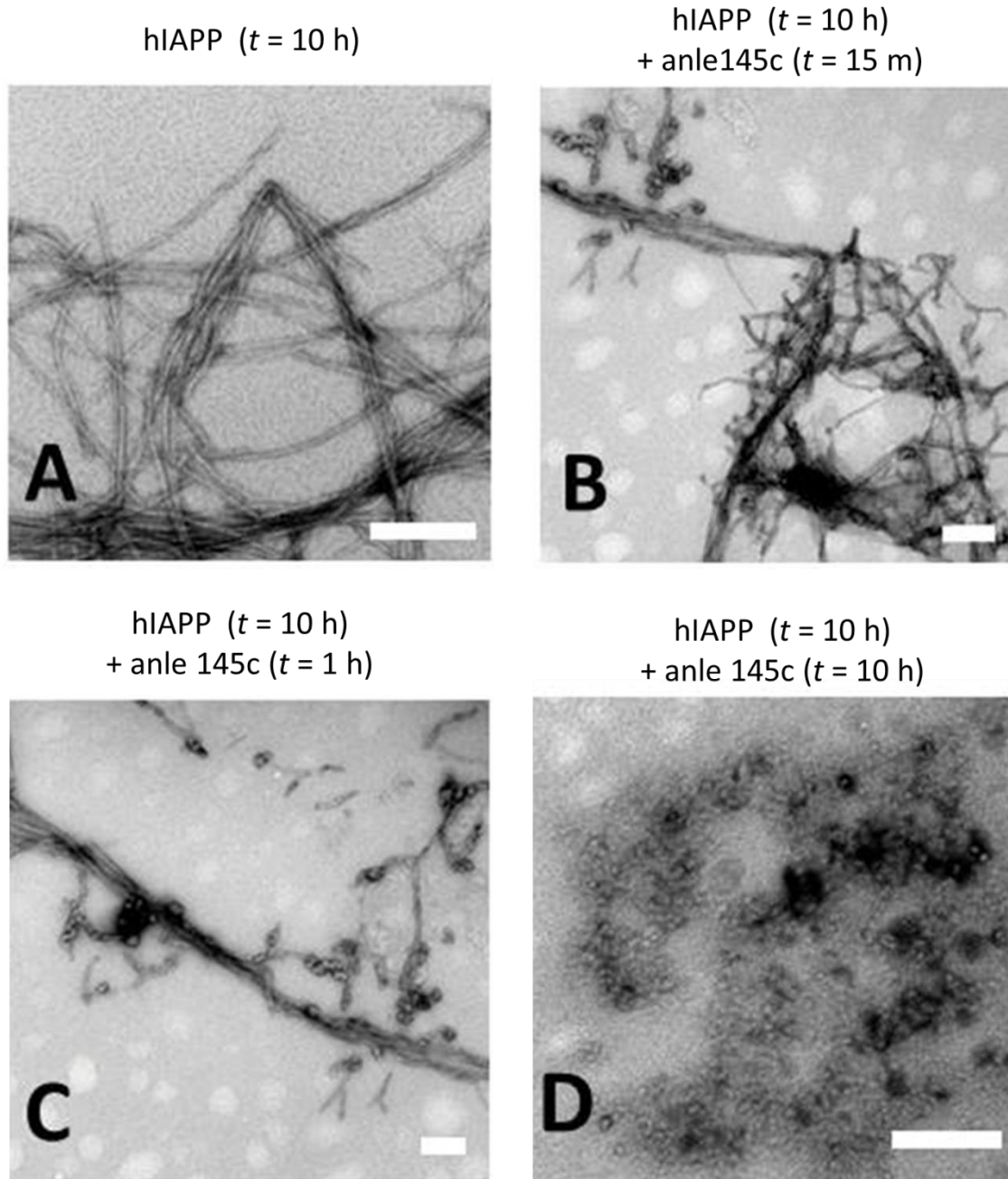


Figure S2. TEM images of hIAPP fibril formation after 10 h incubation (A) and effects of anle145c on the formed fibrils after different times of incubation: immediately after addition of anle145c (B), 1 h after addition of anle145c (C) and 10 h after addition of anle145c (D). (Scale bar represents 200 nm)

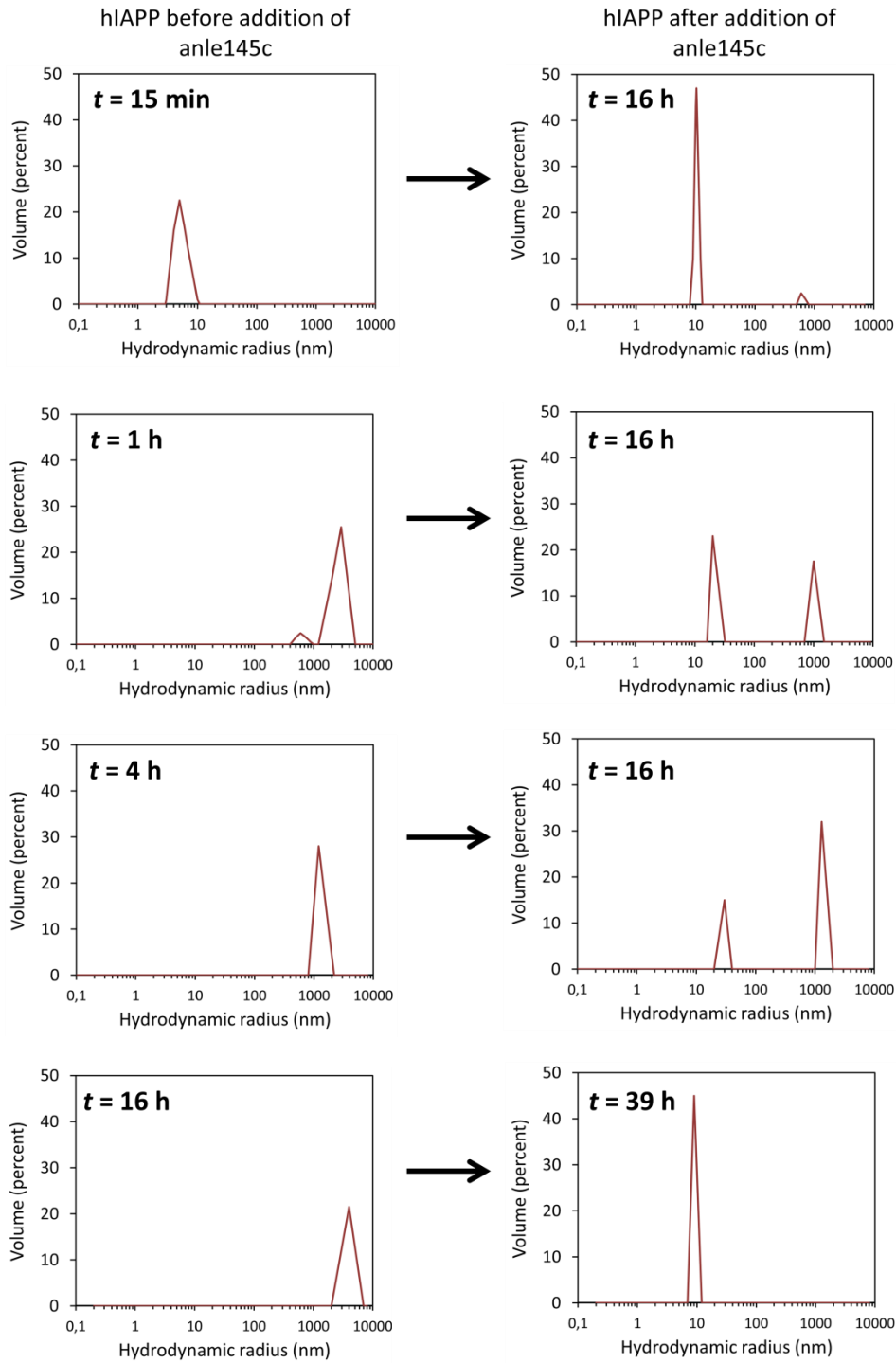
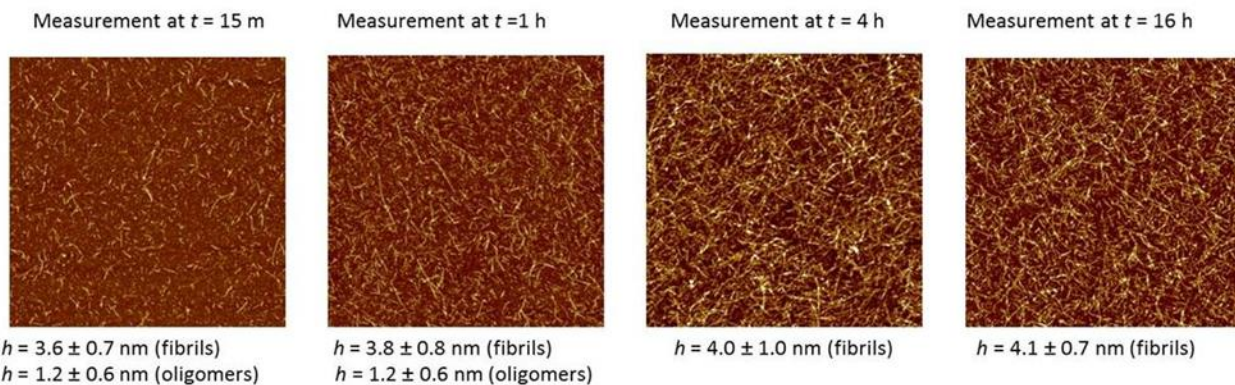


Figure S3. DLS measurements showing from top to bottom the size distributions of hIAPP amyloid species at different time points before (left panel) and after addition of anle145c (right panel). The time indicated in the right panel is the total incubation time of hIAPP.

IAPP



IAPP + anle145c

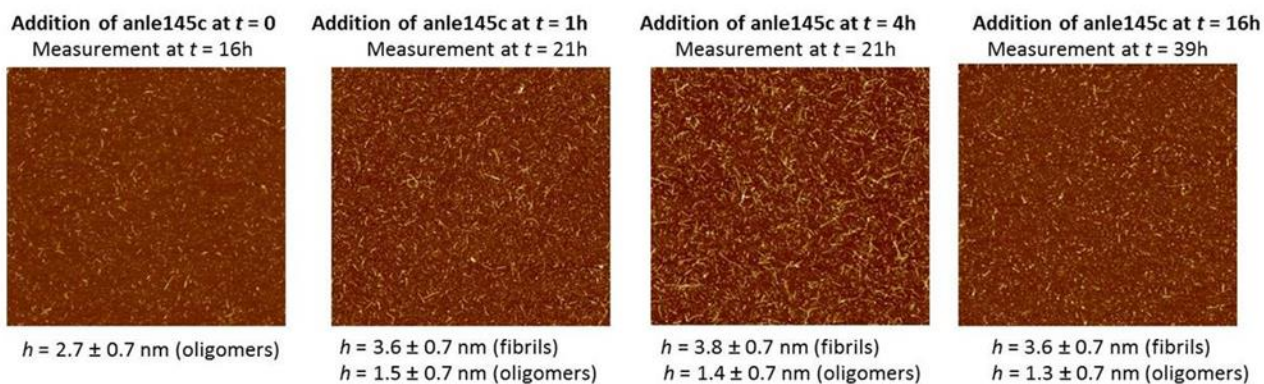


Figure S4. AFM micrographs of hIAPP amyloid species at different times of incubation (top) and after addition of anle145c to pre-incubated hIAPP amyloid species at the specified times (bottom).