Supplemental Figures

Hexafluoroisopropanol induces amyloid fibrils of islet amyloid polypeptide by enhancing both hydrophobic and electrostatic interactions

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Supplemental Fig. S1. The sample preparation of hIAPP. (A) Amino acid sequence and structural properties of hIAPP. (B) Schematic diagram of the method used. (C) Far-UV CD spectra of hIAPP in 10 mM HCl with 80% (v/v) HFIP (solid line: 0 days, dashed line: 4 days). (D) Far-UV CD spectrum of hIAPP in 10 mM HCl after ultracentrifugation.
Supplemental Fig. S2. Time-dependent changes of the far-UV CD spectra of 25 μM hIAPP at various concentrations of HFIP in 10 mM HCl at 25°C.

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Supplemental Fig. S3. Time-dependent changes of the far-UV CD spectra of 25 μM hIAPP at various concentrations of HFIP in 10 mM sodium phosphate buffer at pH 7.0 and at 25°C.
Supplemental Fig. S4. Sedimentation velocity experiments of 25 μM hIAPP of various conformations in the absence and presence of 10% (v/v) HFIP in 10 mM HCl and 25°C. (A-C) Sedimentation boundary profiles of hIAPP oligomers in the absence (A) and presence (B) of 10% (v/v) HFIP and preformed hIAPP fibrils in the presence of 10% (v/v) HFIP (C). Centrifugation was performed at 55,000 rpm (230,000 × g) (A-B) and 6,000 rpm (2,700 × g) (C) by monitoring the absorbance at 230 nm at intervals of 200 min (A), 100 min (B), and 25 min (C), respectively. Integral distribution plots of the sedimentation coefficient ($s_{20,w}$), corrected for the viscosity and density of the solvent using that of water at 20°C, were shown in the absence (D) and presence (E, F) of 10% (v/v) HFIP. Sedimentation velocity experiments were performed using a Beckman-Coulter Optima XL-A analytical ultracentrifuge (Fullerton, CA) after precentrifugation at 3,000 rpm (700 × g) for 5 min. The experimental sedimentation coefficients were corrected to $s_{20,w}$, the sedimentation coefficient expressed in terms of the standard solvent of water at 20°C, with the van Holde-Weischet method in the software UltraScan 8.0 (www.ultrascan.uthscsa.edu). Molecular weights of oligomeric species were estimated using $s_{20,w}$ distributions, frictional ratios, and partial specific volumes with the UltraScan software.
Supplemental movies

**Supplemental Movie S1:** Real-time observation of fibril growth under acidic conditions in the presence of 10% (v/v) HFIP and 5 μM ThT at 25 °C.

**Supplemental Movie S2:** Real-time observation of fibril growth under neutral conditions (pH 7.0) in the presence of 5 μM ThT at 25 °C.

**Supplemental Movie S3:** Real-time observation of fibril growth under neutral conditions in the presence of 30% (v/v) HFIP and 5 μM ThT at 25 °C.