Identifying Insulin Fibril Conformational Differences by Thioflavin-T Binding Characteristics

Supporting information

*Mantas Ziaunys, Andrius Sakalauskas, Vytautas Smirnovas**

Institute of Biotechnology, Life Sciences Center, Vilnius University, Vilnius, Lithuania

*Corresponding Author:

Vytautas Smirnovas

Sauletekio al. 7, Vilnius, LT-10257, Lithuania

Email address: vytautas.smirnovas@bti.vu.lt

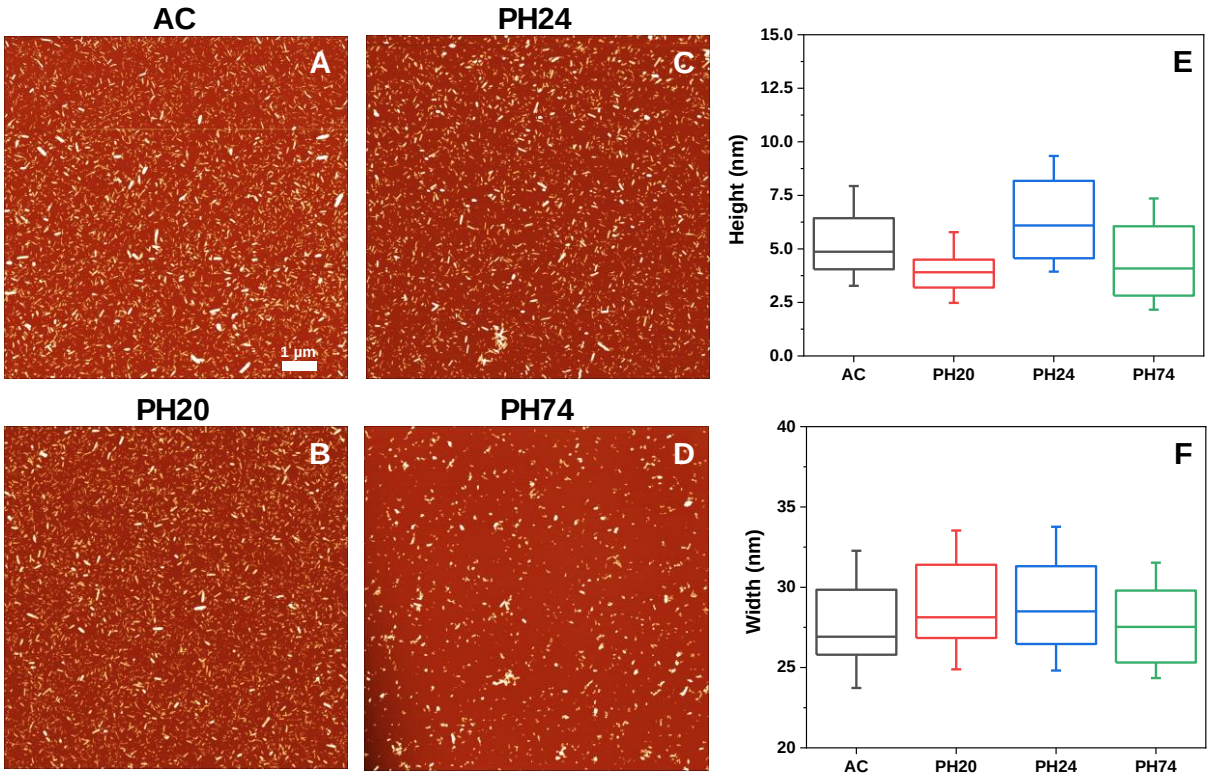

Figure S1. Atomic force microscopy images of insulin fibrils, prepared in AC (A), PH20 (B), PH24 (C) and PH74 (D) conditions after multiple rounds of resuspension into MilliQ H_2O and sonication. Height (E) and width (F) distribution of all four fibril types (n=50), where box plots indicate the interquartile range and error bars are for 1 standard deviation.

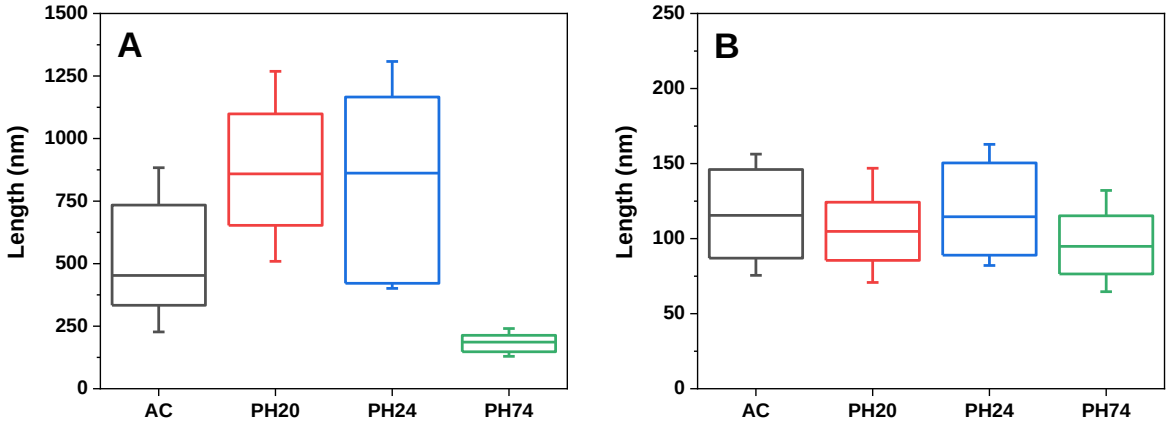

Figure S2. AC, PH20, PH24 and PH74 fibril length distributions before (A) and after (B) resuspension into MilliQ H_2O and sonication (n=50), where box plots indicate the interquartile range and error bars are for 1 standard deviation.

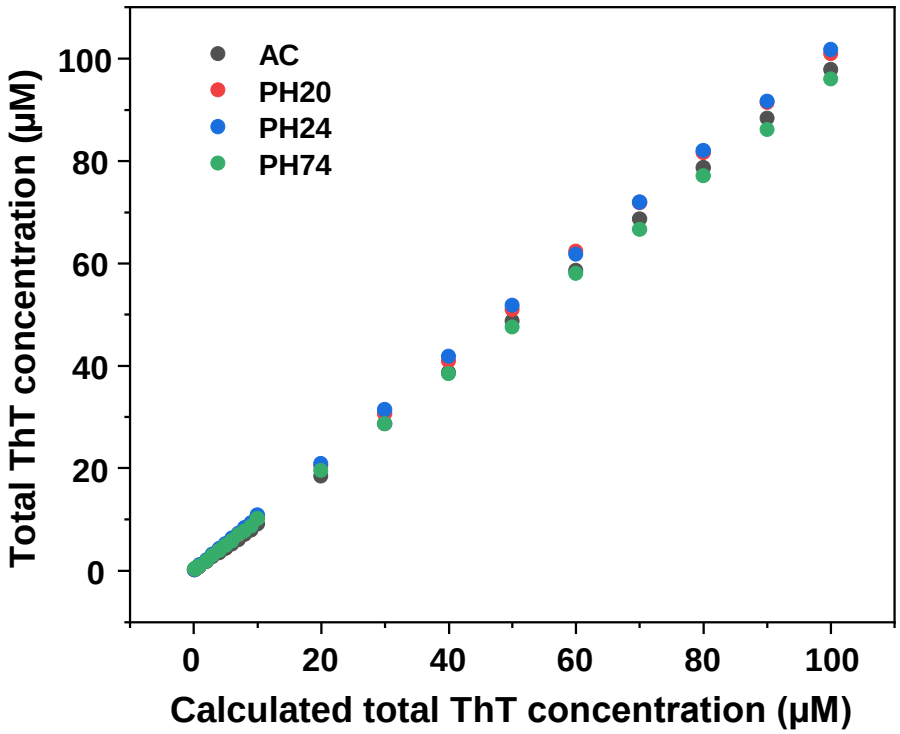

Figure S3. Comparison of total (bound + free) ThT concentration calculated from sample absorbance data and total ThT added to the sample.

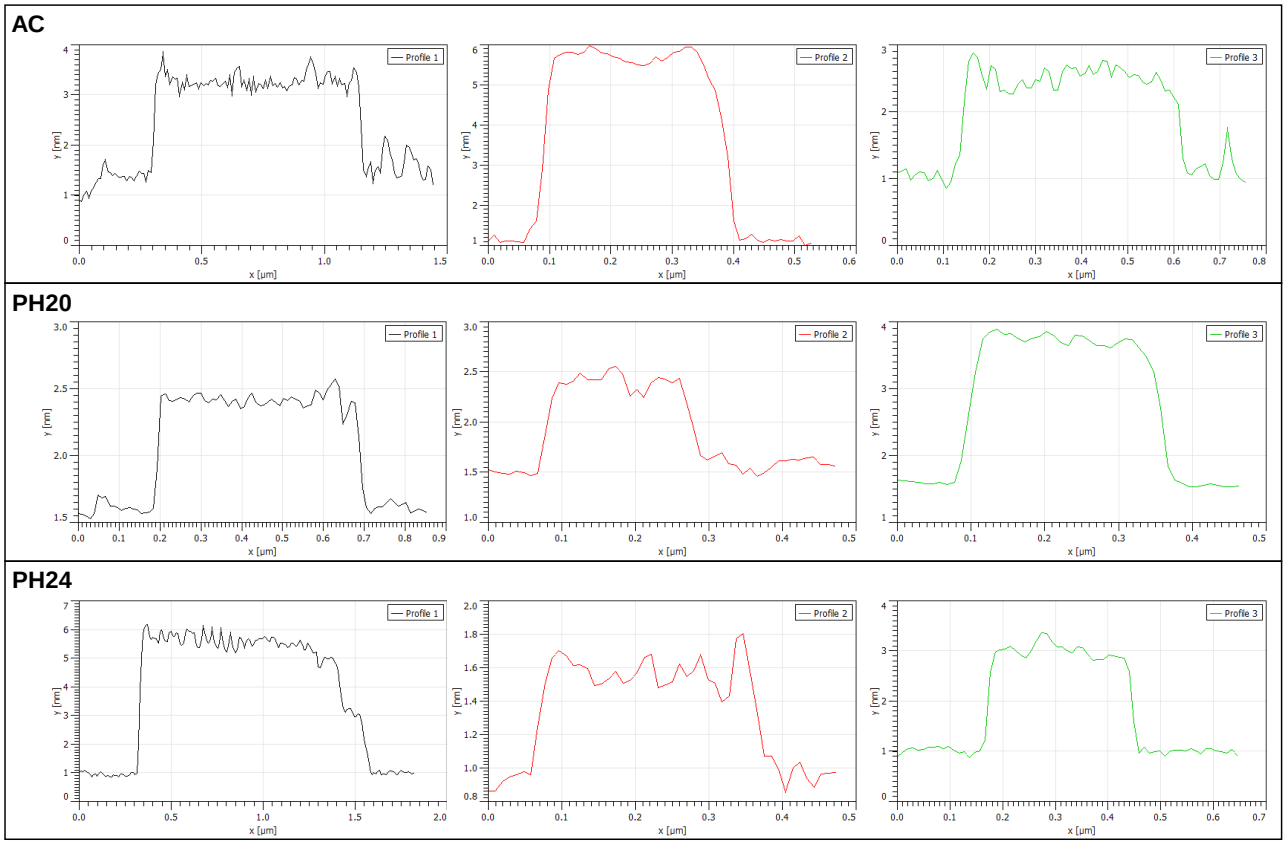

Figure S4. AC, PH20 and PH24 fibril surface height along the fibril‘s axis. 3 traces were measured for each condition. PH74 surface could not be traced due to the small length of the fibrils.

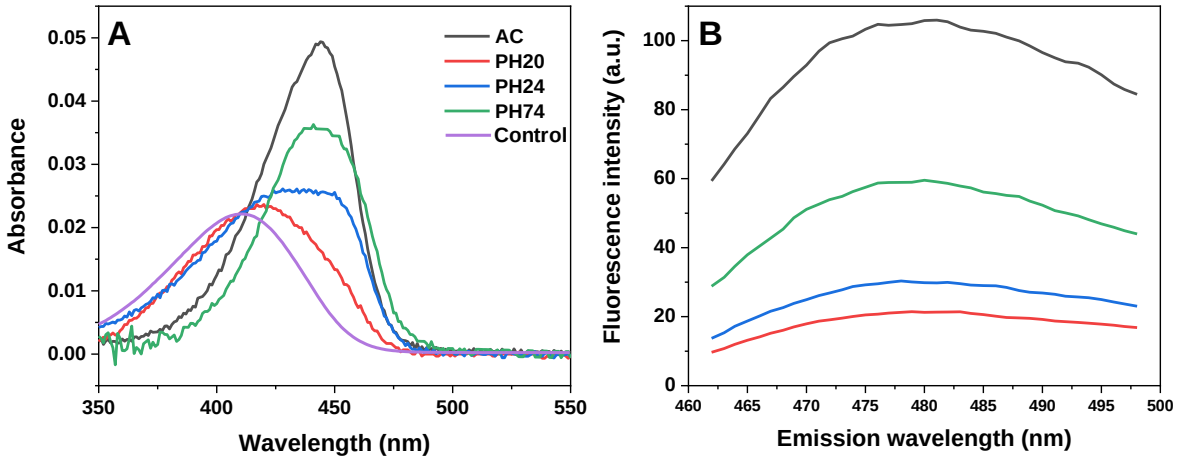

Figure S5. Absorbance spectra of free (A, control) and fibril-bound ThT (A) (total ThT present in solution was 1 μM). Fluorescence intensity (excitation wavelength was 445 nm) of all four types of fibrils in the presence of 1 μM ThT (B). Absorbance and fluorescence spectra were recorded and corrected as described in the Materials and Methods section.