Preliminary cryo-electron microscopy (EM) data for ptau decorated microtubules

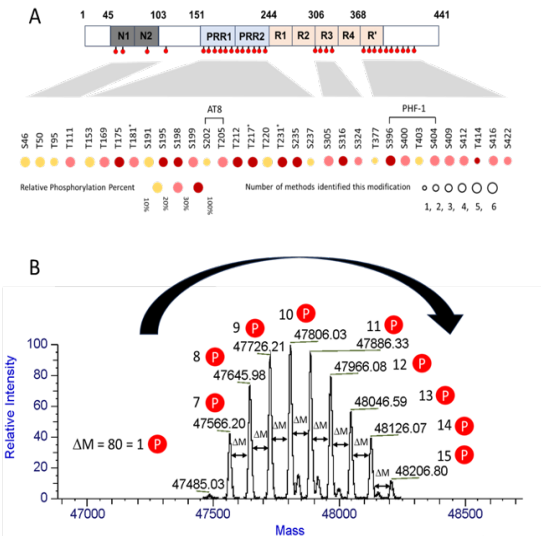

Fig. 1. MS characterization of ptau, phosphorylated by GSK-3β, the most prominent tau kinase in Alzheimer's disease (AD). (A) The phosphorylation sites and their relative abundance of ptau identified by trypsin-digest followed by LC-MS/MS. Phosphorylation sites marked with * are biomarkers of AD. (B) Distribution of number of phosphorylation sites in ptau, ranging from 7 to 15 phosphorylation, obtained by ESI-MS.

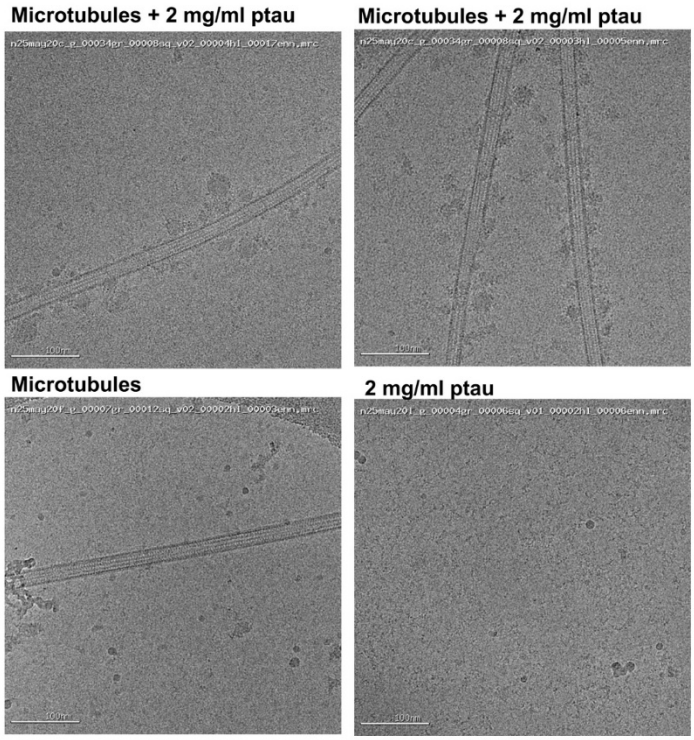

Fig. 2 Formation of ptau LLPS droplets is templated by microtubules. Representative micrographs, collected in ice with the Glacios transmission EM at NCCAT at NYSBC. Top panels: Representative micrographs confirm ptau decoration of microtubules. Liquid-liquid phase separation droplets of ptau are formed on microtubules at a ptau concentration of 2 mg/ml. Note that these LLPS droplets are absent in samples that either contain only microtubules or ptau at 2 mg/ml (bottom).

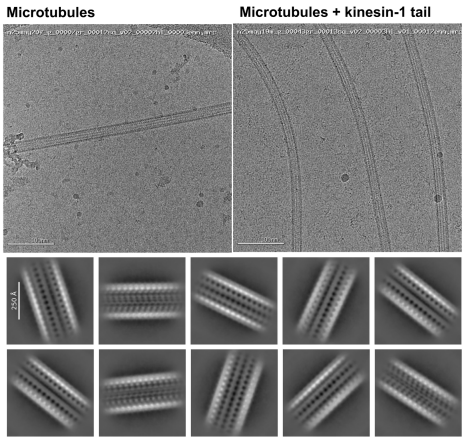

Fig. 3 Representative cryo-electron micrograph and representative 2D classes of microtubules decorated with the kinesin-1 tail, collected by the PI with the Glacios cryo-TEM at NYSBC. A representative micrograph of microtubules without the kinesin-1 tail is shown as a control.