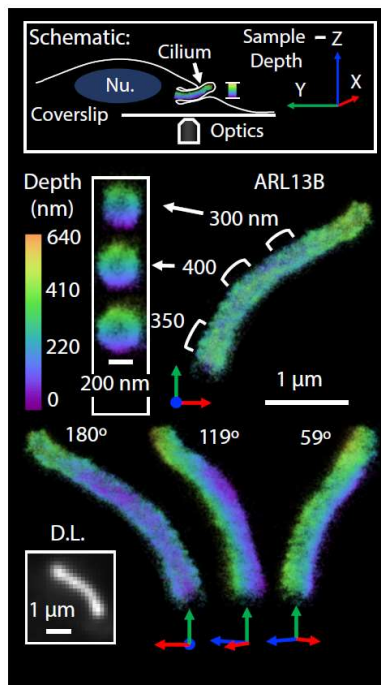


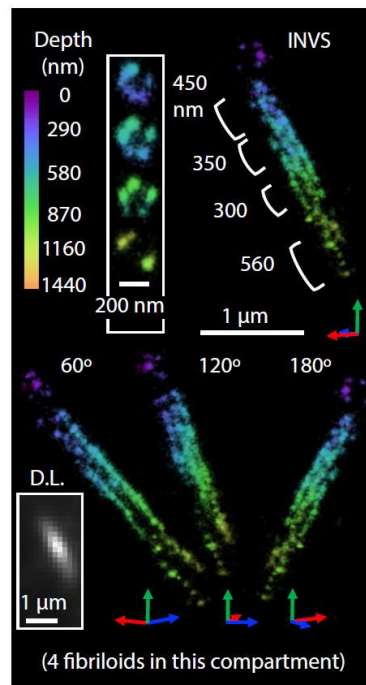
# Novel fibrillar structure in the inversin compartment of primary cilia revealed by 3D single-molecule superresolution microscopy



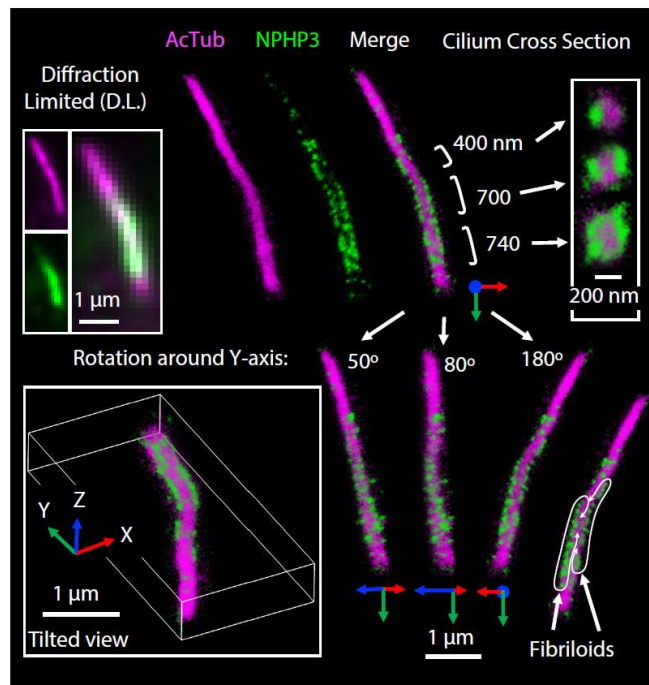
3D single-molecule superresolution (3D SM SR) imaging using the DH-PSF microscope revealed that proteins in the inversin compartment in primary cilia form fibriloid sub-structures. The discovery of these novel structures together with genetic dissection of protein-protein binding relationships that organize compartment assembly allowed us to develop a new structural model of the inversin compartment.



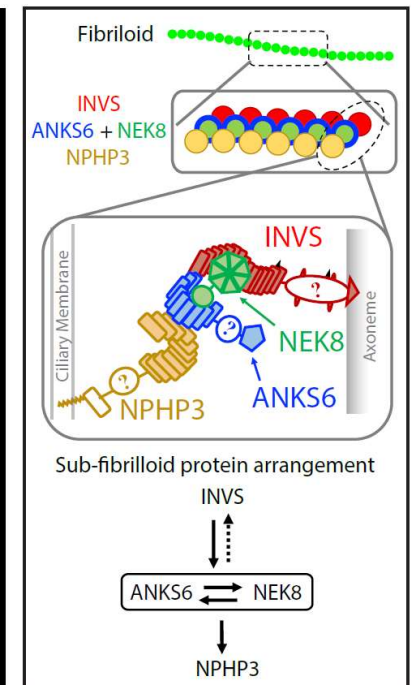
3D SM SR imaging of the ciliary protein ARL13B showed homogeneous protein distribution along the cilium.



3D SM SR imaging of the inversin compartment proteins revealed a fibriloid sub-structure.



Two-color 3D SM SR imaging of inversin compartment proteins and acetylated tubulin showed that the fibriloids wrap around the axoneme.



A new model for the structure and composition of the inversin compartment.