

The primary cilium is a specialized appendix present on the surface of the cell that is used as an antenna to enable communication between the cell and its environment. Many components must be delivered to the cilium for it to function, but the cilium is a minuscule organelle compared to the entirety of the cell and it is unclear how the cell manages to guide these components into the cilium entry. We will characterize the mechanisms of the precise transport of ciliary components to their cellular destination. This will not only help us understand the way in which different cellular components are delivered to their target compartments, but also will help us combat diseases associated with the dysfunction of primary cilia.