Title:

On the microtubule based transport of Marek’s Disease Virus

Abstract:

During infection, viruses use the host transport machinery to get from the cell periphery to the nucleus. Egress of new viral particles requires transport to the endoplasmic reticulum, the Golgi and back out to the cell cortex. We have determined the essential role of both microtubules and actin for the cell-to-cell spread of Marek’s Disease Virus (MDV). Using super-resolution microscopy, we show that viral capsids are transported along microtubules and that the majority of viral particles outside the nucleus are associated with microtubules. Using a split kinesin assay we identified KIF13B, a molecular motor of the kinesin-3 family to be responsible for viral capsid transport.