

MCDB 4550/5550
Molecular and Cellular Biophysics
Perkins
Assignment #11
Due Tuesday, April 23rd at the end of class

1. Bring three (3) well thought out questions about the literature paper to class and hand them in.

Additional questions on the paper for you to answer.

1.1 Why doesn't the Dam1 complex fall off the end of a depolymerizing microtubule? More complex, what is one possible explanation why does a Dam1 complex stay attached to a growing microtubule under tension?

1.2 How do the authors attach the microtubule to the surface?

1.3 What range of forces can a depolymerizing microtubule exert via the Dam1 complex onto the optically trapped bead?

1.4 How many Dam1 complexes are on each bead? Thoughts on why this number? Think about how the assay is initiated.