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Preferred Method of Contact: e-mail

Project Name(s): Microtentacles and CPCs

General Topic (Keywords): cancer, tetrahymena, cilia, tubulin, electron microscopy

Project Description(s):
Microtentacles are thin projections recently discovered on cancer cells. They are formed by microtubules and promoted by factors that stabilize microtubules or destabilize actin polymers, and they may play an important role in metastases by enhancing attachment of circulating tumor cells. We are using electron microscopy/tomography to understand the structure of these features and to see how the structure may depend on the presence of drugs such as Taxol.

At the base of the cilia on Tetrahymena there is a structure that we call the “Ciliary Pore Complex” (CPC), which appears to function as a filter separating the cytoplasmic space from the cilia. We are using electron microscopy to better understand the structure of the CPC and to investigate its relation to possible homologous structures in mammalian cells.

Desired Skills or Experience: General wet lab skills

Time Commitment: 15-20 hours/week

Preferred Starting Date: ASAP