

thursday, january 8 / 2004

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*Tau Induces Cooperative
Taxol Binding to Microtubules*

Taxol and tau are two ligands that stabilize the microtubule (MT) lattice. Taxol is an anti-mitotic drug that binds tubulin in the MT interior. Tau is a MT-associated protein that binds both tubulin and tubulin on the MT exterior. Both taxol and tau reduce MT dynamics and promote tubulin polymerization. Tau alone also acts as a buttress to bundle, stiffen, and space MTs. A structural study recently suggested that taxol and tau may interact by binding to the same site. Using fluorescence recovery after photobleaching, we find that tau induces taxol to bind MTs cooperatively, depending on the tau concentration. We develop a model that correctly fits the data in the absence of tau and yields a measure of taxol cooperativity when tau is present.

thursday january 8 at 4 pm
department conference room (3302 broida)

winter quarter schedule
<http://www.iquest.ucsb.edu/sites/cleland/classes/cmseminar/index.html>

if you wish to be on the e-mail list for the seminar, send mail to cleland@physics.ucsb.edu