



FIGURE 1 Three possibilities for assembly of a subunit into a 2-D lattice, like that of the microtubule wall. Subunits are connected to each other by two types of bonds. Longitudinal bonds connecting the subunits into vertical protofilaments are represented by a double line and lateral bonds are represented by a single line. A subunit may polymerize into this lattice forming (a) a lateral bond, (b) a longitudinal bond, or (c) both a lateral and a longitudinal bond. The relation of the three equilibrium constants to each other and to the bond energies is derived in the text.