On the mechanical stability of microtubular protrusions of microglial cell membrane.


Abstract: Recently, micro- and nanotubular structures that are also present in cells have become a subject of increasing interest. In this work we report on observation of tubular membrane protrusions in microglial cells. It was observed that the membrane of the resting microglial cells exhibits numerous protrusions that may appear as branched microtubular structures. When microglial cells were activated the protrusions were not observed. A theory describing the mechanical stability of the observed myelin-like membrane protrusions in microglial cells is described.