The association of tau-like proteins with vimentin filaments in cultured cells

Capote, Carolina

MacCioni, Ricardo B.

There is increasing evidence that the different polymers that constitute the cytoskeleton are interconnected to form a three-dimensional network. The macromolecular interaction patterns that stabilize this network and its intrinsic dynamics are the basis for numerous cellular processes. Within this context, in vitro studies have pointed to the existence of specific associations between microtubules, microfilaments, and intermediate filaments. It has also been postulated that microtubule-associated proteins (MAPs) are directly involved in mediating these interactions. The interactions of tau with vimentin filaments, and its relationships with other filaments of the cytoskeletal network, were analyzed in SW-13 adenocarcinoma cells, through an integrated approach that included biochemical and immunological studies. This cell line has the advantage of presenting a wild- type clone (vim+) and a mutant clone (vim-) which is deficient in vimentin expression. We analyzed the cellular roles of