Tubulin and microtubule?associated protein pools in unfertilized and fertilized eggs of the trout Oncorhynchus mykiss

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A molecular characterization of tubulin and microtubule?associated proteins (MAPs) along with their intracellular pool distributions in both unfertilized and fertilized oocytes of the trout Oncorhynchus mykiss was carried out. In vitro assembly of microtubular proteins was obtained by cycles of assembly?disassembly and by taxol?induced polymerization, thus allowing identification of the protein components of isolated microtubules from the oocyte. Extraction procedures were developed in order to separate molecular components of the egg vitelum prior to purification steps. The use of antibodies that specifically tag tubulin and a set of site?directed probes against repetitive binding sequences on MAPs provided data on the presence of tubulins and enabled the identification of an 85?kDa protein that shares common functional epitopes with mammalian MAPs. An enzyme?linked immunosorbent assay analysis of the free soluble tubulin pools revealed a significant decrease in the pool extent during