

## **Abstract**

Centrioles are evolutionarily conserved protein structures composed of microtubules. In somatic cells, centrioles serve as the basal body of cilia and flagella and allow the assembly of pericentriolar material, thereby creating the centrosome. Without centrosome, animal cells are not capable of nuclear division. Centrioles do not arise de novo and their formation always requires the presence of a preexisting centriole. Since there are no centrioles in the egg at the time of fertilization, unlike spermatozoa, sperm is the carrier of centrioles and therefore all of the centrioles of the emerging organism are of paternal origin. There are two centrioles in the sperm - a cylindrical shape proximal and a distal one, which is perpendicular to the proximal. The sperm centrioles are the basis for the formation of the sperm flagellum and after fertilization form the mitotic spindle of the zygote, necessary for equal DNA and cell distribution. It follows from the above that the presence of centrioles in sperm is essential in mammals and defects in their structure may lead to male sterility or embryo development disorders. However, sperm centrioles differ from somatic centrioles in their structure and behavior and understanding these differences is one of the important tasks of reproductive biology.