

Poster

Mutations in a histone H2A variant with implications for fertility



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ABSTRACT

Meiosis is a process of cell division in which an organism reproduces sexually by replicating its genetic material followed by two successive cell divisions, resulting in the formation of four haploid products (Foulis, S.J. et al., 2018). In this way, the organization of chromatin plays an important role in the process of cell division, in which the variant of histone H2A, the histone H2A.Z, has been proposed as a possible candidate related to the role of chromatin in meiosis (Shintaro Yamada et al., 2018). The function of this histone variant has been observed in *Saccharomyces cerevisiae*, in which it has been shown that it may have some implication in nuclear movements. Specifically, its relationship with components of the LINC complex has been observed, suggesting that they act as an additional factor associated with this complex, participating in its dynamics and therefore contributing to the chromosomal movement essential for gametogenesis (González-Arranz, S. et al., 2020). In this context, in this study we wanted to develop a more precise methodology that allows us to study the implication of this protein in cell division. To do this, we have used the model organism *Schizosaccharomyces pombe* because the nuclear movements are more drastic than *S. cerevisiae* and therefore it is easier to observe small differences than in wild strains. On the other hand, by fluorescence microscopy (DeltaVision) it is possible to observe these small variations more easily. In this way, we will be able to carry out a more exhaustive study about the participation of the histone H2A.Z and know its implication in chromosomal movement. .

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