MBG FOCUS TALK

Hosted by Tinna Stevnsner



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Maintenance of chromatin structure and genome stability by the SPT2 histone chaperone

Histone chaperones control nucleosome density and chromatin structure, and play essential roles during DNA replication, repair, and transcription. In yeast, the histone H3-H4 chaperone Spt2 regulates histone deposition at active genes, but whether this function is conserved in higher Eukaryotes is not known. During my talk, I will discuss how SPT2 binding to H3-H4 is required to preserve chromatin structure in both the *Caenorhabditis elegans* model organism and in human cells, and I will show that the interaction of SPT2 with histones is essential for organism survival under stress conditions – with implications for genome stability and human health. This work underscores the importance of understanding how chromatin structure is remodelled to allow cells to respond to stress and to preserve the integrity of their genome.

