

Removing histones from chromatin.



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The structure of chromatin has a major impact on the regulation of nuclear processes. Accordingly, more and more epigenetic players that modulate chromatin structure are being shown to be involved in diseases that cannot solely be explained based on the modification of the genetic information. Modulation of chromatin is not only relying on writing, reading and erasing covalent modifications from epigenetic players, notably histones, but is also strongly depending on the replacement of canonical histones by histone variants and on the activity of chromatin remodelers. Yet, little is known in molecular terms on these latter mechanisms. By combining *in vivo*, *in vitro*, structural and genome-wide studies we are studying the exchange of the ancient and ubiquitous histone variant H2A.Z by H2A. We show that this exchange starts by the specific eviction of H2A.Z from nucleosomes. Specifically, definite features of H2A.Z are required for this eviction to occur.