

Abstract

Chromatin structure, gene expression and consequently many important aspects of the plant development are under control of epigenetic regulation. Within epigenetic regulation, histones and their modifications play a pivotal role. The N-terminal tails of histones are dynamically modified by covalent post-translational modifications (PTMs). These modifications are key regulators modulating chromatin structure and thus regulating gene expression. In angiosperms, one of the processes finely regulated at the epigenetic level is the flowering. Flowering represents a very complex process, that is relevant for the study of epigenetic regulation as well as for practical application. In this work, I summarize current knowledge of the role of histone PTMs in the regulation of gene expression in plants, focused predominantly on two key regulators of flowering in *Arabidopsis* – *FLC* and *FT*.