

Plants are constantly exposed to various stressors which usually leads to changes in the expression of many different genes. This can be controlled at multiple levels, including modifications of chromatin structure. Some of these modifications may persist even after the period when the plant is exposed to stress and could possibly act as a kind of "stress memory". This work deals with so-called meiotic/transgeneration "stress memory" of plants caused by abiotic stressors. Compilation of studies dealing with this topic showed that they are still rather rare and usually originated from only a few laboratories. The majority of these studies was aimed only at the examination of DNA methylation and their design was not always optimal. In my opinion, true proofs of transgeneration "stress memory" of plants still remain to be presented; further, more properly designed studies are necessary.