

SEQUENCES AND PROMOTERS FOR USE IN PLANT CELLS AND METHODS OF MAKING AND USING SUCH SEQUENCES

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4. **Abstract:** The present disclosure is directed to a novel sequence constructed from viral elements for use as a transgenic promoter; for example, in transgenic plants. More specifically, the present disclosure is directed to a chimeric transgenic promoter sequence comprising a portion derived from the Figwort Mosaic Virus (FMV/FiMV) genome and a portion derived from the Cassava Vein Mosaic Virus (CsVMV) genome. The present disclosure provides methods and compositions for the making and using such a transgenic promoter.
5. **FIELD OF THE INVENTION:** The present invention relates in general to nucleic acid sequences which may serve as promoters for transgenic expression. More specifically, the invention relates to sequence elements derived from viral promoters and the use of combinations of these sequence elements to express coding sequences or functional RNAs in plants.
6. **BACKGROUND:**
 - a. One of the goals of plant genetic engineering is to produce plants with ergonomically preferable characteristics or traits, and for this aim-enhancing or reducing the expression level of a gene product (or products) or of functional RNAs. Such changes in expression commonly require the use of a non-endogenous promoter.
 - b. Whereas for some plants and crops there is a wide set of promoters available for transgenic use, others, such as *Eucalyptus*, have but a few non-endogenous promoters which are well-characterized to be functional, even for use for constitutive transgenic expression. Thus, constructing promoters for such crops is valuable.
7. **SUMMARY:**
 - a. In one aspect, the present disclosure provides (I) a nucleic acid sequence which comprises (i) a transcriptional regulatory element derived from the sub-genomic transcript (Sgt) promoter of the Figwort Mosaic Virus (FMV, FiMV), which does not include the promoter's TATA portion, and a (ii) transcription regulatory element derived from the genome of Casava Vein Mosaic Virus (CsVMV) promoter which does include a TATA portion, or (II) a nucleic acid sequence that comprises sequences substantially similar to the (i) and (ii) sequences described above.
 - b. In an additional aspect, the present disclosure provides bacteria-clone propagated plasmids which include the nucleic acid sequence described above, and which can function as expression vectors in plant cells.
 - c. The present disclosure also provides a transformed plant cell having in its genome the nucleic acid sequence described above, as well as transgenic plants or seeds including such plant cells.