

Title (en)
GENE EXPRESSION IN PLANTS

Title (de)
GENEXPRESSSION IN PFLANZEN

Title (fr)
EXPRESSION DE GENES DANS LES PLANTES

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Abstract (en)
[origin: WO9749814A1] The present invention provides chimeric genes that comprise a first promoter recognized by a DNA-dependent RNA polymerase different from a eukaryotic RNA polymerase II; a DNA region encoding a chimeric RNA which comprises a 5'UTR, an AU-rich heterologous coding sequence, a 3'UTR; and optionally a terminator sequence recognized by said RNA polymerase, wherein the first promoter and the DNA region encoding the chimeric RNA are operably linked such that upon transcription by the RNA polymerase an uncapped RNA species is produced which comprises a first translation enhancing sequence derived from the 5' region of genomic or subgenomic RNA of a positive stranded RNA plant virus; a heterologous RNA coding sequence encoding a polypeptide or protein of interest, preferably from an AT-rich gene; and a second translation enhancing sequence derived from the 3' region of genomic or subgenomic RNA of a positive-stranded RNA plant virus, wherein the uncapped RNA species is capable of being translated in the cytoplasm of a plant cell to produce the protein or polypeptide. Also provided in the invention are plant cells and plants comprising these chimeric genes, integrated in their nuclear DNA, whereby the plant cell produces the RNA polymerases corresponding to the used promoters and terminators. Further the invention provides a process for producing a plant expressing a protein or polypeptide encoded by a heterologous gene which comprises the steps of transforming the nuclear genome of a plant cell with the above-mentioned chimeric genes; and regenerating a transformed plant from the transformed cell.

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