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- (54) **TRANS-ACTIVATION OF TRANSCRIPTION FROM VIRAL RNA**
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(57) **ABSTRACT**

A method of activating transcription of an RNA of interest in a cell (e.g., a dicot plant cell) includes the steps of: (a) providing a host cell containing a heterologous construct, the heterologous construct comprising an RNA virus subgenomic promoter operatively associated with a heterologous RNA of interest, wherein the promoter does not initiate transcription of the heterologous RNA in the absence of a corresponding RNA virus trans-activating RNA segment, and wherein the RNA virus trans-activating RNA segment is absent from the host cell; and then (b) introducing a trans-activating nucleic acid segment into the host cell so that transcription of the heterologous RNA is initiated. The trans-activating segment may be introduced into the cell by any suitable means, such as by infecting the cell with a virus, which virus expresses the trans-activating RNA.

29 Claims, 6 Drawing Sheets

(1 of 6 Drawing Sheet(s) Filed in Color)