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- [54] **INCREASING EXPRESSION OF TRANSGENES IN PLANT CELLS USING INSULATOR ELEMENTS**
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- [*] Notice: This patent is subject to a terminal disclaimer.
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Related U.S. Application Data

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- [51] **Int. Cl.**⁷ **C12N 15/00**; C12N 15/29; C12N 15/82; A01H 3/00
- [52] **U.S. Cl.** **800/278**; 800/295; 800/298; 435/468; 435/419; 435/320.1; 536/23.6; 536/24.1; 536/23.7
- [58] **Field of Search** 800/295, 298, 800/278; 435/468, 419, 320.1; 536/23.6, 24.1, 23.7

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[57] **ABSTRACT**

A method of making recombinant plant cells having reduced variability of expression of foreign genes therein is described herein. The method comprises (a) providing a plant cell capable of regeneration; and (b) transforming the plant cell with a DNA construct comprising an expression cassette, which construct comprises a transcription initiation region, a structural gene positioned downstream from the transcription initiation region and operatively associated therewith, and an insulator (or “boundary element”) positioned (i) 5' to the transcription initiation region, (ii) 3' to the structural gene, or (iii) both 5' to the transcription initiation region and 3' to the structural gene. DNA constructs useful for carrying out the method and plant cells and plants produced by the method are also disclosed.

41 Claims, 1 Drawing Sheet