

Banana Proteins And Regulatory Elements

BTI-58 and 58PCT (BTI-8001 and BTI-8002)

In re Application of: Gregory May and Stephanie Clendennen
Assignee: Boyce Thompson Institute for Plant Research, Inc.
Patent No.: 6,284,946
Serial No.: 09/160,351
Filed: September 25, 1998
Priority date: September 25, 1997 (Ser. No. 60/060,062)
For: **BANANA PROTEINS, DNA, AND DNA REGULATORY
ELEMENTS ASSOCIATED WITH FRUIT DEVELOPMENT**

Status

Patent issued September 4, 2001.

Related Files or Patent Applications

PCT Application (Ser. No. PCT/US98/03343), filed on September 23, 1998; National Phase entered in Australia, Canada, Europe (regional) and Japan. A continuation-in-part application of U.S. Ser. No. 09/160,351 was filed on June 28, 2001, incorporating new matter pertaining to a promoter obtained from banana, which drives fruit-specific expression in tomato, and further pursuing divisional claims from Group II, drawn to an isolated and purified banana protein differentially expressed in developing fruit, and a composition including the protein.

Summary of Technology

This patent discloses isolated and purified genes, which are differentially expressed during banana fruit development, and the protein products of these genes. The disclosure further provides DNA regulatory elements which are differentially expressed during banana fruit development, chimeric genes comprising these DNA regulatory elements operably linked to heterologous DNA molecules, and plants transformed with the chimeric genes, providing for controlled expression of the heterologous DNA molecules during the development and ripening of the fruit of the plants, or in response to exogenous ethylene signals in the plants.

Claim Coverage

The claims generally are directed to polynucleotides and vectors (pBAN 3-6, and pBAN 3-23), cells, plants and fruits that are modified to include polynucleotides that encode a banana DNA molecule that is differentially expressed during fruit development, banana DNA regulatory elements that drive fruit-specific gene expression.

Interested Parties or Potential Licensees

Licensed but non-exclusive licenses still available in crops other than *Musa sp.*