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**United States Patent** [19]  
**Stuart**

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- [54] **HETEROLOGOUS DIMERIC PROTEINS PRODUCED IN HETEROKARYONS**
- [75] **Inventor:** **W. Dorsey Stuart, Kaneohe, Hi.**
- [73] **Assignee:** **University of Hawaii, Honolulu, Hi.**
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- [52] **U.S. Cl.** ..... **435/69.1; 435/254.3; 435/69.4**
- [58] **Field of Search** ..... **435/69.1, 254.3, 435/69.4, 172.3, 254.11**

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*Primary Examiner*—Mindy Fleisher  
*Assistant Examiner*—James Ketter  
*Attorney, Agent, or Firm*—Morrison & Foerster LLP

[57] **ABSTRACT**

The invention relates to a heterokaryotic filamentous fungus host capable of producing a heterologous heterodimer comprising at least two subunits. The heterokaryon contains a first and second nucleus; each nucleus contains an expression system for one subunit of the heterodimer. The heterokaryon is prepared by culturing together a first fungus host strain and a second fungus host strain that is homozygous with the first fungus host strain with respect to all heterokaryon compatibility alleles, wherein the first and second fungus host strains are cultured together under conditions wherein neither the first nor the second fungus strain can survive unless the heterokaryotic host is formed.

**15 Claims, 4 Drawing Sheets**