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(12) **United States Patent**
Contreras et al.(10) **Patent No.:** US 7,491,510 B2
(45) **Date of Patent:** Feb. 17, 2009(54) **PROTEIN SECRETION IN EUKARYOTIC CELLS**

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(30) **Foreign Application Priority Data**

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(51) **Int. Cl.***C12P 21/02* (2006.01)(52) **U.S. Cl.** **435/69.1; 435/254.21; 435/254.3;**
435/254.5; 435/254.7; 435/254.8; 435/254.9(58) **Field of Classification Search** None
See application file for complete search history.(56) **References Cited**

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Primary Examiner—James S Ketter*(74) Attorney, Agent, or Firm*—TraskBritt(57) **ABSTRACT**

The present invention relates to the use of a glucosidase II mutation to increase protein secretion in eukaryotic cells. The present invention relates further to the use of eukaryotic cells, comprising a mutant glucosidase II gene, possibly in combination with the expression of a recombinant α -1,2-mannosidase gene and/or a recombinant N-acetylglucosaminyl-transferase gene, as a host for protein secretion.

4 Claims, 20 Drawing Sheets
(2 of 20 Drawing Sheet(s) Filed in Color)