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(54) Title: CHONDROITINASE I AND CHONDROITINASE II PRODUCING MUTANTS OF P. VULGARIS

(57) Abstract

Mutant *Proteus vulgaris* strains are provided that, when grown in the absence of an exogenous chondroitinase I and II inducer, produce *P. vulgaris* chondroitinase I and chondroitinase II proteins. The mutants typically produce chondroitinase I and II proteins in the absence of exogenous inducers and in amounts in excess of those produced by wild-type *P. vulgaris* strains induced with such inducers. Two classes of such mutants, Classes 1 and 2, are disclosed. Class 1 and class 2 mutants differ in the relative amounts of chondroitinases I and II produced when cells are grown in casamino acids - supplemented minimal medium. Additional phenotypic variants that release chondroitinase I protein into the culture medium are provided as well. Also contemplated is a method for producing *P. vulgaris* chondroitinase I and II proteins. The mutant cells described above are cultured in the absence of a conventional exogenous chondroitinase I and II inducer, after which the cells are harvested and chondroitinase I and II are recovered from the harvested cells. A method for *in situ* detection of chondroitinase I and II production by bacterial colonies is also provided.