25 November 2002

PCT WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 :
C12N 15/31, 15/53, 15/55, 15/60, C12P 17/18, C12N 9/04, 9/16, 9/88, 1/21, C07K 14/24 // (C12N 1/21, C12R 1:19)

A2

(11) International Publication Number: WO 99/58686

(43) International Publication Date: 18 November 1999 (18.11.99)

(21) International Application Number: PCT/US99/10356

(22) International Filing Date: 12 May 1999 (12.05 99)

(30) Priority Data:
60/085,190 12 May 1998 (12 05.98) US

(71) Applicants *(for all designated States except US)*: E.I. DU PONT DE NEMOURS AND COMPANY [US/US]; 1007 Market Street, Wilmington, DE 19898 (US). GENENCOR INTERNATIONAL, INC. [US/US], 925 Page Mill Road, Palo Alto, CA 94304-1013 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: WHITED, Gregory, M. [US/US], 304 South Road, Belmont, CA 94002 (US). BULTHUIS, Ben [NL/NL], Einsteinweg 101, Postbus 251, NL-2300 AG Leiden (NL). TRIMBUR, Donald, E. [US/US], 349 Orchard Avenue, Redwood City, CA 94601 (US). GATENBY, Anthony, A. [US/US], 2309 Baynard Boulevard, Wilmington, DE 19802 (US)

(74) Agent: FLOYD, Linda, Axamethy; E I. du Pont de Nemours and Company, Legal Patent Records Center, 1007 Market Street, Wilmington, DE 19898 (US)

(81) Designated States: AU, BR, CA, CN, ID, IL, JP, KR, MX, SG, US, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).

Published
Without international search report and to be republished upon receipt of that report.

(54) Title: METHOD FOR THE PRODUCTION OF 1,3-PROPANEDIOL BY RECOMBINANT ORGANISMS COMPRISING GENES FOR VITAMIN B12 TRANSPORT

(57) Abstract

Recombinant organisms are provided comprising genes encoding genes encoding glycerol dehydratase, 1,3-propanediol oxidoreductase, a gene encoding vitamin B_{12} receptor precursor (BtuB), a gene encoding vitamin B_{12} transport system permease protein (BtuC) and a gene encoding vitamin B_{12} transport ATP-binding protein (BtuD). The recombinant microorganism is contacted with a carbon substrate and 1,3-propanediol is isolated from the growth media.

162162

G00002