PCT WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 7 :
C12N 15/12, 15/54, 13/00, 11/02, 9/12, C07K 14/215, 17/02, C12P 19/34

A1

(11) International Publication Number: **WO 00/60072**

(43) International Publication Date: 12 October 2000 (12.10.00)

(21) International Application Number: PCT/GB00/01289

(22) International Filing Date: 6 April 2000 (06.04.00)

(30) Priority Data:
9907813.1 6 April 1999 (06.04.99) GB

(71) Applicant *(for all designated States except US)*: MEDICAL BIOSYSTEMS LTD. [GB/GB]; The Old Mill, Beaston Cross, Broadhempston, Nr. Totnes, Devon TQ9 6BX (GB).

(72) Inventor; and
(75) Inventor/Applicant *(for US only)*: DENSHAM, Daniel, Henry [GB/GB]; The Old Mill, Beaston Cross, Broadhempston, Nr. Totnes, Devon TQ9 6BX (GB).

(74) Agent: GILL JENNINGS & EVERY; Broadgate House, 7 Eldon Street, London EC2M 7LH (GB).

(81) Designated States: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published
With international search report.
Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.



G00001

(54) Title: POLYNUCLEOTIDE SYNTHESIS USING A PROCESSING ENZYME

(57) Abstract

A method for polynucleotide synthesis, comprises the steps of: (i) reacting a polynucleotide processive enzyme, e.g. a polymerase or TdT, with a nucleotide substrate under conditions suitable for enzyme activity; and (ii) modulating the conformation of the enzyme, e.g. using radiation, to allow incorporation of a predetermined nucleotide.



162162