(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
12 May 2011 (12.05.2011)

PCT

(10) International Publication Number
WO 2011/057119 A1

(51) **International Patent Classification**:
C12Q 1/68 (2006.01)

(21) **International Application Number**:
PCT/US2010/055701

(22) **International Filing Date**:
5 November 2010 (05.11.2010)

(25) **Filing Language**: English

(26) **Publication Language**: English

(30) **Priority Data**:
61/258,684 6 November 2009 (06.11.2009) US

(71) **Applicant** *(for all designated States except US)*: **ENZYMATICS, INC.** [US/US]; 100 Cummings Center, Suite 336b, Beverly, MA 01915 (US).

(72) **Inventors; and**
(75) **Inventors/Applicants** *(for US only)*: **PICONE, Stephen** [US/US]; 8 Princeton Avenue, Beverly, MA 01915 (US). **BENOIT, Christopher** [US/US]; 400 Essex Street, South Hamilton, MA 01982 (US). **KOLEVA, Bilyana** [US/US]; 32 Fleet Street, Apt 4, Boston, MA 02113 (US).

(74) **Agent**: **GIUGLIANO, Antoinette, G.**; Antoinette G. Giugliano, P.C., DBA AGG Intelllectual Property, Suite 213C, 100 Cummings Center, Beverly, MA 01915 (US).

(81) **Designated States** *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) **Designated States** *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report (Art. 21(3))*

— *with sequence listing part of description (Rule 5.2(a))*

WO 2011/057119 A1

(54) **Title**: COMPOSITION AND METHOD FOR SYNTHESIZING A DEOXYRIBONUCLEOTIDE CHAIN USING A DOUBLE STRANDED NUCLEIC ACID COMPLEX WITH A THERMOSTABLE POLYMERASE

(57) **Abstract**: The present invention relates to the field of molecular biology, and more particular, to a nucleic acid construct for use in amplification processes. More precisely, the invention enhances the specificity of amplification of nucleic acids by means of a double stranded oligonucleotide modified with a molecule having the ability to prevent extension of the double stranded nucleic acid.