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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
22 March 2001 (22.03.2001)

PCT

(10) International Publication Number
WO 01/19385 A2

(51) International Patent Classification[7]: A61K 38/00

(21) International Application Number: PCT/US00/25093

(22) International Filing Date:
14 September 2000 (14.09.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09/395,636 14 September 1999 (14.09.1999) US

(71) Applicant *(for all designated States except US)*: NEW HORIZONS DIAGNOSTICS CORPORATION [US/US]; 9110 Red Branch Road, Columbia, MD 21045-2014 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: FISCHETTI, Vincent [US/US]; 448 Joan Court, West Hempstead, NY 11552 (US). LOOMIS, Lawrence [US/US]; 113374 Buckelberry Path, Columbia, MD 21044 (US).

(74) Agent: SANDERCOCK, G., Colin; Foley & Lardner, 3000 K Street, N.W., Suite 500, Washington, DC 20007-5109 (US).

(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, 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, MZ, 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.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, 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:

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

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 01/19385 A2

(54) Title: THE USE OF BACTERIAL PHAGE ASSOCIATED LYSING ENZYMES FOR THE PROPHYLACTIC AND THERAPEUTIC TREATMENT OF VARIOUS ILLNESSES

(57) Abstract: A method for the prophylactic and therapeutic treatment of bacterial infections is disclosed which comprises the treatment of an individual with an effective amount of a modified version of a lytic enzyme produced by a bacteria infected with a bacteriophage specific for said bacteria wherein said modified version of said at least one lytic enzyme is selected from the group consisting of shuffled lytic enzymes, chimeric lytic enzymes, wherein the lytic enzyme is in an environment having a pH which allows for activity of said lytic enzyme; and a carrier for delivering said lytic enzyme. Additionally, a holin enzyme for puncturing the membrane may be included in the composition. This method, and composition can be used for the treatment of upper respiratory infections, skin infections, wounds, and burns, vaginal infections, eye infections, intestinal disorders and dental problems.