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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
29 July 2004 (29.07.2004)

PCT

(10) International Publication Number
WO 2004/062487 A2

(51) International Patent Classification[7]: A61B

(21) International Application Number:
PCT/US2004/000755

(22) International Filing Date: 13 January 2004 (13.01.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/439,771 13 January 2003 (13.01.2003) US

(71) Applicant *(for all designated States except US)*: **EMORY UNIVERSITY** [US/US]; 1380 South Oxford Road, N.E., Atlanta, GA 30322 (US).

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: **YANG, Lily** [—/US] (US). **BAO, Gang** [—/US] (US). **STALEY, Charles** [—/US] (US). **COHEN, Cynthia** [—/US] (US).

(74) Agent: **XIA, Tim, Tingkang**; Morris, Manning & Martin, L.L.P., 1600 Atlanta Financial Center, 3343 Peachtree Road, N.E., Atlanta, GA 30326 (US).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, 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, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, 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.

(54) Title: METHODS OF DETECTING GENE EXPRESSION IN NORMAL AND CANCEROUS CELLS

(57) Abstract: The present invention provides methods for detecting gene expression in normal and cancerous cells. Specifically, provided are methods utilizing molecular beacons (MB) technology combined with fluorescence imaging techniques for detecting, identifying or quantitating the presence of, or alterations in gene expression of, various tumor markers in a sample of cells.

WO 2004/062487 A2