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

(19) World Intellectual Property Organization
International Bureau

G00002

(43) International Publication Date
25 July 2002 (25.07.2002)

PCT

(10) International Publication Number
WO 02/057423 A2

(51) International Patent Classification[7]: C12N

(21) International Application Number: PCT/US02/01208

(22) International Filing Date: 16 January 2002 (16.01.2002)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/261,999 16 January 2001 (16.01.2001) US

(71) Applicant *(for all designated States except US)*: **REGENERON PHARMACEUTICALS, INC.** [US/US]; 777 Old Saw Mill River Road, Tarrytown, NY 10591-6707 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **FANDL, James, P.** [US/US]; 11 O'Hare Drive, LaGrangeville, NY 12540 (US). **STAHL, Neil** [US/US]; RD #10, Kent Shore Drive, Carmel, NY 10512 (US). **CHEN, Gang** [CN/US]; 2478 Mill Pond Road, Yorktown Heights, NY 10598 (US). **YANCOPOULOS, George, D.** [US/US]; 1519 Baptist Church Road, Yorktown Heights, NY 10598 (US).

(74) Agents: **FISCHER, Laura, J.** et al.; Regeneron Pharmaceuticals, Inc., 777 Old Saw Mill River Road, Tarrytown, NY 10591 (US).

(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, 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, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, 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, TR), OAPI patent (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.

162162

WO 02/057423 A2

(54) Title: ISOLATING CELLS EXPRESSING SECRETED PROTEINS

(57) Abstract: A method for identifying and isolating cells which produce secreted proteins. This method is based upon a specific characteristic or the expression level of the secreted protein by transiently capturing the secreted protein on the surface of an individual cell, allowing selection of rare cell clones from heterogeneous population. Also provided is the use of this method to generate cells which produce a desired level of secreted protein or secreted protein of a particular characteristic(s), and organisms which possess such cells. In particular, the method allows rapid isolation of high expression recombinant antibody-producing cell lines, or may be applied directly to rapid isolation of specific hybridomas, or to the isolation of antibody-producing transgenic animals. This method is applicable for any cell which secretes protein.