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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
6 October 2005 (06.10.2005)

PCT

(10) International Publication Number
WO 2005/092073 A3

(51) International Patent Classification:
A61K 39/00 (2006.01) *A61K 38/00* (2006.01)
A61K 39/395 (2006.01) *C07K 16/00* (2006.01)
A61K 49/00 (2006.01)

(21) International Application Number:
PCT/US2005/009939

(22) International Filing Date: 24 March 2005 (24.03.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/556,421	24 March 2004 (24.03.2004)	US
60/556,422	24 March 2004 (24.03.2004)	US
60/625,049	3 November 2004 (03.11.2004)	US
60/651,098	7 February 2005 (07.02.2005)	US
60/657,514	28 February 2005 (28.02.2005)	US

(71) Applicant *(for all designated States except US)*: **PROTEIN DESIGN LABS, INC.** [US/US]; 34801 Campus Drive, Fremont, California 94555 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **RAMAKRISHNAN, Vanitha** [US/US]; 825 Holly Road, Belmont, California 94002 (US). **BHASKAR, Vinay** [US/US]; 534 Clipper Street, San Francisco, California 94114 (US). **HO, Sun** [CN/US]; 208 Black Mountain Circle, Fremont, California 94536 (US). **MURRAY, Richard** [US/US]; 22643 Woodridge Court, Cupertino, California 95014 (US). **LAW, Debbie** [GB/US]; 822 Pacheco Street, San Francisco, California 94080 (US).

(74) Agent: **WHITING, Adam**; Howrey Simon Arnold & White, LLP, 2941 Fairview Park Drive, Box 7, Falls Church, Virginia 22042 (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, SM, 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, NA, 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, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, 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 receipt of amendments*

(88) Date of publication of the international search report:
10 August 2006

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: USE OF ANTI-ALPHA5BETA1 ANTIBODIES TO INHIBIT CANCER CELL PROLIFERATION

(57) Abstract: The present invention provides methods for direct killing of cancer cells using anti-α5β1 antibodies. Generally, the method comprises contacting a cancer cell that expresses α5β1 on its surface with an anti-α5β1 antibody, and thereby inducing the death of the cancer cell. The methods of the invention may be employed at an early stage of cancer development in a patient to prevent tumor establishment. In addition, the methods may be used to treat previously formed tumors especially in cancer that have not proven susceptible to anti-angiogenesis therapy. The methods may be employed as a combination therapy of anti-α5β1 antibodies together with cancer chemotherapeutic agents or other molecular-based cancer therapeutic agents.

WO 2005/092073 A3