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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
25 September 2008 (25.09.2008)

PCT

(10) International Publication Number
WO 2008/116103 A3

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

(21) International Application Number:
PCT/US2008/057718

(22) International Filing Date: 20 March 2008 (20.03.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/919,744 22 March 2007 (22.03.2007) US

(71) Applicant *(for all designated States except US)*: **IMCLONE SYSTEMS INCORPORATED** [US/US]; 180 Varick Street, New York, NY 10014 (US).

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: **SRIVASTAVA, Arvind** [IN/US]; 2211 William Circle, Stewartsville, NJ 08886 (US). **GOLDSTEIN, Joel** [US/US]; 9 Morningside Court, Flemington, NJ 08822 (US).

(74) Agents: **KAMAGE, Andrea, J.** et al.; Lerner, David, Littenberg, Krumholz & Mentlik, LLP, 600 South Avenue West, Westfield, NJ 07090-1497 (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, 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, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, 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, 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, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:
— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

Published:
— *with international search report*
— *with sequence listing part of description published separately in electronic form and available upon request from the International Bureau*

(88) Date of publication of the international search report:
8 January 2009

(54) Title: STABLE ANTIBODY FORMULATIONS

(57) Abstract: The present invention provides formulations and methods for the stabilization of antibodies. In one embodiment, the invention provides the stable solution formulation of an IgG1 antibody that specifically binds to insulin-like growth factor-I receptor. In another embodiment, the invention provides methods of stabilization of IgG1 antibody that specifically binds to insulin-like growth factor-I receptor comprising lyophilizing an aqueous formulation of the antibody. The formulations can be lyophilized to stabilize the antibodies during processing and storage, and then the formulations can be reconstituted for pharmaceutical administration.

WO 2008/116103 A3