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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
23 August 2012 (23.08.2012)

WIPO | PCT

(10) International Publication Number
WO 2012/110878 A3

(51) International Patent Classification:
G01N 33/574 (2006.01) *C07K 14/715* (2006.01)
G01N 33/68 (2006.01) *C07K 19/00* (2006.01)

(21) International Application Number:
PCT/IB2012/000259

(22) International Filing Date:
10 February 2012 (10.02.2012)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10-2011-0012983
14 February 2011 (14.02.2011) KR

(71) Applicant *(for all designated States except US)*: **ATGEN CO. LTD.** [KR/KR]; ATGen, Institut Pasteur Korea 2F, Sampyeong-dong 696 Bundang-gu, Seongnam-si Gyeonggi-do, 463-400 (KR).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **LEE, Jae Myun** [KR/KR]; 104-1902, Kolong Apt., Ichon 1-dong, Yongsan-gu, Seoul, 140-744 (KR). **YOON, Joo Chun** [KR/KR]; 112-2003, ParkRio Apt., 17, Sincheon-dong, Songpa-gu, Seoul, 138-240 (KR). **PARK, Sang Woo** [KR/KR]; 1003, Shindong-a RojanView Apt., 1-1, Seokchon-Dong, Songpa-gu, Seoul, 138-842 (KR). **KIM, Jong Sun** [KR/KR]; 123-1206, Mokdong Apt., Mok6-dong, Yangcheon-gu, Seoul, 158-050 (KR).

(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, CL, 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, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, 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, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

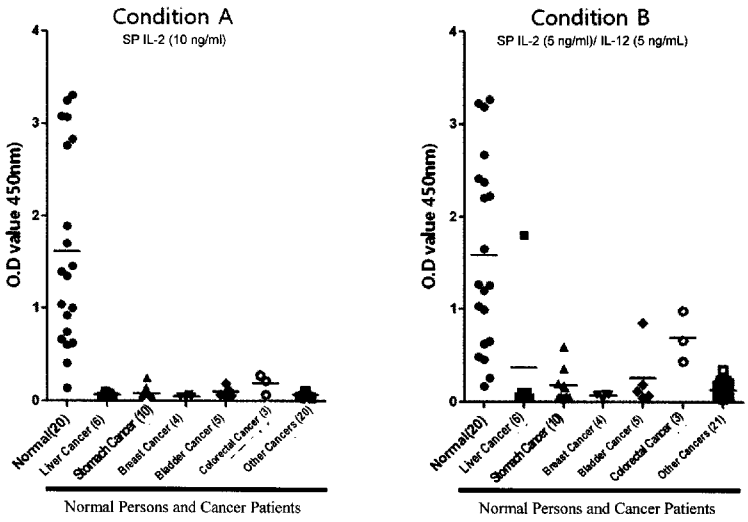
— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

Published:

— *with international search report (Art. 21(3))*

[Continued on next page]

(54) **Title**: METHOD OF DIAGNOSING CANCER AND DIAGNOSIS KIT USING MEASUREMENT OF NK CELL ACTIVITY



(57) **Abstract**: Provided are a method for diagnosing cancer, a diagnosis kit and compositions useful for measurement of NK cell activity. The incidence of cancer may be diagnosed by monitoring changes in the in vivo immune system through measurement of NK cell activity in blood. Thus, the incidence of cancer may be readily predicted as described herein using a blood sample from a subject.

WO 2012/110878 A3

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

— *with sequence listing part of description (Rule 5.2(a))*

(88) Date of publication of the international search report:
31 January 2013