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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
14 May 2010 (14.05.2010)

PCT

(10) International Publication Number
WO 2010/052014 A1

(51) **International Patent Classification**:
C07K 16/28 (2006.01) *C07K 16/46* (2006.01)

(21) **International Application Number**:
PCT/EP2009/007970

(22) **International Filing Date**:
6 November 2009 (06.11.2009)

(25) **Filing Language**: English

(26) **Publication Language**: English

(30) **Priority Data**:
61/112,323 7 November 2008 (07.11.2008) US
61/183,291 2 June 2009 (02.06.2009) US

(71) **Applicant** *(for all designated States except US)*: **MICROMET AG** [DE/DE]; Staffelseestr. 2, 81477 Munich (DE).

(72) **Inventors; and**
(75) **Inventors/Applicants** *(for US only)*: **ZUGMAIER, Gerhard** [DE/DE]; Bavariastrasse 9a, 80336 Muenchen (DE). **DEGENHARD, Evelyn** [AT/DE]; Lenzfriederstr. 14, 80637 München (DE).

(74) **Agent**: **Vossius & Partner**; Siebertstraße 4, 81675 München (DE).

(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, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, 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, MK, MT, NL, NO, PL, PT, RO, 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 the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

— *of inventorship (Rule 4.17(iv))*

Published:

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

— *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))*

WO 2010/052014 A1

(54) **Title**: TREATMENT OF ACUTE LYMPHOBLASTIC LEUKEMIA

(57) **Abstract**: The present invention relates to a method for the treatment, amelioration or elimination of acute lymphoblastic leukemia (ALL), the method comprising the administration of a pharmaceutical composition comprising a CD19xCD3 bispecific single chain antibody construct to an adult patient in the need thereof.