2000489-2
(not only)

PCT WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 :
C12N 5/10, 15/62, 15/85, C07K 16/46, 19/00, A61K 39/395, 48/00, G01N 33/577 // C07K 16/28

A1

(11) International Publication Number: **WO 99/54440**

(43) International Publication Date: 28 October 1999 (28.10.99)

(21) International Application Number: PCT/EP99/02693

(22) International Filing Date: 21 April 1999 (21.04.99)

(30) Priority Data:
98107269.7 21 April 1998 (21.04.98) EP

(71) Applicants *(for all designated States except US)*: DÖRKEN, Bernd [DE/DE]; Lyckallee 47, D–14055 Berlin (DE). RIETHMÜLLER, Gert [DE/DE]; Finauer Strasse 12, D–80805 München (DE).

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: KUFER, Peter [DE/DE]; Am Kapellenacker 13, D–85368 Moosburg (DE). LUTTERBÜSE, Ralf [DE/DE]; Fraunhoferstrasse 29, D–80469 München (DE). BARGOU, Ralf [DE/DE]; Antwerpener–Strasse 38, D–13353 Berlin (DE). LÖFFLER, Anja [DE/DE]; Schulstrasse 21, D–16244 Finowfurt/Eichhorst (DE).

(74) Agent: VOSSIUS & PARTNER; Siebertstrasse 4, D–81675 München (DE).

(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, 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, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, 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), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, 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 the receipt of amendments.

(54) Title: CD19xCD3 SPECIFIC POLYPEPTIDES AND USES THEREOF

(57) Abstract

Described are novel single–chain multifunctional polypeptides comprising at least two binding sites specific for the CD19 and CD3 antigen, respectively. Further provided are polypeptides, wherein the above–described polypeptide comprises at least one further domain, preferably of pre–determined function. Furthermore, polynucleotides encoding said polypeptides as well as to vectors comprising said polynucleotides and host cells transformed therewith and their use in the production of said polypeptides are described. In addition, compositions, preferably pharmaceutical and diagnostic compositions are provided comprising any of the afore–described polypeptides, polynucleotides or vectors. Described is also the use of the afore–mentioned polypeptides, polynucleotides and vectors for the preparation of pharmaceutical compositions for immunotherapy, preferably against B–cell malignancies such as non–Hodgkin lymphoma.