

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

(19) World Intellectual Property
Organization
International Bureau



(10) International Publication Number
WO 2022/214499 A2

(43) International Publication Date
13 October 2022 (13.10.2022)

(51) International Patent Classification:

C07K 16/28 (2006.01) *C07K 14/725* (2006.01)
A61K 39/00 (2006.01) *G01N 33/53* (2006.01)
A61P 35/00 (2006.01)

Published:

- without international search report and to be republished upon receipt of that report (Rule 48.2(g))
- with sequence listing part of description (Rule 5.2(a))

(21) International Application Number:

PCT/EP2022/059031

(22) International Filing Date:

05 April 2022 (05.04.2022)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/170,976 05 April 2021 (05.04.2021) US

(71) Applicant: **ALTHEIA SCIENCE S.R.L.** [IT/IT]; Via Enrico Besana No. 7, 20122 Milan (IT).

(72) Inventors: **PIGAZZI, Martina**; Università Degli Studi di Padova, Via 8 Febbraio 1848 no. 2, 35122 Padova (IT).
BIFFI, Alessandra; Università Degli Studi di Padova, Via 8 Febbraio 1848 no. 2, 35122 Padova (IT).

(74) Agent: **MEWBURN ELLIS LLP**; Aurora Building, Counterslip, Bristol Avon BS1 6BX (GB).

(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, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, 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, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, 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, KM, ML, MR, NE, SN, TD, TG).

(54) Title: DIAGNOSIS AND TREATMENT OF MYELOID DISORDERS AND ACUTE LEUKEMIAS USING NOVEL TUMOR SPECIFIC ANTIGENSCROSS-REFERENCE TO RELATED APPLICATIONS

(57) Abstract: The present disclosure relates to a method of diagnosing or treating myeloid disorders and acute leukemias by using a tumor specific antigen selected from CD63, CD151, CD72, CD84, CD69, and CD109. Further provided are an antigen binding protein (ABP), an ABP-drug conjugate, and a CAR targeting the tumor specific antigen, and methods for their use.



WO 2022/214499 A2