

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
06 May 2021 (06.05.2021)



(10) International Publication Number
WO 2021/087368 A2

(51) International Patent Classification:
C07K 16/30 (2006.01)

(21) International Application Number:
PCT/US2020/058373

(22) International Filing Date:
30 October 2020 (30.10.2020)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
62/929,137 01 November 2019 (01.11.2019) US
62/929,194 01 November 2019 (01.11.2019) US
62/929,207 01 November 2019 (01.11.2019) US
62/929,283 01 November 2019 (01.11.2019) US
62/929,288 01 November 2019 (01.11.2019) US
62/929,347 01 November 2019 (01.11.2019) US
62/929,601 01 November 2019 (01.11.2019) US
62/940,742 26 November 2019 (26.11.2019) US
62/978,147 18 February 2020 (18.02.2020) US
63/015,348 24 April 2020 (24.04.2020) US
63/046,046 30 June 2020 (30.06.2020) US
63/046,164 30 June 2020 (30.06.2020) US
63/084,903 29 September 2020 (29.09.2020) US

(71) Applicant: **MAGENTA THERAPEUTICS, INC.**
[US/US]; 100 Technology Square, 5th Floor, Cambridge,
Massachusetts 02139 (US).

(72) Inventors: **BOITANO, Anthony**; 27 Evelyn Road, New-
ton, Massachusetts 02468 (US). **COOKE, Michael**; 1387
Washington St., Unit 202, Boston, Massachusetts 02118
(US). **MCDONAGH, Charlotte**; 27 Fells Road, Win-
chester, Massachusetts 01890 (US). **PALCHAUDHURI,**
Rahul; 46 Springfield Street, Apt. 2, Somerville, Massa-
chusetts 02143 (US). **PANWAR, Rajiv**; 11 Adeline Way,
Acton, Massachusetts 01720 (US). **PEARSE, Bradley R.**;
18 Priest Road, Watertown, Massachusetts 02472 (US).
WIDBOOM, Paul Fredrick; 3 Ledge Road, Hanover,
New Hampshire 03755 (US). **CRUITE, Patricia Ann**; 197
Ashcroft Rd, Medford, Massachusetts 02155 (US).

(74) Agent: **ERICKSON, Briana M.** et al.; Womble Bond
Dickinson (US) LLP, Independence Wharf, 470 Atlantic
Avenue, Suite 600, Boston, Massachusetts 02210 (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, 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, 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).

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:

- *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))*

(54) Title: ANTI-CD45 ANTIBODIES AND CONJUGATES THEREOF

(57) Abstract: Disclosed are anti-CD45 antibodies, antigen binding fragments thereof, and antibody drug conjugates (ADCs) that specif-
ically bind to human CD45. Such antibodies and ADCs are useful in therapeutic methods, including methods of depleting CD45+ cells
from a patient. The compositions and methods described herein can be used to treat a disorder directly, for instance, by depleting a
population of CD45+ cancer cells or autoimmune cells. The compositions and methods described herein can also be used to prepare
a patient for hematopoietic stem cell transplant therapy, and to improve the engraftment of hematopoietic stem cell transplants, by
selectively depleting endogenous CD45+ cells prior to the transplant procedure.

WO 2021/087368 A2