

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
08 June 2023 (08.06.2023)



(10) International Publication Number
WO 2023/099683 A1

(51) International Patent Classification:

A61K 39/00 (2006.01) *G01N 33/68* (2006.01)
A61K 39/395 (2006.01) *C07K 16/28* (2006.01)
G01N 33/574 (2006.01) *C07K 16/30* (2006.01)

(21) International Application Number:

PCT/EP2022/084107

(22) International Filing Date:

01 December 2022 (01.12.2022)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

21306692.1 02 December 2021 (02.12.2021) EP
63/385,375 29 November 2022 (29.11.2022) US

(71) Applicant: **SANOFI** [FR/FR]; 46 avenue de la Grande Armée, 75017 PARIS (FR).

(72) Inventors: **CHADJAA, Mustapha**; c/o Sanofi, Patent Department, 46 avenue de la Grande Armée, 75017 PARIS (FR). **BAUCHET, Anne-Laure**; c/o Sanofi, Patent Department, 46 avenue de la Grande Armée, 75017 PARIS (FR). **COMBEAU, Céline**; c/o Sanofi, Patent Department, 46 avenue de la Grande Armée, 75017 PARIS (FR). **HENRY, Christophe**; c/o Sanofi, Patent Department, 46 avenue de la Grande Armée, 75017 PARIS (FR). **DEMERS, Brigitte**; c/o Sanofi, Patent Department, 46 avenue de la Grande Armée, 75017 PARIS (FR). **BENSFIA, Samira**; c/o Sanofi, Patent Department, 450 Water Street, Cambridge, Massachusetts 02141 (US).

(74) Agent: **CABINET NONY**; 11 rue Saint-Georges, 75009 PARIS (FR).

(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, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, 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, CV,

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, ME, 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).

Published:

- with international search report (Art. 21(3))
- with sequence listing part of description (Rule 5.2(a))
- in black and white; the international application as filed contained color or greyscale and is available for download from PATENTSCOPE

WO 2023/099683 A1

(54) Title: CEA ASSAY FOR PATIENT SELECTION IN CANCER THERAPY

(57) Abstract: Provided are methods for identifying and treating patients with cancer, where the cancer expresses CEACAM5. The methods include measuring circulating CEA to identify patients likely to benefit from treatment with an agent specific for CEACAM5. Such patients can have high circulating CEA and only low or medium expression of CEACAM5 on tumor cells as measured by immunohistochemistry (IHC). The agent specific for CEACAM5 can be tusamitamab ravtansine. Such agent can be used in combination with one or more additional agents to treat the cancer. In certain embodiments the cancer is non-squamous non-small cell lung cancer (NSQ NSCLC).