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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
03 September 2020 (03.09.2020)

WIPO | PCT

(10) International Publication Number
WO 2020/176789 A1

(51) International Patent Classification:
C12N 5/078 (2010.01) *A61K 35/17* (2015.01)
C12N 15/87 (2006.01)

(21) International Application Number:
PCT/US2020/020194

(22) International Filing Date:
27 February 2020 (27.02.2020)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

62/812,225	28 February 2019 (28.02.2019)	US
19161964.2	11 March 2019 (11.03.2019)	EP
62/841,089	30 April 2019 (30.04.2019)	US
62/886,799	14 August 2019 (14.08.2019)	US
62/933,304	08 November 2019 (08.11.2019)	US
62/948,732	16 December 2019 (16.12.2019)	US

(71) Applicant: **SQZ BIOTECHNOLOGIES COMPANY** [US/US]; 200 Arsenal Yards Boulevard, Suite 215, Watertown, Massachusetts 02472 (US).

(72) Inventors: **SHAREI, Armon R.**; c/o SQZ Biotechnologies Company, 200 Arsenal Yards Boulevard, Suite 215, Watertown, Massachusetts 02472 (US). **BERNSTEIN, Howard**; c/o SQZ Biotechnologies Company, 200 Arsenal Yards Boulevard, Suite 215, Watertown, Massachusetts 02472 (US). **LOUGHHEAD, Scott**; c/o SQZ Biotechnologies Company, 200 Arsenal Yards Boulevard, Suite 215, Watertown, Massachusetts 02472 (US). **BOOTY, Matthew**; c/o SQZ Biotechnologies Company, 200 Arsenal Yards Boulevard, Suite 215, Watertown, Massachusetts 02472 (US). **BLAGOVIC, Katarina**; c/o SQZ Biotechnologies Company, 200 Arsenal Yards Boulevard, Suite 215, Watertown, Massachusetts 02472 (US). **HLAVATY, Kelan**; c/o SQZ Biotechnologies Company, 200 Arsenal Yards Boulevard, Suite 215, Watertown, Massachusetts 02472 (US). **YARAR, Defne**; c/o SQZ Biotechnologies Company, 200 Arsenal Yards Boulevard, Suite 215, Watertown, Massachusetts 02472 (US). **OZAY, Emrah Ilker**; c/o SQZ Biotechnologies Company, 200 Arsenal Yards Boulevard, Suite 215, Watertown, Massachusetts 02472 (US). **SMITH, Carolyne Kelly**; c/o SQZ Biotechnologies Company, 200 Arsenal Yards Boulevard, Suite 215, Watertown, Massachusetts 02472 (US).

(74) Agent: **DONAHUE, Brian** et al.; Morrison & Foerster LLP, 755 Page Mill Road, Palo Alto, California 94304-1018 (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, 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).

Published:
— *with international search report (Art. 21(3))*
— *with sequence listing part of description (Rule 5.2(a))*

WO 2020/176789 A1

(54) Title: DELIVERY OF BIOMOLECULES TO PBMCS TO MODIFY AN IMMUNE RESPONSE

(57) Abstract: The present application provides peripheral blood mononuclear cells comprising an antigen, methods of manufacturing such PBMCs, and methods of using such PBMCs, such as for modulating an immune response in an individual. In some embodiments, the PBMCs are conditioned by incubating the PBMC in the presence of an adjuvant.