

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
26 March 2020 (26.03.2020)



(10) International Publication Number
WO 2020/061499 A1

(51) International Patent Classification:

C12N 5/0783 (2010.01) C07K 16/30 (2006.01)
A61K 35/17 (2015.01)

(21) International Application Number:

PCT/US2019/052228

(22) International Filing Date:

20 September 2019 (20.09.2019)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

62/734,924 21 September 2018 (21.09.2018) US
62/893,712 29 August 2019 (29.08.2019) US

(71) Applicant: **BERKELEY LIGHTS, INC.** [US/US]: 5858
Horton Street, Suite 320, Emeryville, CA 94608 (US).

(72) Inventors: **BEEMILLER, Peter, J.**: 5858 Horton Street,
Suite 320, Emeryville, CA 94608 (US). **MASTROIANNI,
Alexander, J.**: 5858 Horton Street, Suite 320, Emeryville,
CA 94608 (US). **LOWE, Randall, D.**: 5858 Horton Street,
Suite 320, Emeryville, CA 94608 (US). **BRONEVETSKY,
Yelena**: 5858 Horton Street, Suite 320, Emeryville, CA
94608 (US).

(74) Agent: **RADEL, Peggy, A.** et al.; Shay Glenn LLP, 2755
Campus Drive, Suite 210, San Mateo, CA 94403 (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, SM, ST, SV, SY, TH, TJ, TM, TN,
TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

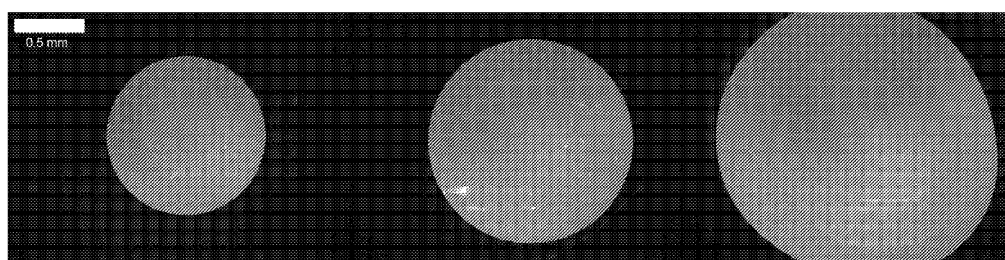
(84) Designated States (*unless otherwise indicated, for every
kind of regional protection available*): ARIPO (BW, GH,
GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ,
UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ,
TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HR, 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))
- before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments (Rule 48.2(h))

(54) Title: FUNCTIONALIZED WELL PLATE, METHODS OF PREPARATION AND USE THEREOF

FIG. 6A



193

195

197

(57) Abstract: In biosciences and related fields, it can be useful to modify surfaces of apparatuses, devices, and materials that contact biomaterials such as biomolecules and biological micro-objects. Described herein are surface modifying and surface functionalizing reagents, preparation thereof, and methods for modifying surfaces of wells within a well plate to activate lymphocytes, including but not limited to T lymphocytes, in a controllable and reproducible manner.

WO 2020/061499 A1