

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
07 April 2022 (07.04.2022)



(10) International Publication Number
WO 2022/069577 A1

(51) International Patent Classification:

C12N 15/88 (2006.01) A61K 47/69 (2017.01)
A61K 47/66 (2017.01)

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).

(21) International Application Number:

PCT/EP2021/076845

(22) International Filing Date:

29 September 2021 (29.09.2021)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

2015399.5 29 September 2020 (29.09.2020) GB

(71) Applicant: **EVOX THERAPEUTICS LTD** [GB/GB];
Oxford Science Park, Medawar Centre, 2nd Floor East
Building, Oxford OX4 4HG (GB).

(72) Inventors: **GUPTA, Dhanu**; Karolinska Institutet, El Andaloussi Lab/Evox Novum/KFC BMM, Level 5, Elevator F, Lab 501 Hälsovägen 7-9, 141 57 Huddinge (SE). **EL ANDALOUSSI, Samir**; Karolinska Institutet, El Andaloussi Lab/Evox Novum/KFC BMM, Level 5, Elevator F, Lab 501 Hälsovägen 7-9, 141 57 Huddinge (SE). **WIKLANDER, Oscar**; Karolinska Institutet, El Andaloussi Lab/Evox Novum/KFC BMM, Level 5, Elevator F, Lab 501 Hälsovägen 7-9, 141 57 Huddinge (SE). **NORDIN, Joel**; Karolinska Institutet, El Andaloussi Lab/Evox Novum/KFC BMM, Level 5, Elevator F, Lab 501 Hälsovägen 7-9, 141 57 Huddinge (SE).

(74) Agent: **COOLEY (UK) LLP**; 22 Bishopsgate, London Greater London EC2N 4BQ (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, 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,

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: ENGINEERED EXTRACELLULAR VESICLES DISPLAYING ENHANCED PHARMACOKINETICS

(57) Abstract: The present invention relates to engineered extracellular vesicles (EVs) as a therapeutic modality for the treatment of various severe diseases. More specifically, the invention relates to a novel approach to manufacturing engineered EVs which extends their half-life and alters their biodistribution, resulting in a novel therapeutic modality able to carry various types of drugs suitable for application in not only genetic diseases but more broadly across essentially all therapeutic areas.

WO 2022/069577 A1