

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

(19) World Intellectual Property
Organization

International Bureau

(43) International Publication Date
16 December 2021 (16.12.2021)



(10) International Publication Number
WO 2021/252860 A3

(51) International Patent Classification:

A61K 35/742 (2015.01) **A61P 35/00** (2006.01)
A61P 3/00 (2006.01) **A61P 37/00** (2006.01)
A61P 17/00 (2006.01)

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/US2021/036956

Declarations under Rule 4.17:

— of inventorship (Rule 4.17(iv))

(22) International Filing Date:

11 June 2021 (11.06.2021)

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))

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/037,882 11 June 2020 (11.06.2020) US
63/091,015 13 October 2020 (13.10.2020) US

(88) Date of publication of the international search report:

10 March 2022 (10.03.2022)

(71) Applicant: **EVELO BIOSCIENCES, INC.** [US/US]; 620
Memorial Drive, Cambridge, MA 02139 (US).

(72) Inventors: **BALLOK, Alicia**; c/o Evelo Biosciences,
Inc., 620 Memorial Drive, Cambridge, MA 02139
(US). **FRANCISCO-ANDERSON, Loise**; c/o Evelo Bio-
sciences, Inc., 620 Memorial Drive, Cambridge, MA 02139
(US). **HUYNH, Kevin**; c/o Evelo Biosciences, Inc., 620
Memorial Drive, Cambridge, MA 02139 (US). **KRAVITZ,
Valeria**; c/o Evelo Biosciences, Inc., 620 Memorial Drive,
Cambridge, MA 02139 (US). **MCCBRIDE, Audrey**; c/o
Evelo Biosciences, Inc., 620 Memorial Drive, Cambridge,
MA 02139 (US). **ROMMEL, Tyler**; c/o Evelo Biosciences,
Inc., 620 Memorial Drive, Cambridge, MA 02139 (US). **SI-
ZOVA, Maria**; c/o Evelo Biosciences, Inc., 620 Memorial
Drive, Cambridge, MA 02139 (US).

(74) Agent: **JONES, Brendan, T.** et al.; Foley Hoag LLP, 155
Seaport Boulevard, Boston, MA 02210-2600 (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,

(54) Title: COMPOSITIONS AND METHODS FOR TREATING DISEASES AND DISORDERS USING *HARRYFLINTIA ACETIS-PORA*

(57) Abstract: Provided herein are methods and pharmaceutical compositions related to the bacteria and microbial extracellular vesicles (mEVs) of *Harryflintia acetispora* that are useful as therapeutic agents.



WO 2021/252860 A3