

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
15 July 2021 (15.07.2021)



(10) International Publication Number
WO 2021/142192 A1

(51) International Patent Classification:

A61K 38/44 (2006.01) A61K 9/127 (2006.01)
C12N 9/00 (2006.01)

(21) International Application Number:

PCT/US2021/012599

(22) International Filing Date:

08 January 2021 (08.01.2021)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

62/958,935 09 January 2020 (09.01.2020) US
16/854,653 21 April 2020 (21.04.2020) US

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(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,

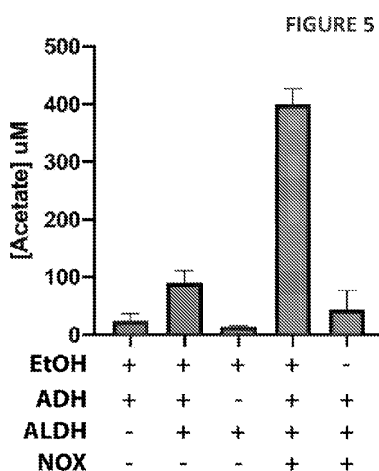
ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

(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, 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))

(54) Title: MICROPARTICLE-BASED ENZYME SYSTEMS FOR SELECTIVE REMOVAL OF TARGET MOLECULES



(57) Abstract: The present disclosure provides compositions of microparticles and uses thereof for removing toxic or undesirable molecules from an environment, e.g. the blood of a subject. The microparticles can be liposomes. In one embodiment, the aqueous phase of the liposomes contains (i) a system of generating NAD^+ from NADH, and (ii) one or more enzymes that are involved in one or more NAD^+ -dependent reactions that remove the toxic or undesirable molecules from the environment. In one embodiment, the liposomes contain NADH oxidase, alcohol dehydrogenase (ADH) and acetaldehyde dehydrogenase (ALDH) to remove ethanol from the blood of a subject.

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