



(51) International Patent Classification:

A61K 35/20 (2006.01) B01D 61/58 (2006.01)
A61K 38/17 (2006.01) C07K 14/47 (2006.01)

(21) International Application Number:

PCT/US2022/017554

(22) International Filing Date:

23 February 2022 (23.02.2022)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/152,784 23 February 2021 (23.02.2021) US

(71) Applicant: **VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY** [US/US]; Burruss Hall, 800 Drillfield Drive, Blacksburg, Virginia 24061 (US).

(72) Inventors: **MARSH, Spencer**; c/o Fralin Biomedical Research Institute, 2 Riverside Circle, Roanoke, Virginia 24016 (US). **PRIDHAM, Kevin J.**; c/o Fralin Biomedical Research Institute, 2 Riverside Circle, Roanoke, Virginia 24016 (US). **JOURDAN, Linda Jane**; c/o Fralin Biomedical Research Institute, 2 Riverside Circle, Roanoke, Virginia 24016 (US). **GOURDIE, Robert G.**; c/o Fralin Biomedical Research Institute, 2 Riverside Circle, Roanoke, Virginia 24016 (US).

(74) Agent: **MILLER, Carin** et al.; Johnson, Marcou, Isaacs & Nix LLC, P.O. Box 691, Hoschton, Georgia 30548 (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, JM, 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).

Declarations under Rule 4.17:

— of inventorship (Rule 4.17(iv))

Published:

— with international search report (Art. 21(3))

(54) Title: METHODS OF ISOLATING EXOSOMES

Tangential Flow Filtration based Isolation

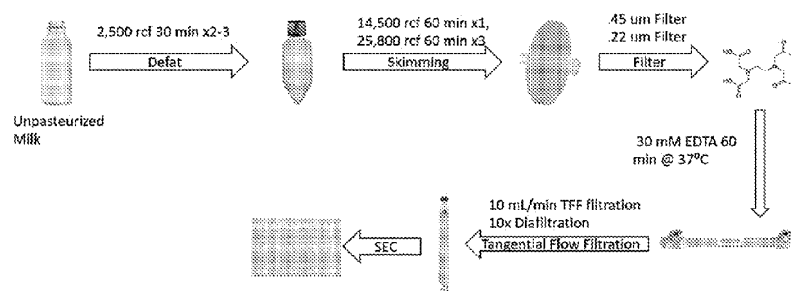


FIG. 2

(57) Abstract: Described in certain example embodiments herein are methods of isolating exosomes from a biological fluid, such as those containing caseins.

