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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
20 June 2013 (20.06.2013)

WIPO | PCT

(10) International Publication Number
WO 2013/088250 A1

(51) International Patent Classification:
A61K 9/00 (2006.01) *A61P 35/00* (2006.01)

(21) International Application Number:
PCT/IB2012/002950

(22) International Filing Date:
12 December 2012 (12.12.2012)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/569,907 13 December 2011 (13.12.2011) US

(71) Applicant: **ENGENEIC MOLECULAR DELIVERY PTY LTD** [AU/AU]; Building 2, 25 Sirius Road, Lane Cove West, Sydney, New South Wales 2066 (AU).

(72) Inventors: **BRAHMBHATT, Himanshu**; c/o Engeneic Molecular Delivery Pty Ltd, Building 2, 25 Sirus Road, Lane Cove West, Sydney, New South Wales 2066 (AU). **MACDIARMID, Jennifer**; c/o Engeneic Molecular Delivery Pty Ltd, Building 2, 25 Sirius Road, Lane Cove West, Sydney, New South Wales 2066 (AU).

(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, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, 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, 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, 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, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

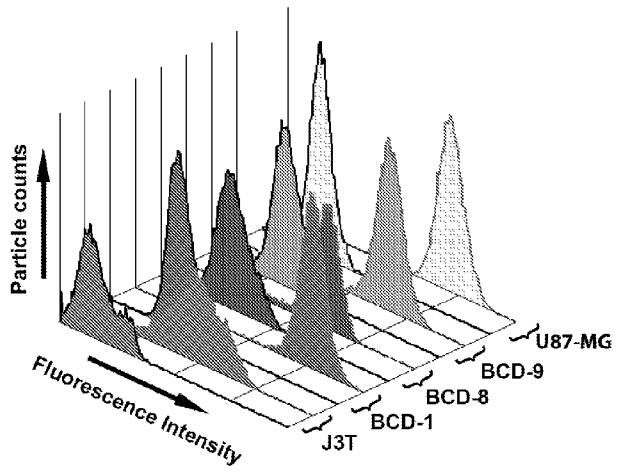
— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

[Continued on next page]

(54) Title: BACTERIALLY DERIVED, INTACT MINICELLS FOR DELIVERY OF THERAPEUTIC AGENTS TO BRAIN TUMORS

Figure 1



(57) Abstract: Systemic administration of intact, bacterially derived minicells results in rapid accumulation of the minicells in the microenvironment of a brain tumor, in therapeutically significant concentrations, without requiring endothelial endocytosis/transcytosis across the blood brain barrier or any other mechanism by which, pursuant to conventional approaches, nanoparticles have entered into that microenvironment. Accordingly, a wide variety of brain tumors, both primary and metastatic, can be treated by administering systemically a therapeutically effective amount of a composition comprised of a plurality of such minicells, each minicell being a vehicle for an active agent against the tumor, such as a radionuclide, a functional nucleic acid or a plasmid encoding one, or a chemotherapeutic agent.

WO 2013/088250 A1

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))*