



(51) International Patent Classification:

C08L 25/08 (2006.01) *A61K 47/34* (2006.01)
A61K 9/50 (2006.01)

(21) International Application Number:

PCT/SG2011/000274

(22) International Filing Date:

4 August 2011 (04.08.2011)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/370,847 5 August 2010 (05.08.2010) US

(71) Applicant (for all designated States except US): **AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH** [SG/SG]; 1 Fusionopolis Way, #20-10 Connexis, Singapore 138632 (SG).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **NALLANI, Madhavan** [IN/SG]; Institute of Materials Research and Engineering, 3 Research Link, Singapore 117602 (SG). **TOMCZAK, Nikodem** [PL/SG]; Institute of Materials Research and Engineering, 3 Research Link, Singapore 117602 (SG). **FU, Zhikang** [SG/SG]; Institute of Materials

Research and Engineering, 3 Research Link, Singapore 117602 (SG). **OCHSNER, Mirjam** [CH/SG]; Institute of Materials Research and Engineering, 3 Research Link, Singapore 117602 (SG).

(74) Agent: **VIERING, JENTSCHURA & PARTNER LLP**; P.O. Box 1088, Rochor Post Office, Rochor Road, Singapore 911833 (SG).

(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, 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, PE, PG, PH, PL, PT, QA, RO, RS, RU, 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, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, 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,

[Continued on next page]

(54) Title: A MULTICOMPARTMENTALIZED VESICULAR STRUCTURE AND A METHOD FOR FORMING THE SAME

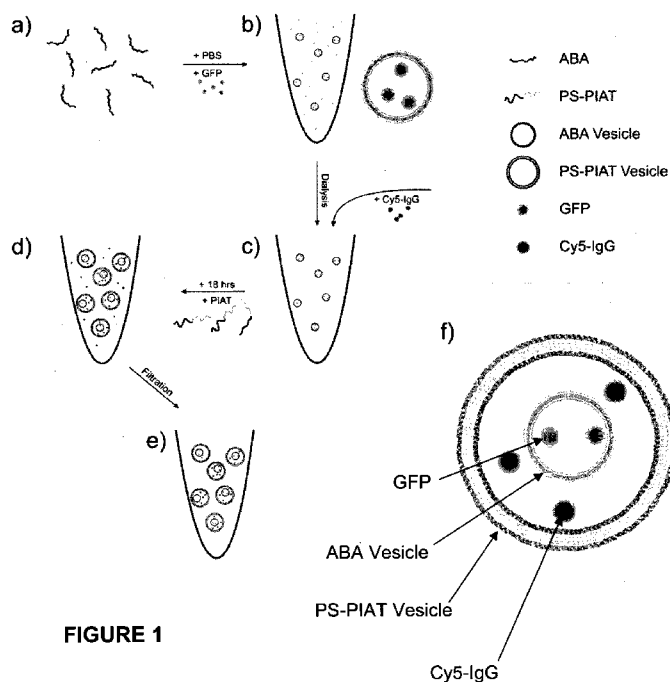


FIGURE 1

(57) Abstract: The present invention provides a method for forming a multicompartmentalized vesicular structure comprising an outer block copolymer vesicle and at least one inner block copolymer vesicle, wherein the at least one inner block copolymer vesicle is encapsulated inside the outer block copolymer vesicle. The method comprises forming the at least one inner block copolymer vesicle by any method and adding block copolymers dissolved in a suitable solvent to a dispersion of the at least one inner block copolymer vesicle in an aqueous buffer under conditions that allow the block copolymers to form the outer block copolymer vesicle and encapsulate the at least one inner block copolymer vesicle. A multicompartmentalized vesicular structure and its uses are also provided.



LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, **Published:**
SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, — *with international search report (Art. 21(3))*
GW, ML, MR, NE, SN, TD, TG).