



(51) International Patent Classification:
C08L 71/02 (2006.01) *A61K 47/60* (2017.01)

(21) International Application Number:
PCT/US2024/020893

(22) International Filing Date:
21 March 2024 (21.03.2024)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
63/453,619 21 March 2023 (21.03.2023) US

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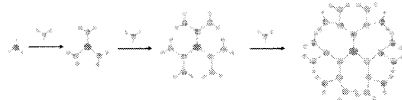
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(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, MG, MK, MN, MU, 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.

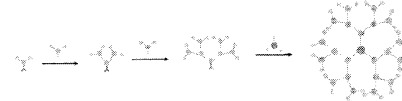
(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, ME, 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).

(54) Title: POLY(ETHYLENE GLYCOL) BASED DENDRIMER-LIKE HYPERBRANCHED MACROMOLECULES, METHODS OF PREPARATION AND USE THEREOF

a) Divergent synthesis (core to dendron)



b) Convergent synthesis (dendron to core)



c) Combined divergent/convergent synthesis

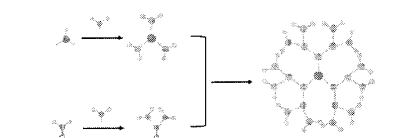


FIGURE 1

(57) Abstract: In certain embodiments, the present invention relates to dendrimer-like hyperbranched macromolecules for several uses such as medical or biopharmaceutical applications, or non- medical or industrial uses, such as antibody purification, cosmetic applications, catalytic applications, applications in electronics, agriculture, food, filtration and further applications. In embodiments, the present invention relates to a hyperbranched macromolecule for drug delivery, comprising polyethylene glycol (PEG) units and at least one active agent conjugated to the hyperbranched macromolecule. Further, methods for synthesizing, purifying and characterizing such hyperbranched macromolecules and methods of treatment of a medical condition such as treatment of an ocular disease are provided.

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