



(51) International Patent Classification:

A61K 31/69 (2006.01)

(21) International Application Number:

PCT/US2024/033004

(22) International Filing Date:

07 June 2024 (07.06.2024)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/471,669

07 June 2023 (07.06.2023)

US

(71) Applicant: THE RESEARCH FOUNDATION FOR THE STATE UNIVERSITY OF NEW YORK [US/US];

35 State Street, Albany, New York 12201 (US).

(72) Inventors: GUO, Dandan; 32 Presidential Cts., Syracuse, New York 13202 (US). LUO, Juntao; 4628 Mystic Drive, Jamesville, New York 13078 (US). SHI, Changying; 4628 Mystic Drive, Jamesville, New York 13078 (US).

(74) Agent: FALLON, Peter; 35 State Street, Albany, New York 12207 (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, 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).

Published:

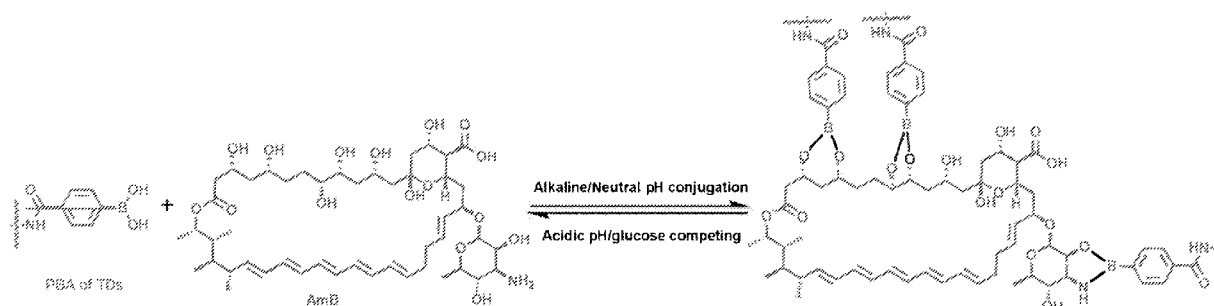
— with international search report (Art. 21(3))

(88) Date of publication of the international search report:

30 January 2025 (30.01.2025)

(54) Title: BORONATE PRODRUG NANOFORMULATIONS IN DISEASE TREATMENTS

FIG. 1A



(57) **Abstract:** Amphotericin B (AmB) is the gold standard for treatment of life-threatening systemic fungal infections. To develop cost-effective AmB formulations with reduced toxicity, embodiments disclosed introduce controlled number of phenylboronic acid (PBA) moieties into telodendrimer (TD) nanoplatform for optimizing AmB conjugation via reversible boronate ester strategy. This multivalent flexible boronate TD nanoplatform can also be applied in developing prodrugs for different cis-diol containing or α - or β -hydroxyl ketone-containing drug molecules.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 24/33004

A. CLASSIFICATION OF SUBJECT MATTER

IPC - INV. A61K 31/69 (2014.01)

ADD. C07F 5/02 (2014.01)

CPC - INV. A61K 31/69, A61K 33/22, C07F 5/025, C07F 5/027

ADD. C07F 5/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

See Search History document

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

See Search History document

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

See Search History document

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	Zheng et al. 'Construction of a Phenylboronic Acid-Functionalized Nano-Prodrug for pH-Responsive Emodin Delivery and Antibacterial Activity', ACS Omega, 18 March 2021 (18.03.2021), Vol.6, pages8672-8679; p8673 p8674 p8676	1-2, 5-6, 8-11, 18, 21
Y		3-4, 7, 12-17, 19-20
Y	US 2015/0045419 A1 (Lam et al.) 12 February 2015 (12.02.2015); Figure 26C para[0010] para[0075]	3-4, 7, 12-17, 19-20
Y	US 5,098,417 A (Yamazaki et al.) 24 March 1992 (24.03.1992); Claim 32	13-14
A	WO 2021/126970 A1 (The Regents Of The University Of California) 24 June 2021 (24.06.2021); entire document	1-21
A	US 2021/0346518 A1 (The Regents of the University of California) 11 November 2021 (11.11.2021); entire document	1-21

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

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Date of the actual completion of the international search

19 August 2024

Date of mailing of the international search report

SEP 06 2024

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US, Commissioner for Patents

P.O. Box 1450, Alexandria, Virginia 22313-1450

Facsimile No. 571-273-8300

Authorized officer

Kari Rodriguez

Telephone No. PCT Helpdesk: 571-272-4300