



(51) International Patent Classification:

A61K 47/02 (2006.01) A61K 31/7125 (2006.01)
A61K 31/7088 (2006.01) A61K 31/713 (2006.01)
A61K 31/712 (2006.01) C07H 21/00 (2006.01)

(21) International Application Number:

PCT/CA2011/000956

(22) International Filing Date:

18 August 2011 (18.08.2011)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/375,257 20 August 2010 (20.08.2010) US

(71) Applicant (for all designated States except US):
REPLICOR INC. [CA/CA]; 6100 Royalmount Avenue,
Suite D-101, Montréal, Québec H4P 2R2 (CA).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **VAILLANT, An-**
drew [CA/CA]; 74 11th Street, Roxboro, Québec H8Y
3E6 (CA). **BAZINET, Michel** [CA/CA]; 343 Brookfield
Avenue, Montréal, Québec H3P 2A7 (CA).(74) Agent: **NORTON ROSE CANADA LLP/S.E.N.C.R.L.,**
S.R.L.; Suite 2500, 1 place Ville-Marie, Montreal,
Québec H3B 1R1 (CA).

(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, 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).

Published:

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

— with sequence listing part of description (Rule 5.2(a))

(54) Title: OLIGONUCLEOTIDE CHELATE COMPLEXES

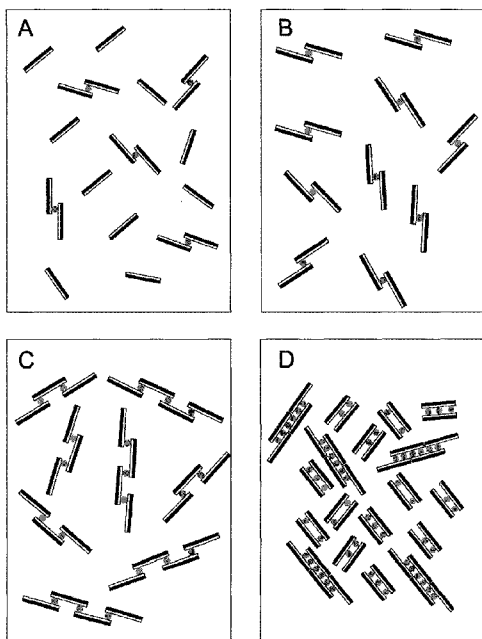


Fig. 15

(57) Abstract: The present disclosure describes the broadly active chelation of diverse divalent 2+ metal cations by any oligonucleotide (ON), regardless of size or modification. This chelation effect is specific to cations which are divalent (or of higher valency) and results in the formation of oligonucleotide chelate complexes which do not behave like salts. It is described herein a novel composition of an ON chelate complex prepared using any ON and a divalent metal cation and methods for the suppression of anti-coagulation and or subcutaneous injection site reactions and or improved tolerability with oligonucleotides by the use of ON chelate complexes during oligonucleotide administration.