

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
31 March 2022 (31.03.2022)



(10) International Publication Number
WO 2022/067214 A3

(51) International Patent Classification:

C07K 14/435 (2006.01) A61P 33/00 (2006.01)
A01N 63/50 (2020.01) C12N 15/82 (2006.01)

(21) International Application Number:

PCT/US2021/052259

(22) International Filing Date:

27 September 2021 (27.09.2021)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/084,339 28 September 2020 (28.09.2020) US

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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, CZ, DE, DJ, DK, DM, DO,
DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN,
HR, HU, ID, IL, IN, IR, IS, IT, JO, JP, KE, KG, KH, KN,
KP, KR, KW, KZ, LA, LC, LK, LR, LS, 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,

(54) Title: MU-DIGUETOXIN-DC1A VARIANT POLYPEPTIDES FOR PEST CONTROL

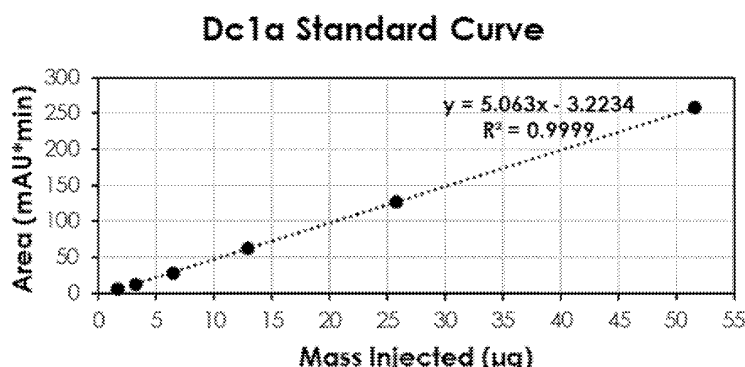


FIG. 1.

(57) Abstract: New insecticidal peptides, polypeptides, proteins, and nucleotides; their expression in culture and plants; methods of producing the peptides, polypeptides, proteins, and nucleotides; new processes; new production techniques; new formulations; and new organisms, are disclosed. The present disclosure is also related to a novel type of peptide named Dc1a-Variant Polypeptides (DVPs) that are a non-naturally occurring, modified-form of the peptide, Mu-diguetoxin-Dc1a, isolated from the American Desert Spider (*Diguetia canities*). Here we describe: genes encoding DVPs; various formulations and combinations of both genes and peptides; and methods for using the same that are useful for the control of insects. Further, the present invention relates to novel, recombinant cysteine rich proteins (CRPs) with a cystine knot (CK) architecture, created by removing one or more disulfide bonds from a polypeptide having four or more disulfide bonds.

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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, GH, GM, KE, LR, LS, MW, MZ, NA, RW, 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, 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))*
- *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))*
- *with sequence listing part of description (Rule 5.2(a))*

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

02 June 2022 (02.06.2022)