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(21) International Application Number: PCT/US97/17507 (22) International Filing Date: 25 September 1997 (25.09.97) (30) Priority Data: ① 08/721,259 26 September 1996 (26.09.96) US ✓ (71) Applicant: ECOGEN, INC. [US/US]; 2005 Cabot Boulevard West, Langhorne, PA 19047-2023 (US). (72) Inventors: RUPAR, Mark J., 42 Sturbridge Drive, Wilmington, DE 19810 (US); DONOVAN, William P., 36 Calicobush Road, Levittown, PA 19057 (US); TAN, Yuping, 34188 O'Neil Terrace, Fremont, CA 94555 (US); SLANEY, Annette, C., 4 Donmoor Court South, Hamilton Square, NJ 08690 (US). (74) Agent: KITCHELL, Barbara, S.; Arnold, White & Durkee, P.O. Box 4433, Houston, TX 77210 (US).		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, ARIPO patent (GH, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, I.U, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). Published ④ With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.
(54) Title: <i>BACILLUS THURINGIENSIS</i> CryET29 COMPOSITIONS TOXIC TO COLEOPTERAN INSECTS AND CTENO-CEPHALIDES SPP ✓ (57) Abstract Disclosed is a novel δ-endotoxin, designated CryET29, that exhibits insecticidal activity against siphonopteran insects, including larvae of the cat flea (<i>Ctenocephalides felis</i>), as well as against coleopteran insects, including the southern corn rootworm (<i>Diabrotica undecimpunctata</i>), western corn rootworm (<i>D. virgifera</i>), Colorado potato beetle (<i>Leptinotarsa decemlineata</i>), Japanese beetle (<i>Popillia japonica</i>), and red flour beetle (<i>Tribolium castaneum</i>). Also disclosed are nucleic acid segments encoding CryET29, recombinant vectors, host cells, and transgenic plants comprising a cryET29 DNA segment. Methods for making and using the disclosed protein and nucleic acid segments are disclosed as well as assays and diagnostic kits for detecting cryET29 and CryET29 sequences <i>in vivo</i> and <i>in vitro</i>.		