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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
28 July 2005 (28.07.2005)

PCT

(10) International Publication Number
WO 2005/067478 A2

(51) International Patent Classification: Not classified

(21) International Application Number:
PCT/US2004/040117

(22) International Filing Date: 1 December 2004 (01.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/525,982 1 December 2003 (01.12.2003) US

(71) Applicant *(for all designated States except US)*: **DOW GLOBAL TECHNOLOGIES INC.** [US/US]; Washington Street, 1790 Building, Midland, MI 48674 (US).

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: **RASOCHOVA, Lada** [US/US]; 13523 Jadestone Way, San Diego, CA 92130 (US). **DAO, Philip, Phuoc** [US/US]; 8272 Torrell Way, San Diego, CA 92126 (US).

(74) Agent: **KNOWLES, Sherry, M.**; King & Spalding LLP, 191 Peachtree Street, 45th Floor, Atlanta, GA 30303-1763 (US).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *without international search report and to be republished upon receipt of that report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2005/067478 A2

(54) Title: RECOMBINANT ICOSAHEDRAL VIRUS LIKE PARTICLE PRODUCTION IN PSEUDOMONADS

(57) Abstract: The present invention provides an improved process for the production of recombinant peptides by fusion of recombinant peptides with icosahedral viral capsids and expression of the fusion in bacterial cells of Pseudomonad origin. The Pseudomonad cells support formation of virus like particles from icosahedral viral capsids *in vivo*, and allow the inclusion of larger recombinant peptides as monomers or concatamers in the virus like particle. The invention specifically provides cells expressing viral capsid fusions, nucleic acids encoding fusions of toxic proteins with icosahedral viral capsids and processes for manufacture of recombinant proteins.