9903913-3
IPOS copy

PCT WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : C07K 14/00, 14/435, 14/46, A61K 38/04, 38/16 — A1

(11) International Publication Number: **WO 98/37090**

(43) International Publication Date: 27 August 1998 (27.08.98)

(21) International Application Number: PCT/IL98/00081

(22) International Filing Date: 19 February 1998 (19.02.98)

(30) Priority Data:
PCT/IL97/00066 20 February 1997 (20.02.97) WO
(34) Countries for which the regional or international application was filed: IL et al.

(71) Applicant *(for all designated States except US)*: YEDA RESEARCH AND DEVELOPMENT CO. LTD. [IL/IL]; Weizmann Institute of Science, P.O. Box 95, 76100 Rehovot (IL).

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: SHAI, Yechiel [IL/IL]; Bar Simantov 70, 56333 Yahud (IL). OREN, Ziv [IL/IL]; Harav Kook Street 3, 75306 Rishon Le-Zion (IL).

(74) Agent: BEN-AMI, Paulina; Yeda Research and Development Co. Ltd., Weizmann Institute of Science, P.O. Box 95, 76100 Rehovot (IL).

(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, GM, GW, 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, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, 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, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).

Published
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: ANTIPATHOGENIC SYNTHETIC PEPTIDES AND COMPOSITIONS COMPRISING THEM

(57) Abstract

Non-hemolytic cytolytic agents selected from peptides, complexes of bundled peptides, mixtures of peptides or random peptide copolymers have a selective cytolytic activity manifested in that they have a cytolytic activity on pathogenic cells, being cells which are non-naturally occurring within the body consisting of microbial pathogenic organisms and malignant cells; and are non-hemolytic, having no cytolytic effect on red blood cells. The peptides may be cyclic derivatives of natural peptides such as pardaxin and mellitin and fragments thereof in which L-amino acid residues are replaced by corresponding D-amino acid residues, or are diastereomers of linear peptides composed of varying ratios of at least one positively charged amino acid and at least one hydrophobic amino acid, and in which at least one of the amino acid residues is a D-amino acid. Pharmaceutical compositions comprising the non-hemolytic cytolytic agents can be used for the treatment of several diseases caused by pathogens including antibacterial, fungal, viral, mycoplasma and protozoan infections and for the treatment of cancer.

