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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
27 May 2010 (27.05.2010)

PCT

(10) International Publication Number
WO 2010/058419 A4

(51) International Patent Classification:
C07K 14/47 (2006.01) *C07K 5/06* (2006.01)
C07K 14/525 (2006.01) *C07K 5/08* (2006.01)

(21) International Application Number:
PCT/IN2009/000626

(22) International Filing Date:
5 November 2009 (05.11.2009)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2622/DEL/2008 20 November 2008 (20.11.2008) IN

(71) Applicant *(for all designated States except US)*: **PANACEA BIOTEC LTD** [IN/IN]; B-1 Extn. / A-27, Mohan Co-operative Industrial Estate, Mathura Road, New Delhi 110044 (IN).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **JAIN, Rajesh** [IN/IN]; B-1 Extn. /A-27, Mohan Co-operative Industrial Estate, Mathura Road, New Delhi 110044 (IN). **VINAYAK, Virendra Kumar** [IN/IN]; B-1 Extn. / A-27, Mohan Co-operative Industrial Estate, Mathura Road, New Delhi 110044 (IN). **DUBEY, Shweta** [IN/IN]; B-1 Extn. / A-27, Mohan Co-operative Industrial Estate, Mathura Road, New Delhi 110044 (IN). **PRASAD, Sudhanand** [IN/IN]; B-1 Extn. / A-27, Mohan Co-operative Industrial Estate, Mathura Road, New Delhi 110044 (IN). **GOEL, Vijay** [IN/IN]; B-1 Extn. / A-27, Mohan Co-operative Industrial Estate, Mathura Road, New Delhi 110044 (IN). **JAIN, Rahul** [IN/IN]; B-1 Extn. / A-27, Mohan Co-operative Industrial Estate, Mathura Road, New Delhi 110044 (IN).

(74) Agent: **GUPTA, Bhartee**; B-1 Extn. / A-27, Mohan Co-operative Industrial Estate, Mathura Road, New Delhi 110044 (IN).

(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, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, 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, 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, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

— *as to the identity of the inventor (Rule 4.17(i))*

— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

— *of inventorship (Rule 4.17(iv))*

Published:

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

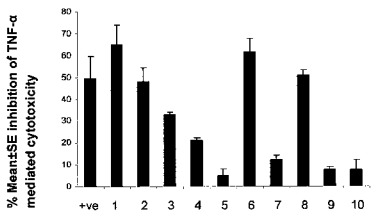
— *with amended claims and statement (Art. 19(1))*

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

Date of publication of the amended claims and statement: 29 July 2010

(54) **Title**: TUMOR NECROSIS FACTOR ALPHA INHIBITING PEPTIDES AND USES THEREOF

Figure -1: Inhibition of TNF-α mediated cytotoxicity of L929 cells by the peptides (Sequence ID-1 to 10) employing bioassay.



(57) **Abstract**: The present invention relates to Tumor Necrosis Factor-alpha (TNF-alpha or TNF-α) inhibiting peptides and process for the preparation thereof. The present invention further relates to a pharmaceutical composition comprising TNF-alpha inhibiting peptides of the present invention and uses thereof in treating TNF - alpha mediated inflammatory disorders.

WO 2010/058419 A4