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(71) Applicant *(for all designated States except US)*: **THYMON L.L.C.** [US/US]; 30 Dorison Drive, Short Hills, NJ 07078 (US).

(72) Inventor; and

(75) Inventor/Applicant *(for US only)*: **GOLDSTEIN, Gideon** [US/US]; 30 Dorison Drive, Short Hills, NJ 07078 (US).

(74) Agents: **BAK, Mary, E.** et al.; Howson and Howson, Spring House Corporate Center, P.O. Box 457, Spring House, PA 19477 (US).

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ACTION

(54) Title: METHODS AND COMPOSITIONS FOR IMPAIRING MULTIPLICATION OF HIV-1

(57) Abstract: A composition which elicits antibodies to most (e.g., greater than 95 %) of the known variants of Tat protein of HIV-1 of both the B and non-B clades contains at least two variants of a peptide or polypeptide of the formula: R1-Asp-Pro-Y_7-Leu-X_9-Pro-Trp-Z_{12}-R2 [SEQ ID NO:8]. According to this formula, Y_7 is Arg, Lys, Ser or Asn; X_9 is Glu or Asp; Z_{12} is Lys or Asn; R1 is hydrogen, a lower alkyl, a lower alkanoyl, or a sequence of between 1 to about 5 amino acids, optionally substituted with a lower alkyl or lower alkanoyl; and R2 is a free hydroxyl, an amide, or a sequence of one or up to about 5 additional amino acids, optionally substituted with an amide. In this composition, at least one of the two variants contains Arg at Y_7 and Lys at Z_{12}, and in at least a second of the two variants Y_7 is Asn and Z_{12} is Asn. Vaccinal and pharmaceutical compositions can contain one or more such peptides associated with carrier proteins, associated in multiple antigenic peptides or as part of recombinant proteins. The addition to this combination of other optional immunogens can provide other compositions useful in eliciting primate anti-Tat antibodies which cross-react with multiple strains and variants of HIV-1 Tat protein. Vaccinal and pharmaceutical compositions can contain the primate antibodies induced by the peptide compositions for use in passive therapy. Diagnostic compositions and uses are described for assessing the immune status of vaccinated patients.

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