

Title (en)
IMMUNOTHERAPY AND IMPROVED VACCINES

Title (de)
IMMUNTHERAPIE UND VERBESSERTE IMPFSTOFFE

Title (fr)
IMMUNOTHERAPIE ET VACCINS PERFECTIONNES

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Application
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Abstract (en)
[origin: WO9817799A1] Improved vaccines which include a nucleotide sequence that encodes IL-12, GM-CSF, IL-1, TNF- alpha , TNF- beta , IL-2, IL-4, IL-5, IL-10, IL-15, IL-18, and/or BL-1 operably linked to regulatory elements are disclosed. The improved vaccines include DNA vaccines, recombinant vaccines for delivering foreign antigen and live attenuated vaccines. Methods of immunizing individuals are disclosed. Pharmaceutical compositions comprising nucleic acid molecules that encode one or more immunomodulatory proteins selected from the group consisting of IL-12, GM-CSF, IL-1, TNF- alpha , TNF- beta , IL-2, IL-4, IL-5, IL-10, IL-15, IL-18, and BL-1 are disclosed. An immunomodulatory protein, BL-1, and nucleic acid molecules that encode BL-1 are disclosed. Methods of making and using BL-1 are disclosed.

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• See also references of WO 9817799A1

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