

Title (en)

GENETIC IMMUNIZATION WITH NONSTRUCTURAL PROTEINS OF HEPATITIS C VIRUS

Title (de)

GENETISCHE IMMUNISIERUNG MIT NICHTSTRUKTURPROTEINEN DES HEPATITIS C VIRUS

Title (fr)

IMMUNISATION GENETIQUE AVEC DES PROTEINES NON STRUCTURALES DU VIRUS DE L'HEPATITE C

Publication

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Application

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Abstract (en)

[origin: WO9938880A1] Nucleic acid molecules that comprise a hepatitis C nonstructural protein including specifically disclosed DNA sequences are disclosed. Pharmaceutical compositions that contain nucleic acid molecules comprising a hepatitis C nonstructural protein including a nucleotide sequence encoding NS3, NS4, or NS5, or a combination thereof, operably linked to regulatory elements functional in human cells are disclosed. Methods of immunizing individuals susceptible to or infected by hepatitis C virus comprising administering such pharmaceutical compositions are disclosed.

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Citation (search report)

- [X] WO 9747358 A1 19971218 - MERCK & CO INC [US], et al
- [A] US 5593972 A 19970114 - WEINER DAVID B [US], et al
- [X] WO 9637606 A1 19961128 - BIONOVA CORP [US], et al
- [E] WO 9929843 A1 19990617 - SMITHKLINE BEECHAM CORP [US], et al
- [X] CHOO Q-L ET AL: "GENETIC ORGANIZATION AND DIVERSITY OF THE HEPATITIS C VIRUS", PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF USA, NATIONAL ACADEMY OF SCIENCE. WASHINGTON, US, vol. 88, 1 March 1991 (1991-03-01), pages 2451 - 2455, XP000652139, ISSN: 0027-8424
- [X] STUYVER L ET AL: "CLONING AND PHYLOGENETIC ANALYSIS OF THE CORE, E2, AND NS3/NS4 REGIONS OF THE HEPATITIS C VIRUS TYPE 5A+", BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, ACADEMIC PRESS INC. ORLANDO, FL, US, vol. 202, no. 3, 1994, pages 1308 - 1314, XP002057873, ISSN: 0006-291X
- [X] INCHAUSPE G.: "Gene vaccination for hepatitis C", SPRINGER SEMINARS IN IMMUNOPATHOLOGY, vol. 19, no. 2, 1997, pages 211 - 221, XP008014824
- [PX] ENCKE J. ET AL.: "Genetic immunization generates cellular and humoral immune responses against the nonstructural proteins of the hepatitis C virus in a murine model", JOURNAL OF IMMUNOLOGY, vol. 161, no. 9, 1 November 1998 (1998-11-01), pages 4917 - 4923, XP002233910
- [PX] PAPA S. ET AL.: "Development of a multigenic plasmid vector for HCV DNA immunization", RESEARCH IN VIROLOGY, vol. 149, no. 5, September 1998 (1998-09-01), pages 315 - 319, XP002233911
- [A] SAITO T ET AL: "PLASMID DNA-BASED IMMUNIZATON FOR HEPATITIS C VIRUS STRUCTURAL PROTEINS: IMMUNE RESPONSES IN MICE", GASTROENTEROLOGY, vol. 112, no. 4, April 1997 (1997-04-01), pages 1321 - 1330, XP001013414, ISSN: 0016-5085
- [X] INCHAUSPE G.: "Mechanism of protection in hepatitis C virus infection", MEDECINE ET MALADIES INFECTIEUSES, vol. 25, October 1995 (1995-10-01), pages 1067 - 1073, XP008017646
- See also references of WO 9938880A1

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