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This section provides information on worldwide patents relevant to vaccine design and production. The Patent Report gives the following information: title of patent, patentee, patent number, publication date and summary of the patent. A number of patents in this report are reproduced from ‘Biotechnology Abstracts’ with permission of Derwent Publications Ltd.

**Purified human intra-acrosomal sperm antigen preparation; and DNA sequence; hybridoma construction and mononclonal antibody preparation; useful in contraceptive vaccine**

*Center-Innovative Technol.*

*World* 9009 802; 7 September 1990

A purified intra-acrosomal human sperm antigen (I) (specified DNA sequence and protein sequence) which remains associated with the inner and outer acrosomal membranes of human sperm after the acrosome reaction, is new. The antigen comprises a family of proteins with mol. wts in the 18 000-34 000 range and antibody preparation; useful in contraceptive vaccine.

New vaccine against infectious viruses e.g. feline infectious-spermatogenesis, and the mAb may be used to purify sperm.

A purified intra-acrosomal human sperm antigen (I) (specified DNA sequence and protein sequence) which remains associated with the inner and outer acrosomal membranes of human sperm after the acrosome reaction, is new. The antigen comprises a family of proteins with mol. wts in the 18 000-34 000 range and antibody preparation; useful in contraceptive vaccine.

**Complex virus promoter; complex pox virus promoter construct; recombinant vaccinia virus construction**

*Tos-Fuel*

*Jpn* 2186 992; 23 July 1990

A complex virus promoter is claimed which is a pox virus promoter that is composed of a late phase expression promoter and a downstream side region of 7.5 kb of the gene's promoter. When a foreign structural gene is ligated downstream of the promoter, the structural gene can be expressed from the early phase to late phase of a viral infection. Also claimed is a vaccinia virus which contains a complex promoter and optionally a foreign structural gene downstream of the promoter.

**Diphtheria recombinant vaccine; comprises Corynebacterium diphtheriae toxin-A fragment murein, Gly158 DT-A, which is enzymatically inactive; DNA sequence**

*Cetus*

*USA* 4950 740; 21 August 1990

A protein (I) having immunological cross-reactivity with diphtheria toxin (DT) comprises an enzymatically inactive diphtheria toxin-A fragment (DT-A) murein, namely Gly158DT-A, and is preferably bound to DT-B. (I) is encoded by DNA sequences produced by site-specific mutagenesis of cloned DNA encoding the native amino acid sequence and obtained from Corynebacterium diphtheriae. Amino deletions, insertions or replacements which affect the active site (Glu-148) of diphtheria toxin are particularly preferred. Alterations at this active site or within 15 amino acid residues of the active site produce enzymatically inactive proteins which retain cross-reactivity with the native molecule. Examples are given of the preparation of recombinant des-Glu148DT-A, Gly158DT-A and Asn148DT-A by site-directed mutagenesis of DT-A, gene cloning in plasmid vectors and expression in Escherichia coli (ATCC 39531). (I) is useful as an anti-diphtheria vaccine. It is available as a homogeneous, safe and effective immunogen protein capable of causing formation of neutralizing antibodies against diphtheria toxin in vaccinated subjects.

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