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(71) Applicant *(for all designated States except US)*: **BIOSYNTH S.R.L.** [IT/IT]; Zona Industriale - Località Sentino, I-53040 Rapolano Terme (IT).

(72) Inventor; and

(75) Inventor/Applicant *(for US only)*: **PORRO, Massimo** [IT/IT]; Via Selvapiana, 97, I-53040 Rapolano Terme (IT).

(74) Agent: **COPPO, Alessandro**; Ing. Barzanò & Zanardo Milano S.p.A., Via Borgonuovo, 10, I-20121 Milan (IT).

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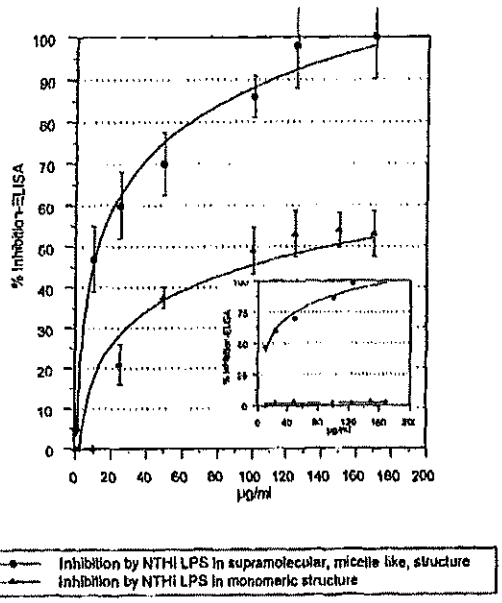
(54) Title: BROAD-SPECTRUM LPS BASED VACCINES OF UNENCAPSULATED STRAINS OF *HAEMOPHILUS INFLUENZAE* AND OTHER PATHOGENIC SPECIES OF GRAM-NEGATIVE BACTERIA

Specificity of NTHi LPS-induced IgG PAbs for LPS in supramolecular, micelle-like structure, as compared to the same LPS in non-micellar, monomeric structure



The window inside the graph represents the binding curve of the MAH1-3 monoclonal antibody for LPS in micellar and non-micellar structure ($p<0.01$).

(57) Abstract: Vaccines prepared using purified LPS of *unencapsulated* (non-typeable) *Haemophilus influenzae* detoxified by a strategy which leaves structurally intact the native Lipid A moiety, presereing broadly cross-reactive epitopes expressed by an antigenic supramolecular structure composed of at least 50 LPS monomers. The detoxification strategy preferentially involves the formation of the equimolar complex between by the Lipid A moiety of LPS and the cyclic synthetic peptide with the sequence NH_2-Lys-Thr-Lys-Cys-Lys-Phe-Leu-Leu-Leu-Cys-COOH, CysA-Cys10 disulfide. The same strategy of detoxification resulting in the preservation of the supramolecular, micelle-like, structure of native NTHi LPS is extended to LPS antigens purified from other pathogenic species of bacteria, in order to generate the homologous endotoxoid vaccines.

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