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(71) Applicant: UNITED BIOMEDICAL, INC. [US/US]; 25 Davids Drive, Hauppauge, New York 11788 (US).

(72) Inventors: WANG, Chang Yi; 47 Snake Hill Road, Cold Spring Harbor, New York 11724 (US). LIN, Feng; c/o: United Biomedical, INC., 25 Davids Drive, Hauppauge, New York 11788 (US). CHEN, Jiun Bo; c/o: United Biomedical, INC., 25 Davids Drive, Hauppauge, New York 11788 (US).

(74) Agent: FILL, Peter et al.; Locke Lord LLP, 3 World Financial Center, New York, New York 10281 (US).

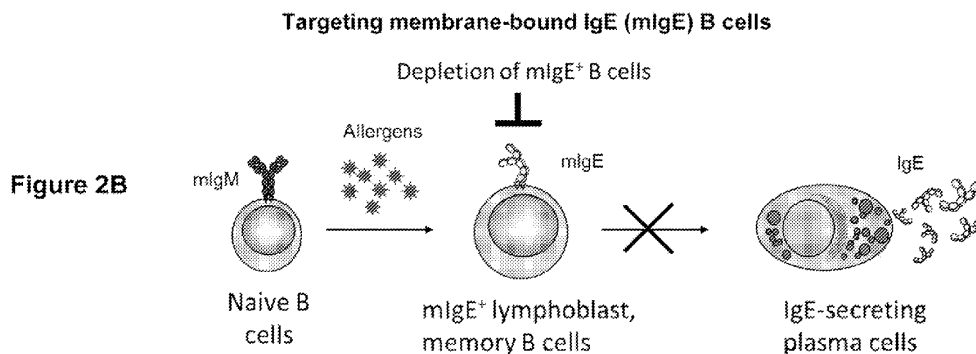
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(54) Title: PEPTIDE IMMUNOGENS AND FORMULATIONS THEREOF TARGETING MEMBRANE-BOUND IGE FOR TREATMENT OF IGE MEDIATED ALLERGIC DISEASES



(57) Abstract: The present disclosure is directed to IgE EMPD peptide immunogen constructs and formulations thereof for the treatment of IgE-mediated allergic diseases. The IgE EMPD peptide immunogen constructs have a B cell epitope peptide of more than 20 amino acids, preferably cyclic, linked through an optional spacer to heterologous T helper cell (Th) epitopes derived from pathogen proteins. These peptide immunogen constructs and formulations thereof can stimulate the generation of highly specific antibodies in vaccinated hosts that are directed against the IgE EMPD peptide and are crossreactive with membrane-bound IgE on B lymphocytes committed to IgE secretion. The antibodies induced by the peptide immunogen constructs and formulations thereof in vaccinated hosts can induce apoptosis of IgE-expressing B cells and mediate Antibody Dependent Cellular Cytotoxicity (ADCC), resulting in reduction of antigen-specific IgE and total IgE levels in vaccinated hosts to effectively treat IgE-mediated allergic pathology.

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