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(54) Title: HUMANIZED AND DE-IMMUNIZED ANTIBODIES

(57) Abstract: The invention relates to humanized and de-immunized antibodies that bind to an epitope at the N-terminus of pyroglutamated amyloid beta (A β N3pE) peptide and to preventive and therapeutic treatment of diseases and conditions that are related to accumulation and deposition of amyloid peptides, such as amyloidosis, a group of disorders and abnormalities associated with pyroglutamated amyloid peptide, like Alzheimer's disease, Down's syndrome, cerebral amyloid angiopathy and other related aspects. More specifically, it pertains to the use of monoclonal antibodies of the invention to bind pyroglutamated amyloid beta peptide in plasma, brain, and cerebrospinal fluid to prevent accumulation or to reverse deposition of A β N3pE within the brain and in various tissues in the periphery, and to alleviate amyloidosis. The present invention further pertains to diagnostic assays for the diagnosis of amyloidosis using the antibodies of the invention.