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(54) Title: PEGYLATED L-ASPARAGINASE

(57) Abstract: Disclosed is a conjugate of a protein having substantial L-asparagine aminohydrolase activity and polyethylene glycol. In particular, the polyethylene glycol has a molecular weight less than or equal to about 5000 Da and the protein is an L-asparaginase from *Erwinia*. The conjugate of the invention has shown superior properties such as maintenance of a high level of in vitro activity and an unexpected increase in half-life in vivo. Also disclosed are methods of producing the conjugate and use of the conjugate in therapy. In particular, a method is disclosed for use of the conjugate in the treatment of cancer, particularly Acute Lymphoblastic Leukemia (ALL). More specifically, a method is disclosed for use of the conjugate as a second line therapy for patients who have developed hypersensitivity or have had a disease relapse after treatment with other L-asparaginase preparations.



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