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(54) **POLYPEPTIDE COMPLEX COMPRISING NON-PEPTIDYL POLYMER HAVING THREE FUNCTIONAL ENDS**

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See application file for complete search history.

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(57) **ABSTRACT**

Disclosed is a protein complex, comprising a physiologically active polypeptide, a dimeric protein and a non-peptidyl polymer having three functional ends (3-arm), with the linkage of both the physiologically active polypeptide and the dimeric protein to the 3-arm non-peptidyl polymer via respective covalent bonds. The protein complex guarantees the long acting activity and biostability of a physiologically active polypeptide. Having the ability to maintain the bioactivity of physiologically active polypeptides or peptides highly and to significantly improve the serum half life of the polypeptides or peptides, the protein complex can be applied to the development of sustained release formulations of various physiologically active polypeptide drugs. Also, it utilizes raw materials including the physiologically active polypeptides without significant loss, thereby increasing the production yield. Further, it can be easily purified.

24 Claims, 2 Drawing Sheets