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(54) Title: PHARMACEUTICAL FORMULATIONS COMPRISING A WATER-INSOLUBLE COMPLEX FOR SUSTAINED DRUG DELIVERY

(57) Abstract

Sustained delivery formulations comprising a water–insoluble complex of a peptidic compound (e.g., a peptide, polypeptide, protein, peptidomimetic or the like) and a carrier macromolecule are disclosed. The formulations of the invention allow for loading of high concentrations of peptidic compound in a small volume and for delivery of a pharmaceutically active peptidic compound for prolonged periods, e.g., one month, after administration of the complex. The complexes of the invention can be milled or crushed to a fine powder. In powdered form, the complexes form stable aqueous suspensions and dispersions, suitable for injection. In a preferred embodiment, the peptidic compound of the complex is an LHRH analogue, preferably an LHRH antagonist, and the carrier macromolecule is an anionic polymer, preferably carboxymethylcellulose. Methods of making the complexes of the invention, and methods of using LHRH–analogue–containing complexes to treat conditions treatable with an LHRH analogue, are also disclosed.