ABSTRACT

SELF-PRECIPITATING PHARMACEUTICAL FORMULATIONS FOR THE MODIFIED RELEASE OF AN ACTIVE PRINCIPLE

The present invention relates to novel pharmaceutical formulations for the release of an active principle (AP) over a sustained period of time of several days, or even several weeks.

The invention relates, in a first aspect, to a liquid formulation comprising at least one active principle (AP) and an aqueous suspension based on colloïdal particles of a polymer (PO), wherein said formulation satisfies the following four conditions:

(a) the polymer (PO) is a polyamino acid comprising glutamic residues, wherein

- some glutamic residues each carry a pendant cationic group (CG), said cationic groups being identical or different from one another, and
- other glutamic residues each carry a pendent hydrophobic group (GH), said hydrophobic groups (GH) being identical or different from one another,

(b) the pHf value of the pH of said formulation is between 3.0 and 6.5;

(c) at the pHf value, the polymer (PO) forms a colloïdal solution which associates spontaneously and noncovalently with the active principle (AP);

(d) 1 ml of said formulation precipitates during mixing with a volume of 1 ml of a test buffer solution Tp.

The invention also relates to a process for the preparation of such formulations and to a process for the preparation of medicaments including such formulations.