

ABSTRACT**MODIFIED-RELEASE MICROPARTICLES BASED ON AMPHIPHILIC COPOLYMER AND ON ACTIVE PRINCIPLE(S) AND PHARMACEUTICAL FORMULATIONS COMPRISING THEM**

The present invention relates to novel microparticles formed of amphiphilic polyamino acids which transport active principle(s), AP(s), in particular protein and peptide active principle(s), and to novel modified-release pharmaceutical formulations comprising said AP microparticles.

The aim of the invention is to develop novel microparticles, charged with AP, obtained by aggregation of nanoparticles of amphiphilic polyamino acids and having improved properties, in particular in the dry solid form, with regard to their ability to be dispersed and, concerning the reconstituted suspension, its stability and its ability to be easily handled and injected.

The invention relates firstly to microparticles of amphiphilic polyamino acid (PO) comprising at least one AP (associated noncovalently) which spontaneously form a colloidal suspension of nanoparticles in water, at pH 7.0, under isotonic conditions; which microparticles

- a. are obtained by atomization of a solution or colloidal suspension of PO comprising at least one AP,
- b. have a size of between 0.5 and 100 microns,
- c. and are dispersible in colloidal suspension.

The invention also relates to the process for the preparation of these microparticles, to a liquid formulation comprising a suspension of these PO/AP microparticles, to a reconstitution process and kit for this formulation and to a dry form of this formulation.