

ABSTRACT**POLYGLUTAMIC ACIDS FUNCTIONALIZED BY CATIONIC GROUPS AND HYDROPHOBIC GROUPS AND APPLICATIONS THEREOF, IN PARTICULAR THERAPEUTIC APPLICATIONS THEREOF**

The present invention relates to novel biodegradable materials based on modified polyamino acids that are useful in particular in the vectorization of active principle(s) (APs). The invention is also directed to novel pharmaceutical, cosmetic, health-food or plant-protection compositions based on these polyamino acids.

The aim of the invention is to provide a novel polymeric starting material which can be used for AP vectorization and which satisfy all the requirements: biocompatibility, biodegradability, ability to easily associate with or dissolve numerous active principles and to release these active principles in vivo. This goal is achieved by the present invention, which relates to novel polyglutamates modified by cationic groups, which, if they can be deprotonated, exhibit a pKa equal to or greater than 7, and by hydrophobic groups comprising from 8 to 30 carbon atoms.

These polyglutamates modified by cationic groups are easily and economically converted into particles for the vectorization of active principles, these particles being themselves capable of forming stable aqueous colloidal suspensions. These modified polyglutamates exhibit the advantage of being less viscous than other analogous polymers while retaining an ability to associate proteins, such as insulin. Some are soluble in water at acidic pH and become insoluble at physiological pH (7.4) and should thus, during subcutaneous injection, precipitate on the site of injection.