



Zwitterionic Hydrogels for the Sustained Release of Therapeutic Agents

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Summary: Compositions and methods to produce zwitterionic hydrogels for the sustained release of therapeutic agents.

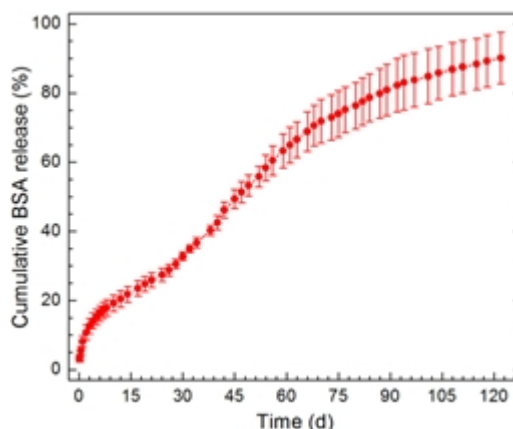
Description: Hydrogels have been considered as promising materials for the controlled delivery of macromolecular therapeutics such as proteins, peptides and genes, due to their good biocompatibility and tunable mechanical and chemical properties. However, their high water content generally results in a rapid release of therapeutics with a large burst release, which not only decreases the efficiency of the therapy but also can cause serious side effects due to the sudden increase of drug concentration in the blood. In addition, efficient loading of macromolecular therapeutics to the hydrogels is challenging since they are released during hydrogel washing steps. Disclosed herein are compositions and methods to produce zwitterionic hydrogels that overcome several limitations associated with the application of sustained drug delivery. For example, these hydrogel compositions demonstrate high loading efficiencies and sustained release profiles with little to no burst release.

Main Advantages of this Invention

- High loading efficiencies. Up to 80% loading efficiencies obtained.
- Sustained release of 4 months with little to no burst release

Potential Areas of Application

- Biotechnology
- Pharmaceuticals
- Ophthalmology
- Therapeutic contact lens and lens case



Cumulative release of BSA

ID number: 16044

Intellectual Property Status: US provisional patent 62/314,156 filed March 16, 2016.

Opportunity: We are seeking an exclusive or non-exclusive licensee for implementation of this technology.

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