youthful skin and the presence of a strong HA network in the intercellular matrix.

Unfortunately, non-cross-linked as well as cross-linked polysaccharide chains such as HA are subject to degradation through different pathways; (e.g. enzymatic, free radical) thus limiting the polymer's longevity *in vivo*. It is, therefore, important to develop methods and compositions that decrease the rate of natural decomposition and increase the product's persistence *in vivo*. There remains an unmet need for having a polysaccharide formulation which has increased longevity by being resistant to degradation.

SUMMARY

In a first aspect, there is provided a polysaccharide gel formulation comprising at least one polysaccharide selected from the group consisting of hyaluronic acid, cellulose, chitosan, *o*-sulfated HA, dextran, dextran sulfate, chondroitin sulfate, dermatan sulfate, keratin sulfate, heparin, heparin sulfate, and alginate, and at least one inhibitor of polysaccharide degradation which is tannic acid.

In a second aspect, there is provided a polysaccharide gel formulation with an increased degradation time comprising cross-linked hyaluronic acid and tannic acid, wherein said tannic acid is present at a concentration of about 0.0001% to about 1%.

In a third aspect, there is provided a method of producing a polysaccharide gel formulation comprising having an increased degradation time comprising the step of:

providing at least one polysaccharide selected from the group consisting of hyaluronic acid, cellulose, chitosan, *o*-sulfated HA, dextran, dextran sulfate, chondroitin sulfate, dermatan sulfate, keratin sulfate, heparin, heparin sulfate, and alginate and incorporating in said polysaccharide at least one inhibitor of polysaccharide degradation which is tannic acid.

Described herein are polysaccharide gel (e.g. hyaluronic acid, HA) formulations with increased longevity, or increased degradation time, *in vivo*. This increase in degradation time is provided by the incorporation of molecules that act as inhibitors to degradation. Further, the present disclosure provides methods for encapsulating these formulations to sustain a prolonged longevity or degradation time *in vivo*. The present disclosure also relates to the preparation of gels that can have pharmaceutical or cosmetic applications.

In one embodiment described herein is a polysaccharide gel formulation comprising at least one polysaccharide selected from the group consisting of hyaluronic acid, cellulose, chitosan, *o*-sulfated HA, dextran, dextran sulfate, chondroitin sulfate, dermatan sulfate, keratin sulfate, heparin, heparin sulfate, and alginate, and at least one inhibitor of polysaccharide degradation selected from the group consisting of a glycosiaminoglycan, an antioxidant, a flavonoid, a protein, a fatty acid, and combinations thereof. In one embodiment, the polysaccharide is cross-linked. In one embodiment, the at least one polysaccharide is hyaluronic acid.

In one embodiment, the glycosiaminoglycan is selected from the group consisting of heparin, heparin sulfate, dermatan sulfate, chondroitin