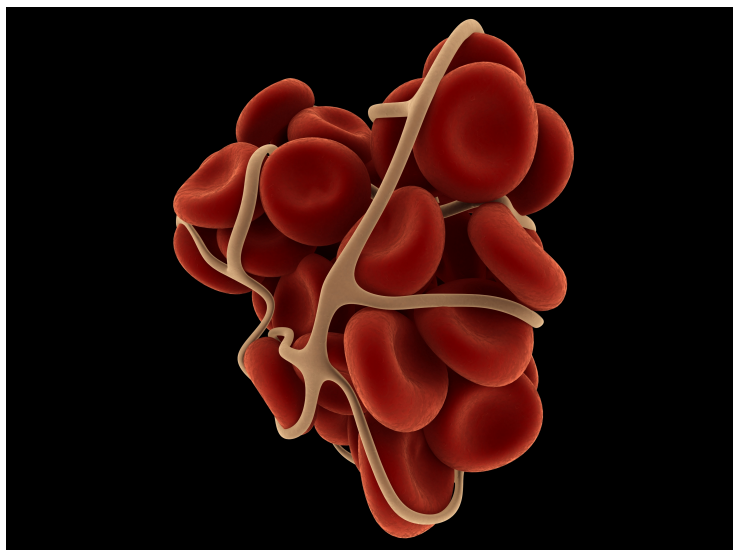


## Nanoengineered injectable bandages to heal injuries

04 April 2018 | News

**The researchers combined kappa-carrageenan with synthetic two-dimensional nanosilicates to generate an injectable hydrogel that can quickly stop bleeding**



A team from Texas A&M University has created a novel injectable bandage that blends a commonly used food thickening agent with nanoparticles.

The result is an injectable hydrogel that can rapidly stop bleeding and potentially promote wound healing.

Kappa-carrageenan, commonly extracted from red edible seaweed, has been utilized for decades as an effective gelling agent in food.

The researchers combined kappa-carrageenan with synthetic two-dimensional nanosilicates to generate an injectable hydrogel that can quickly stop bleeding.

The nanoparticles were found to enhance the hemostatic capacity of the hydrogel, speeding up the cascading process of blood clotting.

An injectable hydrogel containing nanoparticles promises to rapidly stop bleeding and enhance wound healing

Additionally, the nanoparticles can be modified to contain a variety of therapeutic biomacromolecules that result in enhanced tissue regeneration and wound healing.

This secondary benefit follows on from the injectable bandage simply stopping bleeding and provides a way to direct therapeutic molecules directly into a wound.