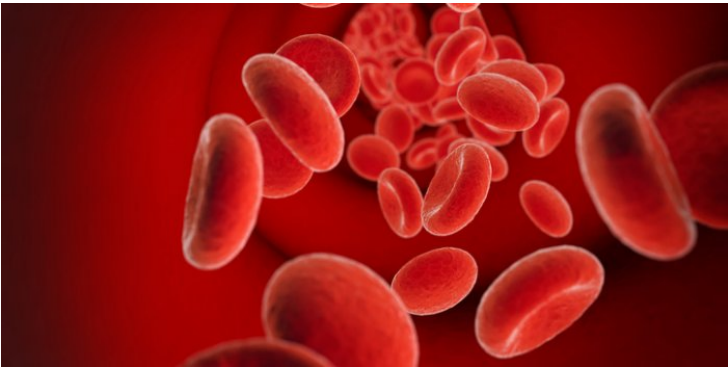


Indian scientist fabricates injectable bandage

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The team found that these injectable bandages can show a prolonged release of therapeutics that can be used to heal the wound.



A team of scientists led by Dr. Akhilesh K. Gaharwar, at the Texas A&M University, has successfully fabricated an injectable bandage to stop bleeding and promote wound healing. The team has used kappa-carrageenan and nanosilicates to form injectable hydrogels to promote hemostasis and facilitate wound healing via a controlled release of therapeutics.

When kappa-carrageenan is mixed with clay-based nanoparticles, injectable gelatin is obtained. The charged characteristics of clay-based nanoparticles provide hemostatic ability to the hydrogels. Specifically, plasma protein and platelets form blood adsorption on the gel surface and trigger a blood clotting cascade.

The team also found that these injectable bandages can show a prolonged release of therapeutics that can be used to heal the wound. The negative surface charge of nanoparticles enabled electrostatic interactions with therapeutics thus resulting in the slow release of therapeutics.