

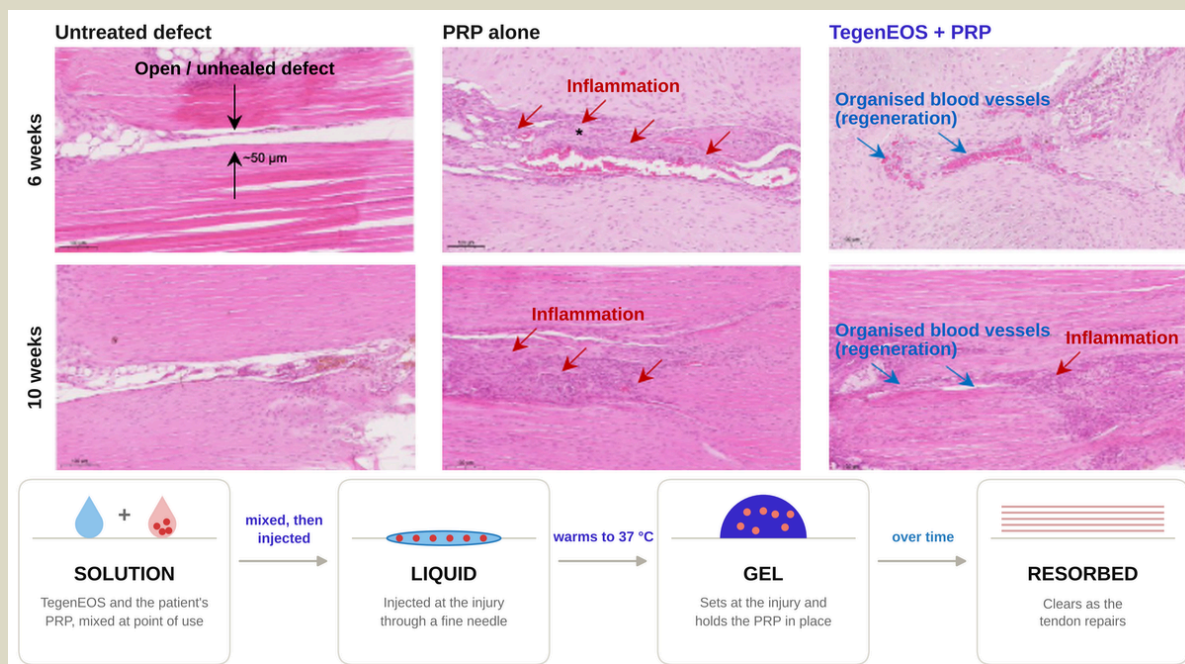
# TegenEOS+PRP Opens Orthopaedic Pathway with Positive Tendon Repair Data

29th October 2026

## HIGHLIGHTS

- TTX is pleased to announce the successful completion of its ten-week preclinical validation study of **TegenEOS** as a carrier for platelet-rich plasma (PRP) in tendon repair.
- More than **30 million tendon and ligament injuries occur worldwide each year**.
- PRP has one well-known weakness: **once injected, it does not stay where it is needed**. PRP is a liquid, and it disperses from the injury site within hours long before healing is under way.
- TegenEOS addresses this directly. It is mixed with PRP as a liquid, injected through a fine needle, and sets into a gel at body temperature, **holding the PRP at the injury** rather than letting it wash away.
- At six weeks, injuries treated with TegenEOS + PRP healed significantly better, these sites showed organised new blood vessels, less inflammation and scar-like tissue than injuries treated with PRP alone.
- These results extend TegenEOS beyond bone graft delivery to the delivery of biologics such as PRP for soft tissue repair. The global PRP market was estimated at more than **US\$700 million in 2026**, with orthopaedics and sports medicine its largest area of use.

Read our CEO's views and commentary on this space at our latest Medium post [here](#):



Above: the tendon repair site under the microscope at six and ten weeks. The untreated defect still shows a gap (black arrows); PRP alone shows a broad band of inflamed, scar-like tissue (red arrows); TegenEOS + PRP shows organised new blood vessels (blue arrows) and, by ten weeks, a narrower, better-aligned repair. Below: TegenEOS and the patient's PRP are mixed at the point of use and injected as a liquid, which sets to a gel at body temperature to hold the PRP at the injury and resorbs over time.

**Dr Ali Fathi, Founder and CTO of TTX, said:**

"PRP has never had a biology problem. It has a delivery problem. Clinicians are giving patients a concentrate of their own growth factors, and most of it has left the injury long before healing has really begun. We asked a simple question: what happens if you keep it there? Same PRP but the only difference was our matrix holding it in place. At six weeks we saw organised new blood vessels where PRP alone left inflammation and scar tissue, and at ten weeks TegenEOS resulted in the most ordered repair of any group we examined.

What I like most is how little it asks of clinicians and end users. The PRP is prepared exactly as it is today, mixed with TegenEOS at the point of care and injected, and body heat does the rest: no activator, no additive, no new equipment. It is the same Tetramatrix chemistry that carries bone graft in TegenEOS, doing a second job. That turns a bone graft carrier into a delivery platform for biologics, and it is a conversation we can now take to orthopaedic partners with data in hand."

## CONTEXT

### Where is it used?

Tendons are the tough cords that connect muscle to bone. They are injured in sport, at work and increasingly with age; the Achilles tendon, the rotator cuff in the shoulder and the patellar tendon below the kneecap are common examples. Tendons heal slowly and often poorly, because they have little blood supply and few cells. The tissue that forms is largely scar, which is weaker than the tendon it replaces.

PRP is one of the most widely used ways to help. A small sample of the patient's blood is spun in a centrifuge to concentrate the platelets, and the concentrate is injected at the injury, either in the clinic or during surgery. Platelets carry growth factors that signal the body to grow new blood vessels, bring in repair cells and rebuild tissue. Because TegenEOS is injected through a fine needle and sets with body heat alone, TegenEOS + PRP can be given in an outpatient clinic, without an operating theatre or additional equipment. This has the potential to lower the cost of treatment for patients and healthcare systems.

### Why keeping PRP at the injury matters

Growth factors only help where they are. Healing a tendon takes weeks, but injected PRP is a liquid and disperses from the site within hours, so much of the signal it carries is lost early. Holding PRP in a gel at the injury is a recognised way to solve this. The difficulty is that most gels need a chemical reaction, an activator or an additive to set, and anything added to the PRP risks changing the very thing it is meant to deliver.

### What is TegenEOS and how does it work?

TegenEOS is our bone graft carrier, formulated from our proprietary Tetramatrix™ platform technology. In this study it was used, under development code TP280, as a carrier for PRP.

TegenEOS is:

- Supplied as a sterile, ready-to-use liquid in a syringe
- Mixed with the patient's PRP while cool, with no chemicals, activators or additives
- Injected through a fine needle, then set by the patient's own body heat into a cohesive gel

This gel:

- Holds the PRP as a single deposit at the injury instead of letting it disperse
- Releases the PRP's proteins over a longer period than PRP alone, in laboratory testing
- Does not damage what it carries: key healing signals remained active after mixing
- Resorbs over time as the tissue repairs

**Same PRP, kept where it is needed. The difference is not the biology being delivered, but whether it stays at the injury long enough to act.**

### Why is it a good commercial opportunity?

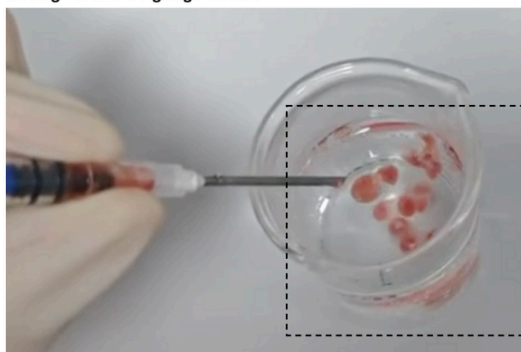
PRP is already an established treatment, with its own preparation systems, clinical routines and, in some markets, reimbursement. What it lacks is a reliable way to stay at the injury. TegenEOS does not ask clinicians to replace PRP or change how it is prepared; it adds one simple step that keeps the PRP they already use where it is put.

Key advantages:

- Works with the patient's own PRP, prepared exactly as it is today
- Requires no additional equipment or hospital infrastructure
- Sets by temperature alone, so nothing is added to the PRP
- Derived from a single platform chemistry we already manufacture across our products, with biocompatibility testing already completed for the underlying technology to support our US FDA submissions

**What have we seen in the study and how do we measure success?**

**Liquid:** mixed with PRP and injected through a fine 24-gauge needle



**Gel:** sets on contact with warm saline at 37 °C, holding the PRP



TegenEOS mixed with PRP passes through a fine needle as a liquid (left) and sets on contact with warm saline at body temperature, holding the PRP as discrete deposits rather than letting it disperse (right, detail of the boxed area).

The study was carried out in two stages. In the laboratory, we confirmed that TegenEOS mixes evenly with PRP, stays injectable through a fine needle, sets at body temperature, and releases the PRP's proteins over a longer period than PRP alone, while key healing signals (VEGF and HIF-1α) remain active.

In the animal stage, a defect was created in the patellar tendon, below the kneecap, an injury that does not heal on its own in this model. Animals were treated in four groups: untreated, TegenEOS alone, PRP alone, and TegenEOS + PRP. Male and female animals were included and were followed to six and ten weeks. We tracked body weight and organ weights, examined the limbs, and examined the repair site under the microscope.

Untreated defects still showed a gap at six weeks and traces of old bleeding at ten weeks, confirming the injury does not heal on its own. PRP alone produced a broad band of inflamed, scar-like tissue at the repair. With TegenEOS + PRP, the repair at six weeks was crossed by organised new blood vessels, with less inflammation. By ten weeks it was the narrowest and most regularly aligned of the groups examined, and the blood vessels were still present. The tissue was rebuilding rather than scarring.

No section containing TegenEOS, with or without PRP, showed the features of a foreign body reaction (giant cells, granuloma or a fibrous capsule) at either time point, and body weight and organ weights were comparable across all groups.

These results answer the first question any clinician or commercial partner asks of a PRP carrier: **does keeping PRP at the injury make a difference.** In this preclinical model it did, which supports the further development of TegenEOS as a carrier for PRP.

#### **Are we changing the way PRP is used?**

No. Clinicians prepare PRP exactly as they do today. TegenEOS is mixed in at the point of care before injection, and the patient's body heat does the rest. What this study adds is evidence that the PRP then stays where it is needed, and that the tissue responds better for it.

#### **What are the next technical and commercial steps?**

An equine study is being prepared to confirm these results in a larger animal model, alongside a dedicated PRP development plan. TegenEOS continues to progress toward its US FDA 510(k) approval as a bone graft carrier, and PRP delivery adds a second application for the same product. Use of TegenEOS to deliver PRP is a different intended use from bone graft delivery and will require its own regulatory pathway, which will be defined as part of the PRP development plan with multiple catalysts in the near future.

Consistent with our platform-to-product model, TegenEOS is intended for commercialisation through partnership. TTX generates the proof-of-concept and pilot data; the partner owns regulatory approval, reimbursement and market planning. These results broaden the opportunity with orthopaedic partners, positioning TegenEOS both as a bone graft carrier and as a delivery vehicle for biologics.

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