

Special Issue

Research Progress on Molecular Repair of Tendon/Ligament

Message from the Guest Editor

The repair of tendon injuries still presents a major clinical challenge to orthopedic medicine. Tendons and ligaments are poorly vascularized and heal slowly. Further, healing often causes the formation of fibrous tissue and scar tissue which lack flexibility and biomechanical properties. Thus, the management of tendon and ligament injuries is challenging.

For this reason, better knowledge of the molecular mechanisms underlying tendon and ligament healing is fundamental for the development of new treatments to accelerate it. These include platelet-rich plasma (PRP), which has been shown effective in treating many tendon and ligament disorders; synthetic peptides to endow biomaterials with novel biological functions, namely to capture and immobilize endogenous growth factors; hydrogel-mediated delivery of bone morphogenetic protein-2 (BMP-2) and GSK126 that appears to be safe and has the potential to enhance tendon-to-bone tunnel healing in ligament reconstructions; engineered tissue graft for rotator cuff in rotator cuff tears; and combined stem cell technology with a non-absorbable biomaterial for the reconstruction of the ruptured anterior cruciate ligament.

Guest Editor

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