



## SPECIAL ISSUE: BIOLOGIC ACL REPAIR - AUGMENTATION

Ignacio Dallo<sup>1</sup>, William D. Murrell<sup>2-5</sup>

<sup>1</sup>SportMe Medical Center, Department of Orthopaedic Surgery and Sports Medicine. Unit of Biological Therapies and MSK Ultrasound, Seville, Spain

<sup>2</sup>Gardner Orthopaedics, Ft Myers, Florida, United States of America

<sup>3</sup>411<sup>th</sup> Hospital Center, Jacksonville Naval Air Station, Jacksonville, Florida, United States of America

<sup>4</sup>Harlem Hospital Center, New York, New York, United States of America

<sup>5</sup>Institute for Mobility and Longevity, Phoenix, Arizona, United States of America

Author for correspondence: Ignacio Dallo: [doctorignaciodallo@gmail.com](mailto:doctorignaciodallo@gmail.com)

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Unlike other knee ligaments, such as the posterior cruciate ligament (PCL) and medial collateral ligament (MCL), the ACL possesses a limited intrinsic capacity for spontaneous healing after an injury.<sup>1</sup> Despite recent advances in orthopedics, there remains controversy in ligament injury treatment, particularly when functional insufficiency is associated with a partial ligament injury. There are challenges related to restoring joint homeostasis and biomechanics in cases of ACL injury, and biological approaches have great potential to address some of these concerns.<sup>2</sup> The use of orthobiologics, including different growth factors, platelet-rich plasma (PRP), stem cells, biological scaffolds, and augmented ACL primary repair, has been the focus of current research in ACL accelerated repair and healing. These alternatives to the current surgical reconstruction techniques can preserve the native insertion site of the remaining fibers and, therefore, its proprioceptive function, which may lead to more natural biomechanics.<sup>1</sup>

These orthobiologic treatments may be an essential feature of treatment algorithms as these technologies develop and understanding of reparative processes at the cellular level advances.<sup>3</sup> There has been an acceleration in the publication of literature

that examines the clinical outcomes of biologic ACL repair procedures over recent times. In the case of ACL insufficiency, initial findings have been most supportive of the biologic ACL repair /augmentation in acute, partial, and proximal ligament injury. This ongoing work will have excellent clinical importance in identifying and characterizing specific injury patterns that would benefit most from these regenerative treatments.<sup>4-11</sup>

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