

CaReS®-1S – Literature (verfügbar)

Titel	Autor	Ergebnis
A comparative study of 3 different cartilage repair techniques	Schneider et al., Knee Surg Sports Traumatol Arthrosc DOI 10.1007/s00167-011-1460-x	This study demonstrates the high chondrogenic potential of the applied collagen gel, which might help to overcome the disadvantages inherent in conventional cartilage tissue engineering methods.
Cell-free repair of small cartilage defects in the Goettinger minipig: which defect size is possible?	Gavenis et al., Knee Surg Sports Traumatol Arthrosc DOI 10.1007/s00167-011-1847-8	As cell-free collagen type-I gel plugs of all three different sizes created hyaline-like repair tissue, this system seems suitable for the treatment of even larger defects.
A Cell-Free Collagen Type I Device for the Treatment of Focal Cartilage Defects	<i>Gavenis et al., Artif Organs, Vol. 34, No. 1, 2010</i>	In this study, we present a collagen gel plug intended for the treatment of focal cartilage lesions. It has proven to promote chondrocyte in-growth and proliferation in vitro. We believe that this cell-free plug has the potential to become a device for the arthroscopic treatment of focal cartilage defects.
Cell-free collagen type I matrix for repair of cartilage defects— clinical and magnetic resonance imaging results	Efe et al., Knee Surg Sports Traumatol Arthrosc DOI 10.1007/s00167-011-1777-5	Cell-free collagen type I matrix repair of small articular cartilage lesions in the knee leads to good clinical results at a follow-up of 2 years. A sufficient adherence rate and articular resurfacing were detected by MRI. The new collagen type I matrix might help to overcome some of the disadvantages inherent in conventional cartilage tissue engineering techniques.
Repair of a chondral defect using a cell free scaffold in a young patient - a case report of successful scaffold transformation and colonisation	Schüttler et al. BMC Surgery 2013, 13:11 http://www.biomedcentral.com/1471-2482/13/11	In addition to good clinical and radiological results reported for cell-free scaffolds for cartilage repair in several other studies, transformation of the scaffold could be observed during re-arthroscopy for the meniscal tear. Histological examination of the specimen revealed articular cartilage with vital chondrocytes and a strong staining reaction for type II collagen (COL II), but no reaction for type I collagen staining. This might indicate a complete transformation of the scaffold and supports the theory that cell free scaffolds could support cell migration. Although the cell source remains unclear, migrating chondrocytes from the periphery remain a possibility.
Use of cell-free collagen type I matrix implants for the treatment of small cartilage defects in the knee: clinical and magnetic resonance imaging evaluation	Schüttler et al., Knee Surg Sports Traumatol Arthrosc DOI 10.1007/s00167-013-2747-x	The present study showed that the use of cell-free collagen type I matrix implants led to a significant and durable improvement in all the clinical and imaging scores investigated 4 years after implantation.
Short-term follow up after implantation of a cell-free collagen type I matrix for the treatment of large cartilage defects of the knee	Roessler et al., International Orthopaedics (SICOT) DOI 10.1007/s00264-015-2695-9	Cell-free collagen type I matrices appear to be a safe and suitable treatment option even for large cartilage defects of the knee. Results of this study were comparable to the better-established findings for small cartilage defects. Mid- and long-term results will be needed to see if clinical and MR-tomographic outcome can be maintained beyond 24 months.