

Project	Intended use for Impact statement	Impact statement:
Biogellics	Both	<p>Osteoarthritis (OA), is considered one of the most disabling diseases in developed countries. It affects 240 million people globally and its prevalence is increasing. Currently, there are no drugs approved which treat OA progression. We present a tissue engineered construct, that provide a suitable environment for osteochondral repair. Our approach focuses on treating the illness itself and it is specially indicated for relative early OA stages. The solutions already existing, based on stratified designs, are susceptible of delamination presenting abrupt changes in properties, which give poor results and mechanical failure. We have developed a technology which overcomes these problems with very high versatility.</p>
Biogellics	Both	<p>Osteoarthritis (OA), is the most common form of arthritis and it is considered one of the most disabling diseases in developed countries. It affects 240 million people globally and its prevalence is increasing. Currently, there are no drugs approved which prevent, treat or even restrain OA progression. There is an imperative need for developing treatments that instead of focusing on reducing the symptoms of OA, target the illness. we present a tissue engineered construct, with a great potential to be used as scaffold and provide a suitable environment for osteochondral repair and regeneration, thanks to its both osteogenic and chondrogenic induction potential. Thus, our approach focuses on treating the illness itself and it is specially indicated for relative early OA stages, as it promotes tissue regeneration and cartilage formation. Cartilage is an anisotropic tissue that presents a heterogeneous structure. Different approaches have been developed to obtain scaffolds that mimic the osteochondral junction, such as stratified models consisting in a bone-like layer and a cartilage-layer kept together using, among others, fibrin glue. Such stratified designs are susceptible of delamination and present abrupt changes in physical and mechanical properties, which give poor results as the resulting scaffold may lead to poor tissue quality and mechanical failure. Thus, we have developed a technology which allows the immobilization of collagen-based hydrogels onto any substrate by means of a polymeric coating. This technique, allows the modification of almost any type of substrate, conferring a high versatility to the technology widening its range of application</p>