# BIOMATERIALS BASED ON COLLAGEN AND POLYSACCHARIDES INVOLVED IN TISSUE REGENERATION - MINIREVIEW

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**Abstract.** *This article aims to review the specialized literature regarding biomaterials based on collagen and polysaccharides useful in tissue regeneration. Collagen is the predominant protein in the animal body. The rather large spread of this protein, its physico-chemical and biological properties allow its use in the creation of materials that can come into direct contact with animal tissues, including human ones. Biomaterials based on collagen play an important role in tissue engineering. These can be spongy matrices, membranes or hydrogels. Combining collagen with different polysaccharides (cellulose, chitosan, alginate, hyaluronic acid) leads to the improvement of the physical-chemical, mechanical and biological properties of the resulting biomaterials. Studies have shown that they can be used in the regeneration of epidermal tissue, bone tissue, neural tissue, eye tissues. Collagen combined with chitosan can be used in bioprinting. The studies carried out on cell cultures demonstrated that the biomaterials resulting from the combination of collagen with different polysaccharides have a low degree of cytotoxicity. In various articles it was shown that these biomaterials have the physico-chemical properties (degree of biodegradability, degree of swelling, degree of porosity) necessary for tissue regenerative engineering.*

**Keywords:** collagen, polysaccharides, biomaterial, biopolymer, properties
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