

Collagen and metronidazole-based materials for applications in the treatment of periodontitis

Drd. Alice Gianina CHIROBOCEA (SIMONCA)

PhD Advisor Prof. Dr. Ing. Ileana RĂU

Abstract

The aim of this thesis was to obtain and characterize new materials based on collagen and antibiotic (metronidazole) and various other components with applications in the treatment of periodontitis, both for soft tissue regeneration, gingival tissue and for bone tissue regeneration. These materials have been designed for hard tissue regeneration when strontium ranelate has been added and for soft tissue regeneration when natural polysaccharides, hyaluronic acid or carrageenan have been added.

For this purpose, drug delivery systems have been designed, manufactured and characterized both in the form of hydrogels and in the lyophilized form of hydrogels, the form of spongy matrices for applications in periodontitis, but also in other simple conditions or in oro-maxillofacial surgery.