THE USE OF GFP-PT-76 CELLS FOR THE Hap AND TCP BIOCOMPATIBILITY DETERMINATION

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A novel method for testing cytotoxicity and biocompatibility of biomaterials was developed. The method included the use of cell line expressing green fluorescent protein (GFP). It is based on green fluorescence of alive cells in UV light. This method allowed to visualize process of testing and used software for processing results. Combination of novel method with traditionally used Crystal violet (CV) and MMT assays for measurement of cytotoxicity give possibilities to test more properties of the biomaterials.

Our method was applied on two samples of biomaterials generated for bone transplantation. One of them calcium phosphate ceramic – hydroxyapatite (Hap). Another sample – tricalcium- phosphate ceramic– tricalcium phosphate (TCP).