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**THE INFLUENCE OF STRUCTURE OF THE SURFACE OF TITANIUM AND
ZIRCONIUM MODIFIED BY CALCIUM PHOSPHATE COMPOSITES ON THE
CYTOLOGICAL PECULIARITIES OF OSTEOBLASTS**

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The properties of the titanium implants are secured to the great extent by macro- and microstructure of the surface as a whole, and by the chemical composition and the structure of the intermediate layers, firstly the titanium oxides and gradient coatings with the preassigned

distribution of the concentration of the components by the thickness from bioactive materials. We present the results of the investigational processes of the formation of the surface of the clean Ti in the course of the impulse –laser and plasma-arc treatment, when the microstructures with the change or reservation of the Ti phase may form, and also the coatings with hydroxyapatite and tricalciumphosphates, that overlay on these structures with forming the complex intermediate oxide layers.

The investigation presents the comparative results of the influence of the samples of titan and zirconium with the phasal – structural change of their surface by the impulse Nd – YAG laser on the cytological peculiarities of the cultivated osteoblasts. According to the investigated indices – the estimation of the proliferation and the adhesion of the cells to the surface of the samples, the cytological and ultra- structural state of the cells, the absence of pathological mitosis, all the samples under investigation are bio – compatible. Better indicators are characteristic for the zirconium and titan with the modified surface.