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Adhesion and Proliferation of Red Fluorescent U87 Cells in a Mirco-Incubator

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Adhesion and proliferation of red fluorescent U87 cells in a micro-incubator

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Abstract

Availability of bone forming osteoblast cells from genetically modified green fluorescing protein (GFP) expressing mouse opens up the possibility of carrying out live cell imaging of the cells as they adhere, migrate and proliferate on nano-texture modified opaque metallic surfaces. This will lead to improved bone implant materials. A micro-incubator has been designed for this purpose. Adhesion and proliferation of human brain red fluorescent protein U87 cells on a titanium alloy were studied to establish the feasibility of such a research in terms of contamination free live examination of cells over a prolonged period of time. It has been possible to observe and record for seven to eight days the live adhesion and proliferation of U87 cells on titanium surface. Cells inoculated at a density of 200 cells/mm² proliferated 131% over a one week period.