

Effects of Low-Level Laser Irradiation on Mammalian Cell Cultures: Comparative Experimental Studies with Different Types of Lasers at 1260-1270 nm

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The effects observed with near-infrared laser irradiation of mammalian cells have been demonstrated to depend to a large extent on the type of irradiation source. In our experiments, we have measured oxidative stress and cell viability in cell cultures of different origins (rodent and human, cancerous and non-cancerous) exposed to the radiation of low-level lasers at 1260-1270 nm. Surprisingly, the effects of narrow-band laser radiations occur to be more pronounced compared with the effects provided by the lasers of broader linewidth. Besides, the aggressive types of cancer are found to require a more accurate selection of irradiation parameters and laser operation regime.