

Abstract Submitted
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Effect of non-thermal atmospheric pressure plasma jet on human breast cancer cells SHAHRIAR MIRPOUR, Laser-Plasma Research Institute, Shahid Beheshti University, Evin, 1983963113, Tehran, Iran, MARYAM NIKKHAH, SOMAYE PIROUZMAND, Department of Nanobiotechnology, Faculty of Biological Sciences, Tarbiat Modares University, Tehran, Iran, HAMID REZA GHOMI, Laser-Plasma Research Institute, Shahid Beheshti University, Evin, 1983963113, Tehran, Iran — Nowadays, Non-thermal plasma enjoy a wide range of applications in biomedical fields such as Sterilization, Wound healing, Cancer treatment and *etc.* The aim of this paper is to study the effect of non-thermal atmospheric pressure plasma jet on breast cancer (MCF-7) cells. In this regard the effect of plasma on death of the cancer cells are explored experimentally. The plasma in this discharge is created by pulsed dc high voltage power supply with repetition rate of several tens of kilohertz which led to the inductively coupled plasma. The pure helium gas were used for formation of the plasma jet. MTT assay were used for quantification of death cells. The results showed that the cells death rate increase with plasma exposure time. This study confirm that plasma jet have significant effect on treatment of human breast cancer cells.

Shahriar Mirpour
Laser-Plasma Research Institute, Shahid Beheshti University,
Evin, 1983963113, Tehran, Iran

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