

1. Micronucleus formation induced by dielectric barrier discharge plasma exposure in brain cancer cells

Kaushik, Nagendra K. (1); Uhm, Hansup (1); Ha Choi, Eun (1)

Source: *Applied Physics Letters*, v 100, n 8, February 20, 2012; **ISSN:** 00036951; **DOI:** 10.1063/1.3687172; **Article number:** 084102; **Publisher:** American Institute of Physics

Author affiliation: (1) Plasma Bioscience Research Center, Kwangwoon University, Seoul 139-701, Korea, Republic of

Abstract: Induction of micronucleus formation (cytogenetic damage) in brain cancer cells upon exposure of dielectric barrier discharge plasma has been investigated. We have investigated the influence of exposure and incubation times on T98G brain cancer cells by using growth kinetic, clonogenic, and micronucleus formation assay. We found that micronucleus formation rate directly depends on the plasma exposure time. It is also shown that colony formation capacity of cells has been inhibited by the treatment of plasma at all doses. Cell death and micronucleus formation are shown to be significantly elevated by 120 and 240 s exposure of dielectric barrier discharge plasma. © 2012 American Institute of Physics. (28 refs)

Main heading: Plasma theory

Controlled terms: Cell death - Dielectric devices - Flow control

Uncontrolled terms: Brain cancer - Colony formation - Cytogenetic damage - Dielectric barrier discharge plasmas - Formation rates - Incubation time - Plasma exposure time

Classification Code: 461.9 BiologyBiology - 631.1 Fluid Flow, GeneralFluid Flow, General - 704 Electric Components and EquipmentElectric Components and Equipment - 714 Electronic Components and TubesElectronic Components and Tubes - 932.3 Plasma PhysicsPlasma Physics

Database: Compendex

Compilation and indexing terms, Copyright 2018 Elsevier Inc.

Data Provider: Engineering Village