

IN VITRO STUDY OF EFFECT OF LIGHT DOSE AND PHOTOFRIN CONCENTRATION ON PHOTODYNAMIC THERAPY OF MEDULLOBLASTOMA CELLS

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This study was aimed at investigating two variables in the photodynamic therapy (PDT) of medulloblastoma cells: light dose and Photofrin concentration. To investigate the effect of Photofrin concentration, a Daoy medulloblastoma cell line was incubated with variable concentrations of Photofrin for 24 hours before exposure to a diode laser (605nm) with a set output of 100 J/cm². To investigate the effect of light dose, the same cell line was incubated with 20ug/mL Photofrin for 24 hours before exposure to variable laser outputs. In both investigations, methyl-tetra-zolium (MTT assay; 3-(4,5-dimethylthiazolyl-2)-2, 5-diphenyltetrazolium bromide) was used to determine cell viability and proliferation after PDT. Standardization of the MTT assay was performed order to accurately compare experimental cell viabilities with known concentrations of the same cell line; the resulting “cell concentration vs. absorbance curve” allows for a standard of comparison of cell viability for cells undergoing PDT.

