

Abstract Submitted
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Power source effects of soft plasma jet and the differential response of skin cancer and normal cells NATHANIEL TAYLOR, Drexel University, DANIL DOBRYNIN, A.J. Drexel Plasma Institute, ALEXANDER FRIDMAN, Drexel University, EUN HA CHOI, Kwangwoon University — The effects of pulsed power direct current energy sources were compared using an indirect discharge plasma jet applied to treat cancerous and normal skin cells. Two power supplies with different voltage and current profiles were compared and optimized through the measurement of physical parameters and evaluated through the treatment of skin cells using an atmospheric pressure nitrogen gas plasma jet. Plasma density and temperature, power output, gas output temperature, and reactive species production were measured. Cell morphology, viability, and ROS generation were investigated using staining. A differential response has been shown between the normal and cancerous cell lines. The cancer cells viability reduced while normal cells did not over the same treatment time.

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