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Feed Gas Dependent Nonthermal Plasma Interaction with Bio-organisms

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The nature of feed gas is essential for the active species formed in the nonthermal plasma jets, which would induce various biological phenomena. We investigated the different physiological effects of atmospheric pressure soft-plasma jets on *Escherichia coli* and blood cells according to the feed gas. Cell death rate, growth curve, membrane molecular changes and induced genes were examined. The relationship between cellular reactions and active species generated by discharge will be discussed.

Keywords: nonthermal plasma jets, *Escherichia coli*, blood cells, reactive oxygen species, reactive nitrogen species