

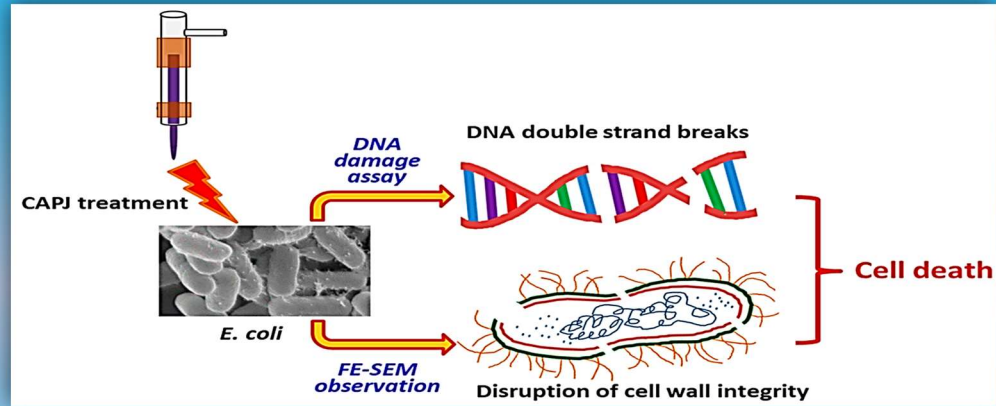


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Research Interest:

- ❖ Atmospheric pressure plasma
- ❖ Microwave plasma source
- ❖ Waves in plasma
- ❖ Plasma diagnostic

Efficacy of cold atmospheric plasma jet for its antimicrobial activity against drug resistant bacterial and fungal pathogen: An in-vitro and in-vivo study



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Research Interest:

- ❖ Antimicrobial resistance
- ❖ Septicemia
- ❖ Urinary tract infection
- ❖ Hospital infection control



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Cold atmospheric plasma sterilization is an emerging tool for microbial decontamination. Now Healthcare associated infections are a major cause of morbidity and mortality in any hospital. Drug Resistant Gram-negative bacteria and fungal pathogen have worsened the situation. The conventional methods, most of them have certain draw backs in term of adverse effect or logistic issue. Cold plasma sterilization method has shown to have significant bacterial decontamination property

The main objectives are:

- ❖ Development of a compact cold atmospheric plasma jet and optimization of various plasma parameters for microbial inactivation
- ❖ Adsorption study of nutrients (eg. Proteins) after plasma treated healthcare devices
- ❖ *In-vitro* evaluation of cold plasma for microbial inactivation against multidrug resistant bacteria and fungal pathogen
- ❖ *In-vivo* evaluation of safety of cold plasma using mice model
- ❖ Microbial inactivation property of cold plasma on healthcare devices and surfaces