



Cold Atmospheric Plasma (CAP) Treatment of Onychomycosis: Application and Mechanism

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Onychomycosis is a prevalent disease with large population (over 10% of adults) and low curing rate by current methods. In our previous and ongoing study, we have showed that cold atmospheric plasma (CAP) has great potential in treatment of onychomycosis both *in vitro* and *in vivo*. A remarkable 2~6 log reduction of *E. coli* and *T.rubrum* located on the backside of the fungal nail model was obtained by 20~45mins CAP treatment.

And a patient with 9 infected nails was cured by 3 times of 45mins surface micro-discharge (SMD) treatments. The possible mechanism of the SMD treatment of onychomycosis would be the penetration of reactive species (mainly RONS) through the nail plate, the uptake and the chemical reactions between the keratin nail plate and the RONS.

References

The references related to your talks will be used to write summary paper in RMPP (Rev. Mod. Plasma Phys.). So do not miss important papers related to your talk.