SilvoClean: Nano AgCide technology, a potential COVID-19 solution

To contribute to the fight against the global pandemic, Biotechnology Industry Research Assistance Council (BIRAC), New Delhi supported Weinnovate BioSolutions has developed a non-alcoholic aqueous based 'Colloidal Silver' solution uniquely made from its NanoAgCide^{TM} technology for disinfecting hands and environmental surfaces.

Silver nanoparticles have antiviral efficacy against many viruses viz. HIV, Hepatitis B, Herpes simplex virus, Influenza virus etc. Recent reports have suggested the role of Silver nanoclusters in inhibiting the proliferation of Coronavirus. Nanoparticles are rapidly emerging as an effective solution to a variety of issues related to COVID-19, from disinfection to imaging. Ag NP-based materials will be able to prevent the contact infection of health care workers (HCWs), besides preventing patient infection. Thus, colloidal silver can affect COVID -19: 1) Spread by blocking the RNA replication and 2) Infectivity by blocking the surface glycoproteins.

This proprietary technology is gentle on the skin and doesn't require any special arrangement for storage unlike the alcohol-based sanitizers which are highly inflammable making their production, transportation and storage a risky affair. Another major advantage is that the solution is that it releases the silver nanoparticles on the surface in a slow and sustained manner which ensures its effectiveness for a longer duration. The product is priced at Rs.450 for a 500mL bottle. An Indian patent has been filed for the process of making of the colloidal silver and test license has been granted for making hand sanitizers and disinfectants. Since, hospital acquired

infections are affecting millions of people worldwide and in these times of COVID when the transmission through contact is very high, the risk is even higher while visiting the hospitals. Thus, the start-up aims to manufacture 200 litres or more of colloidal silver solution per day to cater to the demand of hand sanitization and disinfection to stop the spread of infection.

Innovativeness of this technology:

- Safe: Aqueous based; no hazardous chemicals
- Effective against bacteria, spores and viruses
- Can be used on all surfaces
- Stays on the surface for a longer time
- More effective
- Non-Inflammable

Link: https://birac.nic.in/webcontent/1589286696_Potential_COVID_19%20Solutions_20200512.pdf

Contact details:

Dr Shirshendu Mukherjee, mdpmubmgf@birac.nic.in

Dr Hafsa Ahmad, nbm9@birac.nic.in

Ms Ginny Bansal, pmubmgf6@birac.nic.in