Strl Air - A Portable Disinfection Technology for Combat Care Use.

Nipun Chopra, PhD [1,2] , Anh Le [2], Philips Akinwole, PhD [1], and Ravi Avasarala, PMP, MBA. [1,3]
[1] DexTech Corp; [2] DePauw University; [3] Ogni Capital Partners
DexTech UEI: V8GLE9G9PTK4
Contact: Nipun@DexTechCorp.com

Strl Air reduces viral, bacterial, and fungal loads on hospital surfaces and in medical supplies. Strl Air aims to reduce rates of nosocomial infections in field care, reduce return to care, and reduce loss of duty days.

INTRO / BACKGROUND

- **Increased Hospital Stay:** Hospital-acquired infections (HAIs) add approximately 10 to 20 days to hospital stays, leading to higher healthcare costs and increased mortality.

- **Burn Injuries & HAIs:** Burn injuries have a high risk of HAIs, with pathogen invasion occurring within 5 days, causing tissue destruction, visceral hematogenous lesions, leukopenia, hypothermia, and increased mortality.

- **Associated Infections:** Burn wound infections are linked to urinary tract infections and bloodstream infections, complicating patient outcomes.

-**Common Pathogens:** Pathogens like Pseudomonas aeruginosa, Klebsiella pneumoniae, and Staphylococcus aureus are often involved, many of which are multidrug-resistant and form resistant biofilms.

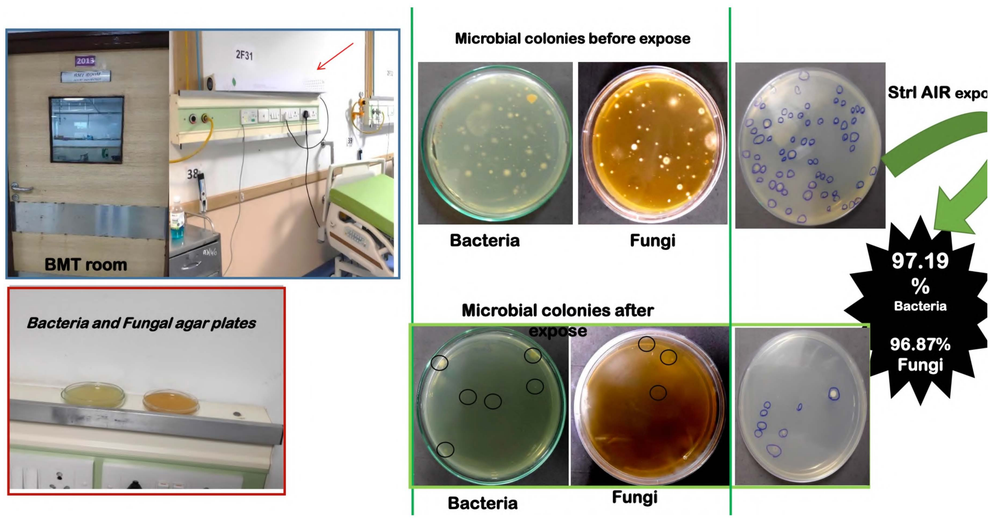
- **Multidrug-Resistant Concerns**: The presence of multidrug-resistant organisms, such as Acinetobacter baumannii and methicillin-resistant S. aureus (MRSA), poses a significant challenge in burn units, requiring strict infection control measures.

- **Infection Rates:** Despite stringent measures, infection rates in some surgical units remain alarmingly high, ranging from 10.53% to 58.3% of patients. Problem is exacerbated in high-stress mobile medical settings.

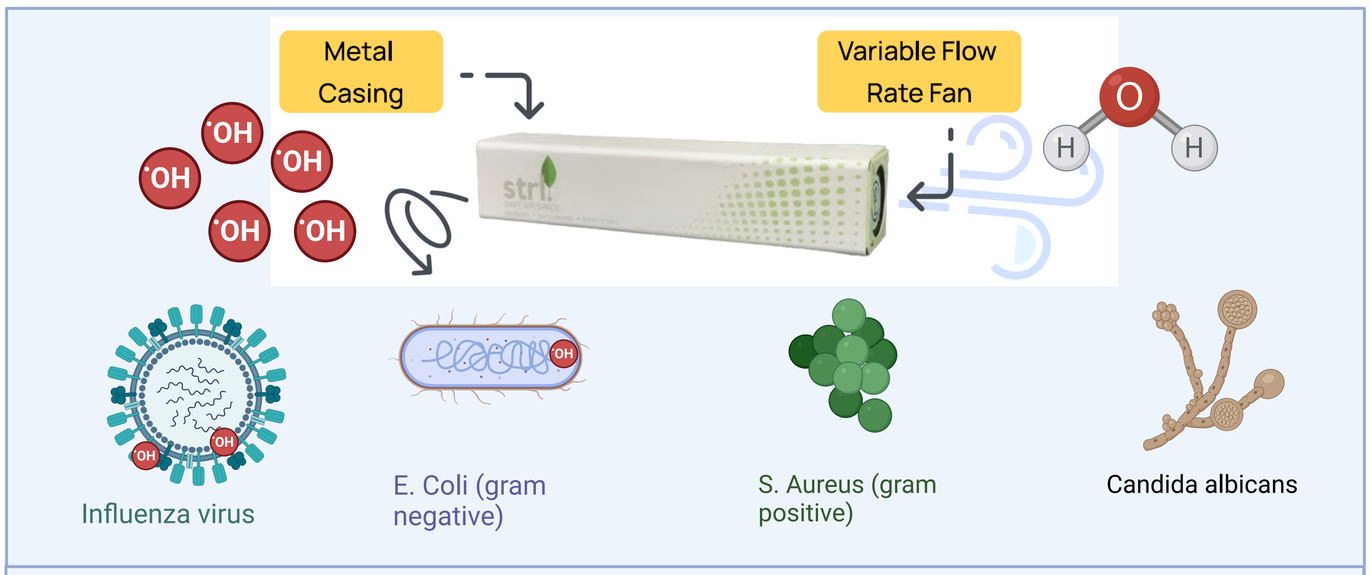
- **Unmet Need:** There is a critical need for a portable, continuous, safe, and effective disinfection method that can be deployed in various healthcare settings to reduce HAI rates and improve patient outcomes.

LAB STUDIES

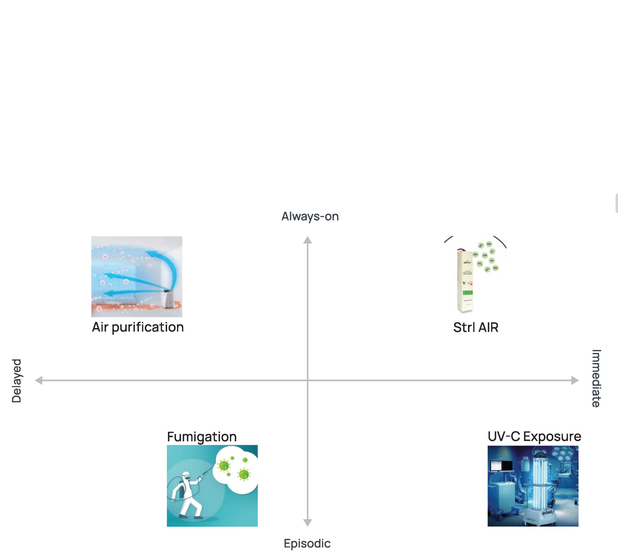
Studies conducted in 3 ERs at hospitals in India.



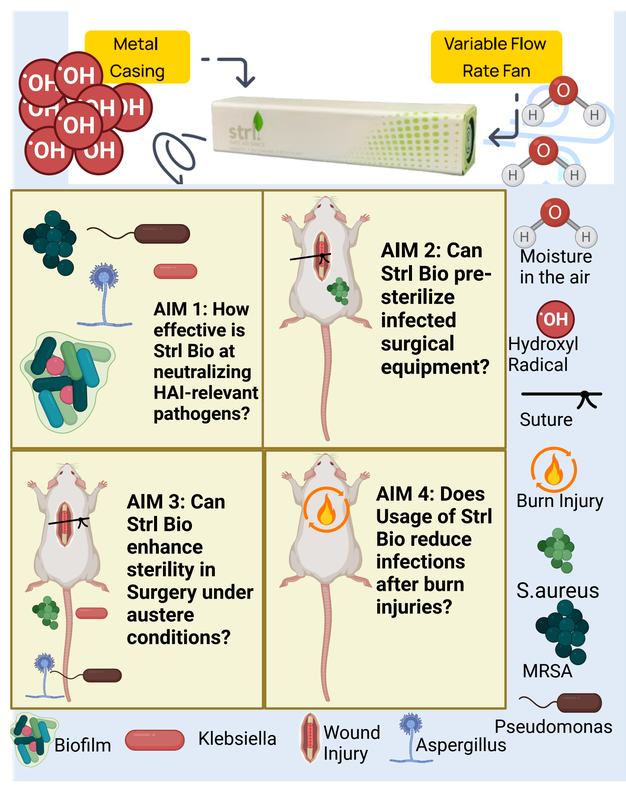
RESULTS



- DexTech has undergone clinical research evaluation in 3 hospitals in India.
- Surfaces at hospitals exposed to Strl Air showed significantly lowered pathogen load compared to unexposed surfaces.
- The device has been shown to be safe via an **extensive toxicity panel** conducted by an independent evaluator.
- The device can be used during- and after- surgery, without an impact on human life.
- Current evaluation efforts are being completed at DePauw University and the team plans on applying for CDMRP and NIH STTR funding to support planned clinical trials in the next 18 months.



Strl Air facilitates autonomous and continuous disinifection without the need to remove patients from the OR.



Planned In Vivo Study to investigate Strl Air use-case in burn units. Burn units have elevated rates of HAI.

WE ARE LOOKING FOR --

(1) MTEC and DOD Collaborators for a future Clinical Study.
(2) Industry partners with existing DOD contracts serving the ambulatory and trauma care use-case.
(3) FFRDC Collaborators interested in infection control in surgical settings.