



## **SYNEXIS DRY HYDROGEN PEROXIDE (DHP™) TECHNOLOGY SHOWN TO SIGNIFICANTLY REDUCE ENVIRONMENTAL CONTAMINATION ON SURFACES IN HEALTH CARE FACILITIES**

*Synexis DHP™ systems reduced levels of environmental contamination detected on surfaces by up to 99.5% after one day of continuous DHP™ implementation*

**LENEXA, KS** – April 20, 2021– Synexis® LLC, the sole developer of patented dry hydrogen peroxide (DHP™) technology, announced a study evaluating the use of DHP technology in a clinical setting. The study, published online in the *American Journal of Infection Control*, assessed the efficacy of using DHP technology, in conjunction with standard manual cleaning, in reducing microbial contamination in the air and on surfaces at Sunrise Hospital and Medical Center and Sunrise Children’s Hospital, acute care facilities located in Las Vegas, Nev.

“Numerous studies show that even after manual cleaning, as many as 50% of surfaces remain contaminated with pathogens, including multidrug-resistant organisms. As the primary investigator, I’m proud of our study results showing the effectiveness of DHP technology in reducing both air and surface microbial contamination,” said Jennifer Sanguinet, DrPh, FAPIC, CIC, MBA-HCM, BSIS, Principal Investigator.

Microbial burden levels were measured from air and surface samples collected before and after technology activation during the 28-day study. Routine manual cleaning operations were continued throughout the study time frame. Surface samples included those collected from high-touch surfaces (privacy curtains, bed rails and nursing counters) and one low-touch surface (top of proximity cabinet). When compared to the average number of bacteria present on surfaces measured before activating DHP technology, the study reported a statistically significant 96.5% reduction in the average number of bacteria observed in all surface samples after one day of continuous operation of the appliance, and an overall reduction of 92.0% on sampled surfaces was being sustained by Day 28. Samples taken on hard surfaces reflected a decrease of 94.3% after one day of DHP technology treatment, maintaining an 88.8% reduction after 28 days of continuous operation of the appliance. The highest levels of reduction were seen on harder-to-clean, soft surfaces (privacy curtains; 99.5% on Day 1; 96.6% on Day 28).<sup>1</sup>

Study investigators analyzed the samples by Genus ID to identify which organisms were present. The predominant organisms before DHP treatment included bacteria such as those found in normal skin flora and *Acinetobacter lwoffii*, a pathogenic bacterium linked to infections that can survive for long periods on surfaces. DHP was effective in the reduction of predominant Gram-negative rod throughout the experiment, and *Acinetobacter lwoffii* was no longer identified as the primary microorganism present in samples taken from surfaces after one week of continuous operation of the DHP technology.

“This study demonstrates the value of DHP as an important addition to manual cleaning protocols due to its ability to address real-time opportunities for recontamination of the environment — both in air and on surfaces — without the need to remove the occupants in the room,” said Eric Schlote, CEO of Synexis. “Our DHP technology can be continuously operated in occupied settings without the need for

healthcare worker involvement in device operation, device transport or room preparation. DHP systems generate hydrogen peroxide during continuous operation at low levels which remain effective at concentrations well below established workplace exposure limits.”

## ABOUT SYNEXIS

Founded in 2008, Synexis® LLC is a leader in microbial reduction and the sole developer of patented technology that creates DHP™ to help reduce the presence of microbes in indoor spaces around the clock, without the need for occupants to leave the space.

Synexis cutting-edge biodefense systems are designed to make the air and surfaces cleaner. Synexis BioDefense systems are regulated by the U.S. Environmental Protection Agency and state governments as antimicrobial devices. Accordingly, Synexis systems are produced in an EPA-registered facility and packaged and labeled in accordance with EPA regulations appearing at 40 CFR 152.500. The Synexis system is Underwriter Laboratories (UL) Certified to produce no ozone and works continuously without disruptions in normal operations or workflow.<sup>2</sup> Synexis currently has 13 patents with 16 pending.<sup>3</sup> In addition, Synexis DHP™ technology is supported by data from five peer-reviewed studies.<sup>1,4,5,6,7</sup>

For more information, visit [Synexis.com](https://synexis.com).

*Disclaimer: Synexis is not making any claim that the study described reflects the product's ability to prevent the spread of the SARS-CoV-2 virus. The FDA has not approved DHP™ for reducing the spread of the virus.*

## MEDIA CONTACT

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<sup>1</sup> Sanguinet, J., & Edmiston, C. Evaluation of dry hydrogen peroxide in reducing microbial bioburden in a healthcare facility. *AJIC* (2021).

<sup>2</sup> UL Certification numbers: Blade UL E482400 and Sentry UL E495096.

<sup>3</sup> Synexis <https://synexis.com/patents/>. Accessed April 12, 2021.

<sup>4</sup> Infection Specialists and Pharmacists Share Responsibility for Ensuring Patient Safety; *Pharmacy Times*. Published November 23, 2020.

<sup>5</sup> Melgar, M., et al. Effectiveness of dry hydrogen peroxide on reducing environmental microbial bioburden risk in a pediatric oncology intensive care unit. *AJIC* (2020). <https://doi.org/10.1016/j.ajic.2020.08.026>.

<sup>6</sup> Melo, E.F. & McElreath, J.S. & Wilson, J.L. & Lara, Leonardo & Cox, N.A. & Jordan, Brian. (2020). Effects of a dry hydrogen peroxide disinfection system used in an egg cooler on hatchability and chick quality. *Poultry Science*. 99. [10.1016/j.psj.2020.05.050](https://doi.org/10.1016/j.psj.2020.05.050).

<sup>7</sup> Herman CK, Hess J, Cerra C. Dilute Hydrogen Peroxide Technology for Reduction of Microbial Colonization in the Hospital Setting. *AJIC*. 2015;43(6S):S25-S26. doi: 10.1016/j.ajic.2015.04.064.