

Carmel Pharma sells and manufactures the drug handling system PhaSeal® to the health care sector. The system is a closed system for the safe handling of hazardous drugs, minimizing the leakage and spread of aerosols into the working environment and allowing a more efficient handling near the patient. Carmel Pharma was founded in 1994 and its major owners are Investor Growth Capital (the venture capital arm of Investor AB) and 3i Group plc. For more information on PhaSeal and Carmel Pharma please visit: [www.carmelpharma.com](http://www.carmelpharma.com)

Göteborg, December 18, 2006

## **New protocol established by University of Utah for determining adherence to NIOSH definition of a closed-system.**

**New evidence-based research for determining adherence to the NIOSH definition of a closed-system was unveiled at the ASHP Mid-year meeting by the University of Utah.**

Project advisor Jim Jorgenson, Administrative Director of Pharmacy Services at University of Utah Health Care, and project lead Cam Au, Pharm. D., tested 5 transfer devices by using titanium tetrachloride to determine which device prevents the escape of vapor, hence meeting the NIOSH definition of closed. Closed-system drug transfer devices are recommended by the National Institute for Occupational Safety and Health (NIOSH) for the containment of hazardous drugs.

The five devices tested were the Alaris Smart Site by Cardinal Health, Tevadaptor Vial Adaptor System by Teva Medical, Ltd., Chemo Mini-Spike Plus Dispensing Pin by B.Braun, the Chemoprotect Spike by Codan US Corporation and PhaSeal Protector 50 & Injector Luer Lock by Carmel Pharma.

Only the PhaSeal System by Carmel Pharma, prevented the release of the titanium smoke out of the closed-system drug transfer device.

Only the PhaSeal System met the definition of a closed-system drug transfer device.

If carbon based filters are utilized, as in the TEVA system, to trap the active drug component present in gas, the actual performance in this regard must be demonstrated in published peer reviewed journals as stated by ASHP Guidelines (AJHP Vol 63, June 15, 2006, p. 118).

**“We’ve used the PhaSeal System for five years at the University of Utah,” Jorgenson said, “and the study confirms selecting it was the right choice.”**

University Health Care is the only academic health care system in the Intermountain West. As part of that system, University Hospitals & Clinics offer services in more than 120 specialties and is consistently ranked as one of the country’s best hospitals by U.S. News & World Report. The system provides care for Utahns and residents of five surrounding states in a referral area encompassing more than 10 percent of the continental United States. The hospitals and clinics log more than 900,000 outpatient visits and more than 23,000 inpatient admissions each year. Its academic partners at the University of Utah School of Medicine and Colleges of Nursing, Pharmacy, and Health are internationally regarded research and teaching institutions.