

Study finds that Retail Pharmacy Workers are exposed to Airborne Pharmaceutical Agents

— One robotic technology used in hundreds of pharmacies is cited —

For Immediate Release

Contact: Josh Fenton, The Fenton Group

Tel. 401-490-4888/401-497-0186

jfenton@thefentongroup.net

Drexel, MO – AlburtyLab located here today released a comprehensive evaluation of the leading technologies and methods of pill dispensing in pharmacies. The study found that one of the leading forms of technology, utilizing air pressure to dispense drugs in its robot, exposes tens of thousands of pharmacy workers to unsafe levels of airborne drug agent particles.

The researchers call for federal health and environmental regulatory agencies to immediately study this issue.

“Certain types of robotic dispensing systems, specifically the McKesson/Parata RDS used in hundreds of retail pharmacies employ air pressure to dispense pills into prescription bottles, and pill dust is readily observed in the vicinity of these machines. This indicates that pharmacy workers are exposed to airborne drug particles when they use air pressure driven dispensers,” wrote the studies authors and principal investigators, David S. Alburty and Pamela S. Murowchick of AlburtyLab, Inc.

AlburtyLab, Inc., working with Inovatia www.inovatia.com and the University of Missouri Mass Spectrometry Facility completed a study in five retail pharmacies over 24-hour periods to determine concentration levels, size characteristics, and chemical properties of pill dust generated by three forms of dispensing 1) McKesson/Parata RDS Dispensing System which uses air pressure to eject pills into prescription bottles; 2) ScriptPro SP 200 Robotic Prescription Dispensing System which uses gravity; and 3) traditional manual counting.

These three forms of pill dispensing constitute approximately 97% of all forms of dispensing in pharmacies in the United States today.

“This study finds clear evidence that robotic dispensing machines that eject pills using air pressure, such as the McKesson/Parata RDS, expose retail pharmacy workers to airborne pharmaceutical agents. Furthermore, the concentrations and particle size ranges observed frequently exceed the levels that are considered safe under USEPA [U.S. Environmental Protection Agency] Standards established for general particulate matter (i.e. non-drug agents),” wrote the authors of the study.

-MORE-

In 2004, the U.S. Centers for Disease Control and Prevention (CDC) recognized the potential for injury to pharmacists and pharmacy technicians from exposure to hazardous drugs (<http://www.cdc.gov/niosh/docs/2004-165/#b>). CDC issued a warning that hazardous drugs in the air or on work surfaces may cause skin rashes, infertility, miscarriage, birth defects, and possibly leukemia or other cancers. CDC estimated that the number of workers who may be exposed to hazardous drugs in all settings exceeds 5.5 million.

Additionally, particle mass concentrations in McKesson/Parata pharmacies frequently exceeded National Ambient Air Quality Standards (NAAQS). While USEPA has not established general indoor air quality standards, studies performed by Professor William W. Nazaroff of U.C. Berkeley and others indicate that the likelihood of inhaling particles generated from an indoor source while working indoors are increased by a factor of up to 1,000 as compared with inhalation of particles from a similar source while outdoors. These studies indicate that workers in pharmacies operating in close proximity to machines generating airborne particles may be subject to a 1,000× risk of exposure as compared with NAAQS. The NAAQS regulate general particulate matter and do not establish safe limits for exposure to airborne drug agents.

The authors of the study have made a number of recommendations as a result of their findings.

“This study raises serious issues relative to exposure risks for workers in pharmacies using air pressure driven dispensing machines. It is critical that further studies be conducted by federal regulatory agencies. It is recommended that these studies assess risk, set guidelines for these types of machines, and establish procedures to monitor the health impact on pharmacy workers,” wrote the authors.

About AlburtyLab, Inc.

AlburtyLab is an independent laboratory located in Drexel, Missouri that serves the aerosol research, development, and instrumentation communities. AlburtyLab has conducted independent studies for a range of agencies and companies, including Boeing/US Navy, Boston Scientific, Northrop Grumman, US Postal Service, US Department of Homeland Security, and the US Army Research Laboratory.

Technical questions may be directed to Mr. Alburty at (816) 619-3374 or via email to dalburty@alburtylab.com.

This study was funded by one of the technologies reviewed in the evaluation, ScriptPro LLC of Mission, Kansas.

The Executive Summary and the final report can be found at www.alburtylab.com