

# News of Concern

***Reports suggest drug-resistant bugs pose threats to health workers*** Healthcare workers may be at increased risk of multidrug resistant infections when they are patients undergoing procedures such as prostate biopsies, according to a recent case series by Canadian researchers. They described three cases of multidrug-resistant *Escherichia coli* urosepsis in physicians who underwent transrectal ultrasound-guided prostate biopsies. One of the infections was fatal. Their findings appear in the *Canadian Journal of Urology*. Investigators warned that reports of complications following prostate biopsy from multidrug-resistant organisms are increasing, highlighting the risk to healthcare workers who are more likely to carry the pathogens and urging further research.

## **Fake Botox, Real Threat**

**A booming market for a counterfeit beauty product could put a deadly biological weapons agent in the wrong hands**

By Ken Coleman and Raymond A. Zilinskas

In early 2006 a self-styled “naturopathic” doctor, Chad Livdahl, pleaded guilty in Arizona to mail fraud and conspiracy to engage in mail and wire fraud, to misbrand a drug and to defraud the U.S. He was sentenced to nine years in prison. His wife and business partner in Toxin Research International, Inc., in Tucson, Zarah Karim, pleaded guilty to the same charges and received a six-year sentence. Both also paid heavy fines and restitution because, according to prosecutors, the couple had made at least \$1.5 million in just more than a year by peddling tiny vials of fake Botox to doctors across the U.S.

Botox, which is injected in minute amounts to smooth frown lines or relax muscle spasms, is far from the only medical product that inspires illicit manufacture and trade. The world market in counterfeit pharmaceuticals is estimated to be worth some \$75 billion annually. But the active ingredient in Botox and related products differs from the constituents of other pharmaceuticals in a profound way: in its pure form, it is the deadliest substance known to science. In fact, botulinum neurotoxin (BoNT) is grouped with the world’s most lethal potential biological weapons agents, sharing “Select Agent” status with the pathogens that cause smallpox, anthrax and plague. This biowarfare potential puts the existence of illicit laboratories churning out the toxin and of shady distributors selling it worldwide through the Internet into a more disturbing light than most pharmaceutical fraud.

***Experts air bioterror concerns about fake Botox*** Increased consumer demand for counterfeit Botox products has likely raised the

## News of Concern

number of illegal botulinum toxin producers, which could make it easier for terrorists to obtain the toxin, two biological weapons experts wrote in *Scientific American*. Authors Ray Zilinskas and Ken Coleman are with the James Martin Center for Nonproliferation Studies in Monterey, Calif. Unlike other counterfeit drugs, Botox is unique because it contains botulinum neurotoxin, which has been weaponized and is considered a category A biological weapon, a group of agents that can be easily disseminated, cause high mortality, cause public panic, and prompt special public health preparedness actions. The authors suggest that scientists and law enforcement agents work together to assess the scope of the problem in advance of taking actions against illegal Botox producers. June *Sci Am* [article preview](#)