Infectious diseases

■ Federal quarantine for XDR-TB traveler. Following on the heels of the story about a Phoenix, AZ, XDR-TB (extreme drug-resistant tuberculosis) patient jailed in July 2006 for not wearing a prescribed protective mask in public, the Associated Press reported in late May the story of a 31-year-old Atlanta lawyer, Andrew Speaker. He is suffering from XDR-TB and is now at Denver’s National Jewish Medical and Research Center, under the first U.S. government-issued quarantine since a 1963 smallpox case. Doctors diagnosed him with TB in January this year, but the severity of his disease was not yet known. The man flew to Europe on May 12 for his wedding in Greece — where he was advised by American health officials from the Centers for Disease Control and Prevention (CDC) not to travel. He then flew to Italy for his honeymoon. It is not clear whether he donned a mask from a supply he had to protect other airline passengers.

In Rome, U.S. health officials notified him that further tests had revealed his TB was rare, drug-resistant, and far more dangerous to others than first suspected. American health authorities insisted he turn himself in to Italian health officials and warned him not to fly on commercial airlines. Ignoring the warnings because he feared he might not get proper treatment in Europe, he flew on passenger jets from Rome to Prague, then from Prague for Montreal, and entered by car from Canada into Champlain, NY. European and American authorities worked closely with several airlines he flew to track down all passengers and crew who may have been exposed to the XDR-TB. He is currently receiving treatment; results of a recent sputum test, which was taken from deep inside his lungs, came back negative, meaning the patient is not very infectious. He has decided to have surgery to remove any infected lung tissue.

■ Avian flu update: June 2007. Several new cases of avian flu reported to the World Health Organization (WHO) bring the total number of laboratory-confirmed cases to 310 worldwide since 2003. In early June, the Ministry of Health of Indonesia announced that a 16-year-old female, who developed symptoms of H5N1 virus on May 21st, was hospitalized on May 25th and died there on May 28th. Dead poultry exposure is thought to be the source of infection. In Indonesia to date, 79 out of a total of 99 confirmed cases have been fatal. China reports its 16th death from H5N1 avian influenza — a 19-year-old male soldier succumbed to the infection on June 3rd. In China, 15 out of 25 cases have been fatal. Health Authorities in the United Kingdom recently confirmed the presence of the A/H7N2 strain in four individuals — two in Wales and two in northwest England — who were exposed to infected poultry at a farm in Wales. The national Public Health Service continues its investigation of the incident in regard to public health measures.

■ Antibiotic fabric ties up infection. Safesmart is “cleaning up” a problem many medical professionals face — transmitting infections through clothing. The company is marketing SafetyTies, a line of 24 necktie designs processed with an antimicrobial coating, which creates a resistance to germs that reside in fabric fibers. A recent study found that 47.6% of the neckties worn by clinicians harbored well-known, hospital-acquired bacteria. Because silk neckties are too delicate to withstand a machine wash, coupled with the cost to professionally clean them, neckties often go unwashed for several weeks. For both laboratory professionals and doctors, these new neckties could be an inexpensive way to promote a sterile environment and a healthy workplace. For more information, visit: www.safesmartinc.com

AIDS

■ WHO urges HIV testing in concentrated areas. The World Health Organization (WHO) advised health workers in countries with a high AIDS concentration to urge every one of their patients to get an HIV test. This new, more aggressive approach goes beyond WHO’s previous recommendation of administering a test only at the patient’s request. The plan is necessary for low- to middle-income nations (e.g., Botswana, Kenya, Malawi, Uganda, and Zambia) where 80% of people infected with HIV are not aware they have it and are, thus, more likely to spread the infection. Rapidly scaled-up HIV treatment and prevention efforts are critical says a UNAIDS leader, but health workers must continue to implement the tests and counseling confidentially as a part of standard medical care in areas of unremitting infection.

■ Canadian breast-cancer patients given false results. In Newfoundland, hundreds of women, including 36 who died, were given false results on their breast-cancer tests, a CanWest News Service report discovered. Eastern Health, the largest healthcare corporation in the Canadian province, acknowledges that more than 300 patients received incorrect results in October 2005; however, only 117 of these were given a change in their treatment as a result. From as far back as 1997, Eastern Health performed tests that produced false-negative results. Eastern Health’s CEO said in a recent news conference that he takes full responsibility for not initially notifying all those whose results were incorrect. A potential class-action lawsuit on behalf of more than 40 survivors and the families of the dead women has been filed against Eastern Health.

■ Congress halts AFIP funding. President George W. Bush signed into law a supplemental military appropriations bill that prevents the Department of Defense (DoD) from using funds to reorganize or relocate the functions of the Armed Forces Institute of Pathology (AFIP) through the remainder of this year. The legislation calls for the secretary of defense to submit a comprehensive plan and timeline for the reorganization of the agency no later than Dec. 31, 2007. The DoD must consider recommendations of a Government Account-
Tainted peanut butter affects more victims. According to the Associated Press, the CDC reported that the number of people sickened since August 2006 by salmonella-tainted peanut butter has increased to grown by more than 200 and now includes a total of 628 cases in 47 states. This is a marked increase from early March numbers: 425 cases in 44 states. ConAgra recalled all its “Peter Pan” and “Great Value” peanut butter brands after government investigators linked the bacteria outbreak to the ConAgra’s Sylvester, GA, plant. After the recall, the CDC reported a sharp drop in the number of new salmonella cases. Walmart, has continued selling its store-brand “Great Value” product, but “Peter Pan” has yet to return to stores. ConAgra does not expect to be able to resume production at its Georgia plant until renovations are complete in late August. Officials believe moisture in the plant most likely helped bacteria to grow and later infect the finished product. Any product code on these brands beginning with “2111” on the lid still need to be discarded, officials say.

Tiny wires revolutionize nanotechnology. A professor at the Georgia Institute of Technology developed a nanogenerator that can produce a continuous electrical flow — as much as four watts per cubic centimeter with ultrasonic waves or even blood flow. That is enough to power an array of nano-scale devices, such as biomedical machinery or biosensors in the body for early ailment detection. The technology harvests mechanical energy from its surroundings by using zinc-oxide nanowires to power the direct-current nanogenerator. As the team optimizes the development process, they are hopeful they can produce millions or even billions of nanowires per generator, which could produce endless possibilities for nanotechnology that could be used in healthcare settings, such as biomedical machinery or biosensors in the body for early ailment detection.

Test determines return of breast cancer. A new breast-cancer test, the MammaPrint, recently cleared by the Food and Drug Administration (FDA), is the first molecular test cleared to profile genetic activity. After a woman’s initial bout with breast cancer, MammaPrint uses the latest in molecular technology to study patterns of behavior of large numbers of genes in biological samples. Whether or not a woman’s current cancer will metastasize partly depends on the activity of certain genes located in the tumor. The test’s Amsterdam developer, Agendia, has identified a set of 70 genes whose activity gives information concerning the likelihood the cancer will recur. The MammaPrint measures the activity of these genes in a surgically removed sample of a cancerous tumor and, therefore, helps physicians determine the likelihood of cancerous cells returning or spreading within a span of five to 10 years. According to the American Cancer Society, an estimated 178,480 new cases of invasive breast cancer will be diagnosed among women in the United States this year; and, in the same period, more than 40,000 women are expected to die from the disease.

Meningitis test detects viral infection. The FDA cleared a test in March that quickly detects the presence of viral meningitis. In conjunction with other laboratory tests, the Xpert EV test is the first fully automated medical diagnostic test that isolates and amplifies viral genetic material present in a patient’s cerebrospinal fluid to aid doctors in discerning between viral meningitis and the less-common but more severe version of bacterial meningitis. By adding a sample directly to a disposable single-use cartridge, Xpert EV identifies infection resulting from entroviruses, which are responsible for about 90% of all viral meningitis cases. By reporting results in about 2½ hours, the test will drastically reduce the waiting period, which has been taking up to a week with other tests. Faster test results should help physicians manage patients more appropriately by preventing unnecessary treatments and minimizing delays in treatments.

July 14. The American Association of Clinical Chemistry (AACC) holds a conference at the San Diego Marriott Hotel and Marina from 5:30 p.m. to 7:30 p.m. on the “Application of standard vocabularies with the laboratory information system,” which addresses the new terms and abbreviations that are increasingly more prevalent in healthcare exchanges. The session will discuss strategies for taking on issues related to standardizing the vocabulary in the laboratory information system (LIS). Highlighted issues include bioterrorism surveillance, semantic interoperability, the Healthcare Information Technology Standards Panel, and the electronic health record. For more information, visit www.aacc.org.

Sept. 19-20. Plan ahead! The first Lab Quality Confab will be held at the Westin Peachtree hotel in Atlanta, devoted exclusively to quality-management techniques. Powerful case studies, lessons from innovated labs, and hands-on learning are designed for every level of manager, and all levels of knowledge and experience. Lean, Six Sigma, ISO 15189, and quality methods, along with access to experts, vendors, and products are only a few highlights of this two-day event. For more information, visit www.labqualityconfab.com.

Oct. 10-13. American political satire group Capitol Steps will be performing at the celebration of The Lab Institute’s 25-year anniversary. Its three-day event at the Crystal Gateway Marriott in Arlington, VA, plays host to a lineup of keynote speakers with compelling topics, including what is new for labs and pathologists, how Medicare pays for lab services, how to improve patient outcome through point-of-care testing, and what the future holds for lab technology. In addition to the pro-networking events, workshops will be conducted throughout the conference. For details, go to www.g2reports.com/conferences/740.html.