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Utah State Lab Glides Through Winter Games

But if, my soul, you yearn
to celebrate great games,
look no further
for another star
shining through the deserted ether
brighter than the sun, or for a contest
mightier than Olympia—

Pindar
5th Century BC

How do you prepare for your worst nightmares—especially in times of grand public affairs?

While this question has assumed greater immediacy to health and safety officials in the past eight months, it has preoccupied Utah’s public health laboratorians for the past five years; since the end of the summer Olympics in Atlanta, Georgia, in 1996, in fact. As the Atlanta games ended, Utah officials began planning in earnest for the largest—and most security-conscious—winter Olympics and Paralympics in history. More than 3,500 athletes from 80 nations and more than 400,000 spectators would take part in this high-profile event. Needless to say, the Utah Division of Epidemiology and Laboratory Services provided critical input in the planning process and critical services throughout the games.

In a telephone interview, Chuck Brokopp, Utah’s state lab director for the past eight years, described those preparations in detail, as well as some of the more quotidian work of the lab.

How do you prepare for your worst nightmares?

According to Brokopp, coordination may well be the answer. “We had so many planning committees and workgroups that it was hard to keep track of them,” he said. The first planning effort took place in summer, 1996, when health and safety officials involved in the Atlanta games traveled to Utah to discuss their experiences and lessons learned. An Olympic planning summit was convened in August, 1998, addressing both environmental and public health issues. From that time onward, the cast of partners steadily expanded.
As my tenure as president of APHL winds down, I find myself reflecting on the experience. The year as president-elect was not exactly typical because we held our annual meeting jointly with the Council of State and Territorial Epidemiologists (CSTE) and its affiliated organizations. Thus, I did not get/have to plan the APHL annual meeting. However, the president of CSTE resigned precipitously in the spring, leaving me to spearhead the planning of the joint meeting! Thanks to the valiant efforts of CSTE and APHL staff, the meeting was put together in due time and we had the opportunity to share our laboratory experiences with our epidemiology colleagues in the beautiful city of Portland.

My year as president was even more atypical. We started out hoping to improve governance and ended up with our first board retreat being cancelled due to the events on and after September 11. The rest is history. Public health labs responded to the anthrax crisis with efforts that are unparalleled in most of our memories. We performed many tasks—testing powders, testing swabs, talking to the media—all of which changed the public perception, if there ever was one, of the role public health laboratories play in safeguarding the nation’s health. I was just told today, as I sat down to write this column, that we saved a corporate neighbor “millions” of dollars by doing testing for the company and that it wants to provide some funding to recognize our contribution. The $100,000 per year that we were getting at that time paid off well by ensuring health and safety, as well as economic viability in our state.

I have enjoyed the opportunity to represent the organization on Capitol Hill and in other public venues. I thank those of you who have expressed your appreciation for those efforts. However, I feel that my greatest contribution to APHL occurred three and a half years ago when, with the support of Ralph Timperi (MA) and Henry Bradford (LA), we convinced the federal bureaucracy to institute country-wide bioterrorism response laboratories instead of supporting the institution of two new bioterrorism laboratories on the East Coast. It took about six months of lecturing, answering objections, and refining our concept paper. The conceptual framework that we presented in December 1998 is essentially that which was instituted as the Laboratory Response Network, with more flesh added by the committee that was championed by Mike Ascher of the Department of Health and Human Services. The gear-up time for implementation of the plan was, thankfully, almost three years in duration. And we were funded on a shoestring. Since last fall, however, the threat of bioterrorism has become a reality. Now there will be adequate funding in most states to realize the potential of our dream.

I am working with APHL to continue efforts to secure increased funding. My testimony before the House appropriations subcommittee in April addressed the need for bioterrorism funding. We are still advocating for greater funding for bioterrorism laboratories. The formula applied for distribution of funds to the states left the smaller states still somewhat needy. However, since the funds can be used for other naturally emerging infections, the money will certainly be of great value to all of us. We are also advocating for funding for chemical terrorism response laboratories.

I have truly enjoyed the experience as your president-elect and president. I thank you for investing your faith in my judgment and for only infrequently second-guessing the decisions that we made, often at the eleventh hour, as the year rolled out. In June, the presidency will be ably assumed by David Mills (NM), who hopes to pursue the governance issues that we leave for his oversight. His thoughtful guidance will move the Association even closer to its vision.

Sincerely,

Mary Gilchrist, PhD, D(ABMM)
President
EXECUTIVE DIRECTOR’S NOTE

Honor The Past; Look To The Future is the theme of the association’s upcoming annual meeting, which will celebrate the fiftieth anniversary of APHL’s founding.

I wonder if our founders a half century ago would recognize the association today?

I invite you to join many of your fellow laboratory leaders at the annual meeting celebration. We will honor our past in a number of ways:

- 50th anniversary dinner gala.
- A special emeritus-member-led session exploring the development of the NLTN, the institution of clinical lab requirements through Medicare and CLIA, and the evolution of the modern laboratory.
- A plenary session reviewing the changing role of public health lab (PHL) directors—from technical supervisors to public health leaders.

We will also look to the future in sessions and posters examining such contemporary topics as bioterrorism, chemical monitoring, mobile laboratory systems, emerging infectious diseases, 21st Century ethical dilemmas, the nascent National Laboratory System, and even immune reconstitution with antiretroviral therapies.

In the past few months APHL leaders have been busy putting the final touches on our new three-year strategic plan. I’m proud that we spent almost nine months in this exercise. Why? Because the time was well spent constructing a thoughtful framework for future association activities that will make a difference at the end of the day. Every member had the opportunity to contribute ideas through a survey or in focus groups, and every member will receive a complete copy of the plan. But here are the highlights.

The association’s mission and vision haven’t wavered. We will strive to achieve a healthier world through quality laboratory practice, and to promote policies and programs that abet this goal. Specifically, we aim to:

- Assure a competent workforce that meets PHL needs.
- Undertake communications, partnerships, and advocacy that serve the association and its members.
- Improve the capability of PHLs to capture, process, and communicate laboratory information of public health significance.
- Promote the development and use of quality laboratory practices at the national and international levels.
- Align the association’s governing bodies and membership structure to effectively pursue our mission.

Finally, I hope you have enjoyed The Minute’s historical series honoring the past 50 years. In this issue you will find the final installment, bringing us up to current times. You will also discover what your colleagues in Utah and New Mexico have been up to lately, find reports on important national conferences and association events (such as the annual PulseNet meeting, the Public Health Data Standards Consortium meeting, and APHL Hill Day), learn about several new Web-based resources for laboratorians (APHL LabNet, Epi-X, and the NLTN lending library), and, on a very practical note, learn more about laboratory-acquired meningococcal disease and what you can do to prevent it.

Fifty years from now, in the summer of 2052, we can only wonder what form and function public health labs will take. What kinds of technology will they employ? What maladies will they be dealing with? Who will lead them and what will their day be like?

At the end of our day, my hope is that we will be remembered for three things: putting in place a sound laboratory infrastructure, securing adequate government support to fund ongoing needs, and training a new generation of laboratory leaders who are well prepared to meet the demands of the future.

Sincerely,

Scott J. Becker
Executive Director
Honor the Past; Look to the Future

The 1960s were a critical decade for the Association of State and Territorial Public Health Laboratory Directors (ASTPHLD) and the nation’s public health laboratory community. In little more than 10 years, the federal government undertook a key regulatory role in enhancing the professionalism of public health laboratory personnel, while the mission of the typical state and territorial laboratory broadened considerably to include food safety and environmental issues. Private clinical laboratories expanded dramatically. And ASTPHLD became an effective communications conduit between the federal Communicable Disease Centers and its membership.

The State of Public Health
The increased sophistication of the U.S. public health laboratory community in the early 1960s is reflected in the topics of the Brown-Hazen Fund Lectures, sponsored by the Division of Laboratories & Research at the New York State Department of Health in Albany from 1958 to 1964.

In 1958, Roger M. Herriott, head of the biochemistry department, School of Hygiene and Public Health at Johns Hopkins University, spoke on “the elements of proteins and nuclear acid chemistry.” The next year, David M. Bonner, professor of microbiology at Yale University, discussed “microbial genetics.” In 1960, James V. Neel, chairman of the department of genetics at the University of Michigan Medical School, lectured on “human genetics.”

Other topics of the popular lectures during the early 1960s included “cellular, humoral and drug-induced mechanisms of anti-bacterial defense,” “chemistry and biology of bacterial surfaces: newer aspects of antimicrobial agents,” and “endotoxins.”

The career of Victor Tompkins, MD, the head of New York’s Division of Laboratories & Research during the late 1950s and 1960s and an influential voice in the senior councils of ASTPHLD, mirrored the new complexity of laboratory research. A 1934 Cornell University graduate who did residencies in pathology after earning a degree from Albany Medical College of Union University in 1938, Tompkins started with the division in 1947 as a senior pathologist. Over the next decade, Tompkins helped develop the laboratory’s capacity to conduct clinical investigations through a study of chronic non-tuberculous pulmonary disorders. He was also instrumental in forging a strong bond between the division and the teaching program of the Albany Medical College.

Tompkins and his immediate predecessor, Gilbert Dalldorf, established a strong presence for the division in many different fields of scientific research, including virology, micromorphology and antibiotics. Under Dalldorf, the Division of Laboratories & Research established the Antitoxin, Serum and Vaccine Laboratories. After 1958, Tompkins helped steer the division in the direction of investigating environmental sanitation issues.

Tompkins believed that public health laboratories had to move beyond simple identification of disease vectors. He suggested that laboratories do much more to analyze the root cause of disease.
NEW MEXICO LAB’S MAMMOTH UNDERTAKING
OR HOW IRENE GOT HER GROOVE BACK

It all began when three bicycle police officers noticed a swaying trailer in the parking lot of an Albuquerque motel. When the driver reluctantly opened the trailer, in August 1997, the officers were overwhelmed by a terrible stench and the sight of eight llamas, and three elephants; all of them sick, and one elephant dead from salmonellosis.

The animals belonged to a traveling circus, passing through town. To the animals great fortune, however, they were soon transferred to the custody of the Albuquerque Biological Park, where veterinarians attempted to reverse the effects of years of ill treatment.

Robert Ferguson, supervisor of the TB and Mycology Section of the New Mexico Department of Health, Scientific Laboratory Division, reported in a phone interview that there was “no suspicion of TB with any of these animals.” Nonetheless, a nasal sample collected from a routine trunk washing revealed that Irene, a 38-year-old Asian elephant, was indeed infected with tuberculosis. Ferguson, whose lab is the “one and only (full-service) tuberculosis laboratory in New Mexico,” said the discovery of TB in an elephant was “a first for us—and a first for the veterinarian at the zoo, as well.”

The positive TB finding prompted a year-long course of treatment for Irene with isoniazid (INH), which was made into a slurry and injected into a tube inserted in the pachyderm’s rectum. “We all went to the zoo to watch them do this,” said Ferguson. “It is quite a procedure.” Irene’s former circus mate, Donna, a young African elephant, was started on a six-month course of INH prophylactically.

At the same time, veterinarians also attempted to medicate Irene orally with rifampin, but she spit out the bitter-tasting drug. Even putting rifampin in watermelon failed to mask the unpleasant taste. After trying it, said Ferguson, “she leaned her head back, pursed her lips up real tight and refused to take it.” After that experience, Ferguson recalled, “she wouldn’t let them put anything in her mouth.” So zoo staff dosed Irene for 12 months with pyrazinamide instead (in conjunction with the isoniazid). Ferguson noted that although Irene lost quite a bit of weight on this drug regimen, she had been overweight to begin with, and the loss of the extra pounds “eased the burden” on her arthritic joints.

Four more isolates were obtained from Irene in 2000 by the New Mexico lab’s TB and Mycology Section. Ferguson reported that all of these were sensitive to five different anti-TB drugs. Then in February, 2001, analysis of another follow-up trunk washing turned up a single rifampin-resistant strain. “We can’t account for that. We can’t explain how rifampin resistance cropped up,” said Ferguson. Multiple blood samples collected
On the morning of March 6, 2002, as the early shades of spring began to tinge the D.C. area, 13 APHL members representing ten states came to Capitol Hill to support critical public health laboratory issues. Some of these participants were veterans to so-called “Hill Day,” looking to renew old relationships with lawmakers, while others were newcomers, fresh on the scene and seeking to forge closer bonds with their state representatives.

This APHL Hill Day unfolded in a different political atmosphere than in years past. In the wake of the anthrax attacks, senators and other lawmakers have a new sense of urgency and intensity when discussing public health matters. Pre-October 4th, public health was an abstract concept, but now, against the backdrop of bioterrorism, it has become more familiar as laboratories and hospitals are recognized as frontline protectors of the public’s health. Realizing this shift of perceptions, the APHL members knew it was an opportune time to advocate for public health issues.

The day before Hill Day, each participant was briefed at APHL headquarters, so they would head to the Capitol with current information and effective communication tips to better address their topic areas. These areas, determined to be the most vital and germane, included: 1) the environmental health laboratory 2) preventing emerging infectious disease 3) the Preventive Health and Health Services Block Grant and 4) terrorism preparedness. Each laboratorian sought to secure more funding for these areas through persuasive presentations during their meetings.

After having their picture taken in front of the Capitol, with the bright sun illuminating the steps, the members dispersed and went to their respective meetings. The members, acting on behalf of APHL included Ming Chan (FL), Dan Hubbard (NH), Norman Crouch (MN), Larry Sturman (NY), Harry Taber (NY), George Eadon (NY), Paul Kimsey (CA), Carol Kirk (WI), Janet Klawitter (WI), Bill Becker (OH), APHL President Mary Gilchrist (IA), Romesh Gautom (WA), and Kati Kelley (CT). This reporter had the opportunity to shadow the three New York members and to witness their advocacy efforts firsthand. Their initial meeting with Christina Holt, aide to Senator Hillary Clinton (D-NY), took place in the Russell building a couple blocks walk from the Capitol. Holt proved to be an ardent listener and well-versed in public health matters. She seemed particularly interested in the handling of infectious diseases, and was especially concerned with the West Nile Virus, which has in recent years plagued New York. Sturman, Taber, and Eadon left the meeting with Holt’s promise to keep in touch and to visit the state public health laboratory if she is ever in the area.

In another building across the way, a second successful presentation was unfolding as Hubbard met with Katie French, legislative aide to Senator Judd Gregg (R-NH). As Hubbard, a newcomer to Hill Day, noted later, he and French “discovered we had a common interest in Hepatitis C,” which prompted him to describe the New Hampshire PHL’s HCV testing activities and limited funding. The following
Over 2000 people, including many public health laboratorians, attended the highly successful 2002 International Conference on Emerging Infectious Diseases (ICEID) in Atlanta March 24-27. The conference, sponsored by the CDC, APHL, Council of State and Territorial Epidemiologists, American Society for Microbiology and other organizations, provides a unique opportunity for public health professionals to present scientific and programmatic updates on an ever increasing number of infectious disease topics. Micheal Skeels, director of the Oregon Public Health Laboratory, represented APHL on the program planning committee. Plenary and slide presentations addressed zoonotic and vector-borne diseases, foodborne and waterborne diseases, surveillance; the impact of globalization on infectious diseases; molecular detection and epidemiology, and antimicrobial resistance, as well as infectious disease prevention and control. Most of the sessions can be viewed via webcast at www.cdc.gov/iceid/webcast/index. Continuing education credits are also available on-line.

This year, numerous presentations focused on bioterrorism and the anthrax events of last fall. James Hughes, director of CDC’s National Center for Infectious Diseases, discussed bioterrorism preparedness lessons, challenges and opportunities during the first plenary session on Monday. He reminded the audience that the actual anthrax attack was small, resulting in 22 cases, and did not involve multiple agents, drug-resistant genetically engineered organisms, human-to-human or vector-borne transmission, or cases in other countries. Nonetheless, said Hughes, the crisis highlighted the importance of surveillance and prompt epidemiologic investigation, the need to enhance laboratory capacity, possibilities for disruption of commerce and transportation as a result of disease outbreaks, and the critical linkages required for an effective emergency response. The webcast of this presentation is posted at: www.cdc.gov/iceid/webcast/plenary1.

Gail Bohan from the California Department of Health Services provided a timely overview of emerging and reemerging sexually transmitted diseases (STDs). She emphasized that trends in STDs and other traditional public health diseases are useful markers of the status of the public health infrastructure necessary to respond to pandemics and bioterrorism. For example, increases in syphilis cases may indicate a poor or declining local or regional public health infrastructure. (Bohan’s presentation is also posted at: www.cdc.gov/iceid/webcast/plenary1.)

A comprehensive overview of smallpox diagnosis, management, and response was provided in a session moderated by Harold Margolis, who is currently serving as the CDC smallpox response coordinator. Stanley Foster, with the Rollins School of Public Health at Emory University, reminded conferees that we cannot assume that smallpox introduced through bioterrorism will behave in the same manner as endemic smallpox. Peter L. Havens, of the Medical College of Wisconsin, discussed advanced medical interventions for the clinical management of smallpox cases. Finally, NCID’s Russ Regnery spoke about new laboratory methods being developed to identify vaccinia and variola. These slide presentations can be found at: www.cdc.gov/iceid/webcast/smallpox_response.

Other slide sessions of note to laboratorians are:

- **Laboratory Response in the Commonwealth of Virginia to the Intentional Release of Bacillus anthracis**, Denise Pettitt, Division of Consolidated Laboratory Services, Richmond, VA.

- **Public Health Laboratory Response to an Anthrax Incident in Connecticut**, Donald Mayo, Connecticut State Health Department, Hartford, CT.


- **Detection of La Crosse Virus in Cerebrospinal Fluid and Tissues by Reverse Transcription-Polymerase Chain Reaction**, Brett Slater, New York State Department of Health, Slingerlands, NY.
Disease outbreaks, bioterrorism, toxic exposures, and other acute public health problems make it crucial that public health officials have a reliable and accurate communications tool to receive up-to-the-minute information, reports and alerts. To meet this need, the Centers for Disease Control and Prevention developed Epi-X, the Epidemic Information Exchange—a secure, Web-based communications system that simplifies and expedites the exchange of routine and emergency public health information.

Launched in December 2000, Epi-X contains reports from federal, state, and local public health officials on a number of timely topics. The reports are reviewed by medical epidemiologists for accuracy and then shared rapidly with public health officials across the country. Since its inception, Epi-X has posted over 500 reports and requests for epidemiologic assistance. Currently, about 850 federal, state and local epidemiologists, laboratorians, military personnel, and other members of the public health community use Epi-X to:

- Find, notify, and communicate with colleagues about urgent public health events.
- Create reports on outbreak investigations and response efforts.
- Create online conferences to disseminate information to a subset of users and to share detailed information on select topics, such as bioterrorism response and West Nile virus.
- Research outbreaks and unusual health events using a flexible search interface.
- Receive a daily Epi-X email regarding newly posted information in specified areas of interest.

During the anthrax crisis last fall, Epi-X provided secure communications for CDC investigative teams, state epidemiologists, and other public health officials. More than 90 reports were posted on Epi-X, including response plans sent in by a few jurisdictions.

Reports posted on Epi-X have also included clusters of cases from unusual pathogens, including uncommon strains of Salmonella, and outbreaks with unusual exposure sources. Epi-X has notified health officials about illnesses that develop in travelers returning home, such as multi-jurisdictional foodborne outbreaks and the outbreak of histoplasmosis that occurred among college students returning from spring break in Acapulco, Mexico, last year.

Because Epi-X is part of CDC’s secure data network, users must use digital certificates to access the Web site and the information on Epi-X is encrypted. Before accessing the site, users are requested to review a use agreement that outlines security policies and to adhere to the security requirements and information dissemination policies of the Web site.

Epi-X management policies are guided by a multidisciplinary editorial board that includes representatives of APHL and other major public health organizations. State level public health laboratory directors can participate in Epi-X. All state public health laboratory directors who have not yet joined Epi-X may do so by contacting Epi-X user assistance at (404)639-3762 or at epixhelp@cdc.gov.

Epi-X continues to build secure public health communications capacity. It will increase its user-base to assure rapid secure communications among public health officials at all levels. State public health laboratory directors are encouraged to participate.

In the future, Epi-X plans to develop state-level systems that link to the national Epi-X system, to integrate more closely with disease monitoring systems, to provide secure communications for multi-state outbreak response teams, and to link between disease surveillance programs and health alert systems in the United States and internationally.
**Staff News**

**Lynn Bradley**, director of environmental health has left the association to form an environmental health policy consulting practice. During Bradley’s tenure with APHL, much was accomplished in the area of environmental health, including the establishment of the biomonitoring planning grant program with CDC, implementation of the 1996 Drinking Water and Public Health Conference recommendations, and implementation of lab accreditation programs for environmental and agricultural/food labs. APHL wishes Bradley success in her new endeavor.

**Farhia Mussa**, newborn screening and genetics program manager, has accepted a position as tobacco control program manager with the District of Columbia Health Department. The association wishes Mussa well in her new position.

**Shawna Hicks** began as assistant to the executive director on April 29th. Shawna comes to APHL from the American Counseling Association and Foundation, where she served as the executive assistant to the director. She has served in a variety of positions in non-profit organizations in Washington (including InterAction and World Learning) since graduating from Indiana University of Pennsylvania. Hicks was also a Peace Corps volunteer in Cameroon during 1999-2000. Her primary duties will be to provide APHL Executive Director Scott Becker with administrative support, assist with board operations and governance, and ensure that general office systems are in place for efficient operations.

This new position replaces the position of executive assistant/office manager, last held by **Marilyn Furbush**. Furbush was with the association only a short period of time, but successfully established a supply tracking and ordering system, and was responsible for the purchase and installation of new office equipment. We wish her well in her future endeavors.

On May 6, **Jennifer Burpee**, joined the staff as senior manager of environmental health. Burpee has her MPH in health law (with an environmental health focus) from Boston University. Most recently, she served as the manager of regulatory affairs at the American Society of Clinical Pathologists. Previously she worked on a variety of issues on Capitol Hill and was a housing advocate in the Boston Childhood Lead Poisoning Prevention Program. Burpee will be supervising the association’s Newborn Screening and Genetics Program manager.

On May 20, **Sarah Lister** will join the staff as director of public health preparedness. Lister has a distinguished public health career and has her MPH in epidemiology from Johns Hopkins, a DVM from New York State College of Veterinary Medicine. In her most recent position Lister was the director of congressional affairs at the American Public Health Association. She has served in the US Public Health Service as a lieutenant commander and was at the USDA Food Safety and Inspection Service, was enrolled in the Epidemic Intelligence Service Officer Program at CDC, and worked for Senator Harkin as a professional staff member and a congressional science fellow. Lister will oversee the emergency preparedness program and supervise both the senior manager of environmental health and the food safety program manager.
### Summary of Recent Board Actions

The APHL Board of Directors met on March 8-9, 2002 in Washington, DC. Below please find a summary of the recent board actions. For more information, or to request a copy of board minutes, contact Kelly Deeb via email at kdeeb@aphl.org or at 202.822.5227, ext. 221.

- Met with D.A. Henderson and Mike Ascher at the Department of Health and Human Services to discuss critical issues facing public health laboratories in regards to biological and chemical terrorism.

- Refined and approved the association’s draft strategic plan that was outlined at the APHL leadership meeting last January.

- Approved a Membership Committee proposal to amend the by-laws regarding honorary members. This proposed by-laws change will be before the members at the annual conference.

- Approved a cost-of-living and merit raise for the APHL staff for the association’s new fiscal year.

### EID Fellowship News

**APHL Fellows are Big Presence at 2002 ICEID**

APHL’s Emerging Infectious Disease (EID) program fellows had the opportunity to gather together at the International Conference on Emerging Infectious Diseases (ICEID) in Atlanta on March 24-27. This bi-annual event brings together public health professionals to exchange scientific and public health information on global emerging infectious disease issues. In addition to attending sessions, many EID fellows presented their research at the conference. We would like to congratulate the following fellows, who gave presentations or posters:

- **Sabrina Walker** (Class VII Training Fellow at Virginia’s Division of Consolidated Laboratory Services) authored the poster entitled “Detection of West Nile Virus Activity in the Commonwealth of Virginia’s Avian Populations.” Additionally, she was the secondary author of the slide presentation “Laboratory Response in the Commonwealth of Virginia to the International Release of Bacillus anthracis.”

- **Kaci Klenk** (Class VII Training Fellow at CDC’s Division of Vector-Borne Infectious Diseases in Fort Collins, Colorado) presented the poster “Acute West Nile Virus Infection of Reptiles and Amphibians.” Following her poster presentation, Reuters News Service interviewed Klenk about her research.

- Representing the New York State Department of Health, Wadsworth Center, Class VII Training Fellow **Patricia Blevins** co-authored a poster entitled “Optimization of Protocols for Processing Samples to Detect Bacillus anthracis.” Blevins continues to work with the bioterrorism response team at her host laboratory. She recently participated in laboratory training for members of the New York State National Guard in BSL-3 protocols.
**EID Fellowship News**

**Sandra Smole** (Class VI Research Fellow working at the Massachusetts Department of Public Health) presented the poster “Development of a multilocus sequence typing (MLST) scheme for Listeria monocytogenes.”

**Kalyani McCullough** (Class VII Training Fellow at CDC’s Division of Parasitic Diseases) presented the poster “Evaluation of Potential Behavioral and Household Risk Factors for Pneumocystic carinii Pneumonia.”

“Inferential modeling of factors determining Anopheles distribution and predictions of potential ranges” was presented by Class VII Training Fellow **Rebecca Levine**, who works at CDC’s Division of Parasitic Diseases.

**Jane Costa** (Class IV International EID Fellow working at CDC’s Division of Parasitic Diseases) gave a presentation entitled “Ecological niche modeling and differentiation of populations of Triatoma brasiliensis Neiva, 1911, the most important Chagas disease vector in northeastern Brazil.”

**Pritha Sen** (Class VII Training Fellow at CDC’s Division of Parasitic Diseases) gave a presentation entitled “A Greenhouse Study to Model Potential Field Use of Genetically Modified Bacterial Symbionts for Chagas Disease Control.”

Travel to the conference for EID fellows was supported by APHL and CDC.

**Other EID Fellow Publications/ Presentations:**

Class VII Research Fellow **Virginia Headley** completed the report “Epidemiology of Streptococcus pneumoniae isolated from patients with invasive disease - Illinois, January - December, 2001.” This report was published internally at the Illinois Department of Public Health (IDPH), Headley’s host laboratory. It presents a compilation and analysis of data from an Access database Headley created to examine antimicrobial resistance patterns of invasive Streptococcus pneumoniae isolates reported to the IDPH.

The oral report “Haemophilus influenzae of Carriage Isolates: Serotype Distribution and Typing Methods” was presented by **Sarah Levin** at the Alaska branch meeting of the American Society for Microbiology in March. Levin is a Class VII training fellow, pursuing her fellowship at CDC’s Arctic Investigations Program and the Alaska Department of Health and Social Services.

At the United States and Canadian Academy of Pathology (USCAP) annual meeting in February in Chicago, Illinois, **Fernando Torres-Vélez** presented the paper “Development of an Immunohistochemistry assay for Detection of Babesiosis in formalin-fixed paraffin-embedded tissues and blood smears.” The paper was also published in the January 2002 issue of Modern Pathology. Torres-Vélez is a Class VI research fellow at CDC’s Division of Viral and Rickettsial Diseases.

See Fellows on page 12...
Vladimir Chulanov presented the paper “Hepatitis B virus genotypes: prevalence among patients with acute and chronic infection” at the HEP-DART 2001 Frontiers in Drug Development for Viral Hepatitis in Maui, Hawaii, in December 2001. Chulanov is a Class IV international EID fellow working at CDC’s Division of Viral Hepatitis.

International Work
Class VII Training Fellow Maribeth Lovegrove recently returned from a month in Leogane, Haiti, where she researched the transmission of lymphatic filariasis. Using GPS, Lovegrove helped map communities in the vicinity of children identified as positive for filarial antigen. This project, which is part of the CDC’s global program to eliminate lymphatic filariasis, aims to determine whether active transmission of the disease is occurring within a given geographic area. Lovegrove works at CDC’s Division of Parasitic Diseases.

Two Class VI training fellows presented posters at the 10th International Congress on Infectious Diseases, held in Singapore in March. Runna Moussa’s poster was entitled “High IL-10 Producing Genotype is Associated with Protection from Plasmodium falciparum Infection and Malaria Anemia in Western Kenyan Children.” Lauren Singer presented “A Study of Age and Exposure in the Development of Malarial Immune Responses in Western Kenyan Children.” Both Moussa and Singer work in the Division of Parasitic Diseases at CDC.

Class VII Training Fellow Ashley Laird will spend the month of April in Mexico on a rotavirus project at the National Institute of Nutrition in Mexico City. The project involves extracting and typing rotaviruses to determine whether reinfections are due to strains with different G and P types. Laird will also train two local technicians in RT-PCR diagnostics before returning to her host laboratory within CDC’s Division of Viral and Rickettsial Diseases.

Other EID Fellow Accomplishments:
Nimisha Kalia (Class VII Training Fellow at the Massachusetts Department of Public Health) helped train personnel from Centro Nacional de Diagnostico y Referencia in Nicaragua to perform Pulsed-Field Gel-Electrophoresis and Pulse Field Analysis on Salmonella and Shigella species.

Working at CDC’s HIV Pathogenesis Lab, Class VI Research Fellow Sheila Abner recently received a $99,000 grant from the American Foundation for AIDS Research (amfAR) to study the effectiveness of microbicides in preventing sexual transmission of HIV. Abner’s research proposal was selected by amfAR’s Scientific Advisory Committee on the basis of its scientific merit, relevance, and promise. Congratulations, Sheila!

APHL Visits EID Fellowship Host Laboratory
APHL staff conducted a site visit to the California Department of Health Services Laboratory in Richmond, California. Richmond is the site of the new laboratory, currently relocating from Berkeley. Two EID Class VI fellows spent their fellowship terms at the California laboratory. Kristie Oxford is completing her fellowship research to immortalize human fetal diploid cell lines sensitive to viral growth. She works in the Viral and Rickettsial Diseases Laboratory under David Schnurr. Alex Espinosa works on HIV-1 molecular epidemiology in the Viral and Rickettsial Diseases Laboratory under Haynes “Chip” Sheppard and Richard Donovan. Espinosa’s EID fellowship ended in March 2002. He has since been hired as a researcher in the Viral and Rickettsial Diseases Laboratory’s Immunology/Serology Unit.
Environmental Health Committee Tackles CT, BT and Food Safety

The Environmental Health Committee met in Washington, DC on April 11-12, 2002, to tackle the critical issues of chemical terrorism, biomonitoring and food safety. Chair Ron Laessig (WI) described the tasks before the committee as complex and then led the group in discussions regarding chemical terrorism and biomonitoring.

First of all, Laessig emphasized the need to define the scope of the chemical terrorism (CT) issue, looking at the big picture and identifying the requirements of state public health laboratories. If CT funding were available, what would state public health labs do to increase capability and capacity? He pointed out that while there is strong support for biomonitoring and associated clinical activities, support for the testing of environmental samples is weak. Nonetheless, the risk for a mass casualty incident is real. In such a situation state public health labs would be called upon to help identify the scope and the source of the event, potentially placing lab workers in peril; samples might blow up, they might vaporize. Laessig thanked Eric Sampson, the Director of Environmental Health Laboratory Services at CDC’s National Center for Environmental Health (NCEH) for supporting an upcoming chemical terrorism meeting for the state public health laboratories. The intent of the meeting is to assist the states in planning for chemical terrorism.

Dayton Miller and Andrea Herz from CDC’s National Center for Environmental Health (NCEH) updated the committee on the status of the biomonitoring planning grants. Miller said that public health laboratories are in the process of assessing needs, establishing priorities, developing plans, and building partnerships. Committee members thanked NCEH for its support for biomonitoring and urged the center to fund as many states as possible in the implementation phase.

Invited guest Roger Carlson, director of the Bureau of Laboratories at the Pennsylvania Department of Environmental Protection, discussed a recent Environmental Protection Agency water security meeting that focused on the roles played by local, state, and federal public health agencies to assure the safety of the nation’s water supply. Two state epidemiologists joined the meeting by phone, Henry Anderson (WI) and John Middaugh (AL). Both detailed the importance of the intersection between laboratory and epidemiological work to respond to biological and chemical threats.

Day two of the meeting, chaired by Veronica Malmberg (NH), focused on the APHL Food Safety Initiative. Gregory Hayes (RI) gave an overview of the consensus conference and highlighted various aspects of the breakout sessions. Emilio Esteban from CDC’s Public Health Food Safety Office at the National Center for Infectious Disease gave an update on the National Association of County and City Health Officials and Council of State and Territorial Epidemiologists food safety cooperative agreements. The committee discussed future association activities in the food safety arena. Plans include a gap analysis to determine the needs of public health laboratories, an informational brochure about the project, and the development of a position statement.
The Changing Face of Newborn Screening Prompts Myriad Activities

Change was the topic of the day at the March 12-13 meeting of APHL's Newborn Screening and Genetics in Public Health Committee. Committee members and invited guests discussed the social, political, and scientific climate that has fueled rapid changes in newborn screening. In this new environment, states are bolstering their capacity to address multiple issues including parental consent, quality assurance, retention and use of specimens, reimbursement, ethical implications of screening panels, the role of private labs, follow-up, genomics, and new technology.

The day-and-a-half meeting, chaired by Ann Willey of the New York State Department of Health, was strategically organized to coincide with the American College of Medical Genetics (ACMG) annual conference. Committee guests were Tim Baker, deputy director of the Office of Genomics and Disease Prevention (OGDP) at CDC; Michele Puryear, program director of the Genetics Service Branch of the Maternal and Child Health Bureau in the Health Resources Services Administration (HRSA); Mike Watson, ACMG executive director; Andy Faucett, an ATPM intern at CDC's Public Health Practice Program Office (PHPPO); Amy Klein and Laura Sternesky with the genetics program of the Association of State and Territorial Health Officials (ASTHO) and Mary Ann Baily, a research fellow at the Hastings Center.

OGDP Update

As CDC moves forward with efforts to integrate genomics into public health practice, the former Office of Genetics and Disease Prevention has changed its name to the Office of Genomics and Disease Prevention (www.cdc.gov/genomics). The terms “genomics” and “disease prevention” reflect a growing understanding of the link between genetics and health, as well as the agency’s efforts to integrate human genome discoveries into public health research, policy, and programs. One important OGDP activity is the development of genomics competencies for the public health workforce. These competencies, posted on the OGDP Web site last June, are essentially an outline to develop knowledge sets through specific programs, including laboratory practice. CDC officials hope the competencies will serve as a catalyst to stimulate discussion among public health professionals and prompt greater integration of genetics/genomics into their daily work. The committee plans within the next six months to assess APHL members’ opinions of the competencies, as well as members’ implementation ideas. (One issue that will affect laboratorians is continuing education credits.)

PHPPO Update

Ira Lubin, a committee member and geneticist at CDC’s Public Health Practice Program Office, reported that PHPPO has funded two new genomics projects. Mount Sinai Medical Center will develop and pilot a genomics curriculum for lab professionals. The curriculum will be based largely on the findings of a survey of public labs and will be geared to address gaps in knowledge. Peggy McGovern is the contact person for the project; Eva Perlman represents APHL on the project steering committee.

Tulane University will host lectures and workgroup meetings to learn the best ways to encourage physicians to take advantage of public health labs' genetic test report and analysis services. This project will also explore ways to make genetic test reports more user-friendly.

HRSA Update

Michele Puryear noted that HRSA has allocated $14.3 million to genetic services in 2002, with an additional $4 million available for Sickle Cell Disease. The genetics priority for HRSA this year is to form the Secretary of Health and Human Services' Title 26 Advisory Committee on Inheritable Disorders as mandated by FY 2002 congressional appropriation legislation that states, in part, “HRSA (is) to work with States to begin implementing the heritable disorders program authorized in the Children's Health Act of 2000.” The heritable
disorders program is designed to strengthen state ability to acquire, develop, and evaluate innovative testing technologies, and establish and improve programs to provide screening, counseling, testing, and special services for newborns and children at risk for inheritable disorders as specified by the legislation. In fiscal year 2002, HRSA will fund grant projects on:

- Implementation of newborn screening program infrastructure.
- Models and materials to explore the clinical validity and utility of new and evolving technologies in newborn screening programs.
- National Newborn Screening and Genetic Resource Center (NNSGRC) and Genetic Resources and Services Information Center.
- Five-day training workshops for laboratorians and follow-up on MS/MS. Convened by NNSGRC, the workshops are geared for trained laboratory personnel who have experience operating the equipment. The courses will take place at Duke University the week of May 6 and Baylor College the week of May 13. APHL, CDC, HRSA and NLTN are co-sponsors.
- Sickle Cell Disease and Newborn Screening Program.

Funding for all of these projects will begin in May, except for the Sickle Cell Disease and Newborn Screening Program, which will be funded beginning September 2.

ASTHO Update
Amy Klein, director of ASTHO’s genetics program (www.astho.org) reported on the activities of the ASTHO Genetics Advisory Committee (GAC), which is now two years old. Last year, the GAC completed a framework document that now serves as the template for ASTHO’s public health genetics policy statement (posted at www.astho.org/phiip/genetics.html#documents). The policy statement addresses privacy and confidentiality, genetic discrimination in insurance and employment, informed consent, population-based genetic screening, public health workforce competencies in genetics, and eugenics.

This year, ASTHO sponsored genetics policy forums with HRSA and the National Conference of State Legislators (NCSL), and conducted focus groups and site visits for the Genetics and Public Health toolkit project. The committee’s priority area for 2002 is workforce training.

Also, this year ASTHO with CDC funding has put together a genomics toolkit to help state and local health agencies integrate genomics into public health policy and practice. Focus groups to assess states’ current genomics capacity and needs were completed in February; site visits are still underway. The toolkit workgroup include representatives from APHL, CDC, HRSA, the Council of State and Territorial Epidemiologists, Association of Maternal and Child Health Programs, NCSL, the National Association of County and City Health Officials, the Council of State Genetics Coordinators, and Chronic Disease Directors.

ACMG Update
Mike Watson, executive director of the American College of Medical Genetics (www.acmg.net) presented on the status of the standardization of outcomes and guidelines for state newborn screening programs. This project, funded by HRSA through 2004, has multiple stakeholders including APHL, American Academy of Pediatrics, CDC, the Agency for Healthcare Research and Quality, and NNSGRC. The project aims to develop a uniform panel, model policies and procedures for state newborn screening, and outcome considerations for individuals and families. In addition, it will identify core public health programs, examining the data management system, and begin to profile 65 conditions. The steering committee has planned a
day and half meeting in the Washington DC area on September 26-27, with the first day open for public comments. The college requests APHL input to identify state best practices for newborn screening programs.

**Hastings Center Update**
Mary Ann Baily, a senior research fellow at the Hastings Center (www.hastingcenter.org), shared with the committee two newborn screening studies with which she has been involved. A HRSA-funded project examines “fairness in the distribution of costs and benefits in newborn screening programs,” and a National Institutes of Health-funded project explores “ethical decision-making for newborn genetic screening.”

Fairness in the Distribution of Costs & Benefits in Newborn Screening Programs
Funded by HRSA, this project will provide guidance to policymakers and the public on ways to determine what fairness means in newborn screening and to ensure that fairness issues are considered in the development of newborn screening policies. Fairness issues include the equal distribution of screening technologies, lack of universal newborn screening programs, test selection decisions, balance between financial and emotional costs to families receiving false positive screening results, and the benefits to a single child of early identification and treatment of serious diseases. Fairness in financing tests and supportive services will also be examined.

Ethical Decision-Making for Newborn Genetic Screening
Funded by the National Institute’s of Health Ethical, Legal & Social Implications of Human Genetics and Genomic Research Program, this project will provide guidance to professionals, policymakers and consumers.

**Moving Forward: Next Steps for APHL**
As the committee meeting neared its conclusion, members put together an agenda to anticipate future directives. The committee identified genomics as its next priority and planned to address five specific focus areas: 1) bio-monitoring, 2) infectious disease epidemiology, 3) adult/chronic disease, 4) lab access/evaluation, and 5) forensics. Specific activities will include establishing a subcommittee on bio-monitoring (molecular epidemiology), exploring ways to collaborate with the environmental committee to identify existing bio-monitoring research projects and funding, meeting with the infectious disease committee at APHL’s annual conference in June, and collecting information on PHL activities related to forensics.
GLOBAL HEALTH

From Disaster to Development:
The Hurricanes Mitch and Georges
Laboratory Reconstruction Project Comes to an End

In May 2000 APHL members, representatives of the laboratories of seven Central American and Caribbean nations, and representatives of three international agencies met to discuss a two-year project (funded through an emergency appropriation from the U.S. Congress) to rebuild and enhance the public health laboratory infrastructure of the countries gravely affected by Hurricanes Mitch and Georges in the fall of 1998. The meeting took place in Tegucigalpa, Honduras. It lasted for two tension filled days, marked by misunderstanding, mistrust, and confusion about the role APHL and its members would play over the course the project.

Almost two years later the picture is entirely different. Despite the rocky start, APHL has aided in the purchase of nearly $3 million in laboratory equipment. Laboratories that previously lacked running water and had only faulty electrical currents have been refurbished with new plumbing and back-up electrical generators. Training in laboratory methodologies for tuberculosis, dengue, measles, rubella, bacteriology, malaria, influenza and other disease areas took place in US laboratories and within each participating country. Laboratory directors were trained in laboratory management, supplies and purchase management, human resource management and conflict resolution, and quality assurance.

Meetings that have taken place since the first meeting in May 2000 are relaxed; partners have learned to trust and communicate with one another. Meetings begin with happy greetings and warm embraces and end in much the same way. Laboratory directors from neighboring countries who did not know each others’ names prior to the project, now communicate regularly via e-mail to share thoughts and methodologies, and are committed to backing one another up to ensure that lab capacity in their countries is not overwhelmed in the event of future outbreaks or other disasters.

APHL has served as a model laboratory association, and laboratory leaders in the sub-region are now looking to organize a similar association to solidify and strengthen their new relationships. As Loris Hughes, emeritus member and project lead said, “I have a strong appreciation of the commitment to improvement of quality on the part of the public health lab directors in Central America and the Caribbean. The Central American laboratory directors decided to form their own association to enable them to continue the networking, which they experienced through the project. This is an amazing achievement in light of the obstacles they faced early on. What grew out of a crisis was the commitment to ensure quality laboratory practice throughout Central America and the Caribbean.”

A final project report is under development. For more information, contact Areana Quiñones at aquinones@aphl.org.
GLOBAL HEALTH

APHL’s Work in Zimbabwe Showcased at ICEID

HARARE, Zimbabwe (AP) - President Robert Mugabe, declared the winner in disputed voting last month, vowed to crush any civil uprising against his rule and dismissed calls for a rerun of the election, state radio reported Monday (April 1, 2002).

While political strife in Zimbabwe has captured worldwide attention, the plight of the country’s HIV/AIDS victims continues with far less fanfare. In the face of the growing epidemic, APHL’s Global AIDS Laboratory Project is proceeding apace with work on laboratory-related issues in Zimbabwe, as well as Botswana and India.

In late March, APHL Program Manager Bhavna Lall shared some of this work via a poster presentation—Public Health Laboratories and HIV/AIDS in Sub-Saharan Africa: Efforts in Zimbabwe—at the International Conference on Emerging Infectious Diseases in Atlanta, Georgia. The poster explained that, worldwide, about 14,000 individuals were newly infected with HIV each day throughout 2001; by year’s end 3 million people had died because of the disease. Currently, 40 million adults and children are living with HIV/AIDS, and rates of infection and death are among the highest in the world in Sub-Saharan Africa.

The APHL project in Zimbabwe utilizes a multi-faceted APHL-Zimbabwe team that includes a country lead, technical experts, state laboratory directors, and association staff who work with CDC-Zimbabwe staff, CDC-Atlanta staff, and others to support technical assistance activities. This team is working to build several integral components of a national laboratory infrastructure capable of supporting HIV/AIDS prevention and treatment activities in Zimbabwe:

- A strengthened National Microbiology Reference Laboratory (NMRL) and National TB Reference Laboratory.
- Quality assurance systems for rapid HIV testing.
- Laboratory information systems.
- A public health laboratory association.

Recent project achievements, also described on the poster, include:

- U.S. training for Zimbabwean laboratorians.
- Assessment of the NMRL and National TB Reference Laboratory.
- Development of written, standard operating procedures for the NMRL.

Project staff are planning to develop a quality assurance plan for the proficiency testing program for the NMRL and TB laboratory and to provide training in the areas of quality assurance, laboratory management, and HIV serology.
Infectious Disease

Smallpox Response Plan
The APHL Infectious Disease Committee is convening a task force to work with the CDC and the Department of Health and Human Services to assess current laboratory capacities for detection of smallpox look-alike diseases; to consider available laboratory procedures to detect smallpox, vaccinia and other orthopoxviruses; and to identify the resources needed to support orthopoxvirus laboratory confirmation outside of the CDC. At this year’s annual meeting, a round table discussion—“Evolving Roles and Expectations for Poxvirus and Other Rash Illness Diagnostics in an Era of Heightened Awareness”—addresses this issue on Tuesday morning, June 11, at 8:00 A.M. The discussion will be facilitated by Inger Damon, with CDC’s Division of Viral and Rickettsial Diseases.

Laboratory-Acquired Meningococcal Disease
A new report—posted at www.cdc.gov/mmwr/preview/mmwrhtml/mm5107a1.htm—summarizes two probable cases of fatal laboratory-acquired meningococcal disease in 2000 and the results of an inquiry to identify previously unreported cases. The findings indicate that *N. meningitidis* isolates pose a risk for microbiologists and should be handled in a manner that minimizes risk for exposure to aerosols or droplets.

The report recommends several safety precautions. Although the exact mechanism of transmission in the laboratory setting is unclear, use of a biosafety cabinet during manipulation of sterile site isolates of *N. meningitidis* would ensure protection. Alternative methods of protection (e.g., splash guards and masks) from droplets and aerosols require additional assessment. If a biosafety cabinet or other means of protection is unavailable, manipulation of these isolates should be minimized, and workers should consider sending specimens to laboratories possessing the necessary safety equipment. Education of microbiologists and strict adherence to safety precautions when manipulating meningococcal isolates should minimize the risk of infection. To address these safety issues, the governing bodies of organizations responsible for setting lab safety policies will be reassessing current guidelines about the handling of *N. meningitidis*.

Although primary prevention should focus on laboratory safety, laboratory workers also should make informed decisions about vaccination. The quadrivalent meningococcal polysaccharide vaccine, which includes serogroups A, C, Y, and W-135, will decrease but not eliminate the risk for infection. Research and industrial laboratory scientists who are exposed routinely to *N. meningitidis* in solutions that might be aerosolized also should consider vaccination. In addition, vaccination might be used as an adjunctive measure by microbiologists in clinical laboratories.

Laboratory scientists with percutaneous exposure to an invasive *N. meningitidis* isolate from a sterile site should receive treatment with penicillin; those with known mucosal exposure should receive antimicrobial chemoprophylaxis. Microbiologists who manipulate invasive *N. meningitidis* isolates in a manner that could induce aerosolization or droplet formation on an open bench top (including plating, subculturing, and serogrouping) also should consider antimicrobial chemoprophylaxis in the absence of effective protection from droplets or aerosols.

Prevention and Control of Influenza
A new CDC report—MMWR 2001;50[No. RR-4]:1—44—updates the 2001 recommendations of the Advisory Committee on Immunization Practices (ACIP) regarding the use of influenza vaccine and antiviral agents. The 2002 recommendations include new or revised information regarding 1) the timing...
Infectious Disease

...Influenza from page 19

of influenza vaccination by risk group; 2) influenza vaccine for children aged 6—23 months; 3) the 2002—2003 trivalent vaccine virus strains [A/Moscow/10/99 (H3N2)-like, A/New Caledonia/20/99 (H1N1)-like, and B/Hong Kong/330/2001-like strains]; and 4) availability of certain influenza vaccine doses with reduced thimerosal content. A link to this report and other information related to influenza can be accessed on the Web site for the Influenza Branch, Division of Viral and Rickettsial Diseases, National Center for Infectious Diseases, CDC: www.cdc.gov/ncidod/diseases/flu/fluivirus.

2002 National STD Prevention Conference

The Centers for Disease Control and Prevention and the American Social Health Association (ASHA) co-sponsored the 2002 National STD Prevention Conference, March 4-7, 2002, in San Diego, California. It has been six years since the Institute of Medicine (IOM) report, The Hidden Epidemic: Confronting Sexually Transmitted Diseases was published, challenging the STD community and its partners to address STD issues in the United States. While many of these issues have been addressed, much work remains to successfully implement the national IOM recommendations. The conference provided an opportunity for individuals to discuss the remaining challenges, utilizing the latest science and best practices. A record-breaking 1,506 individuals were in attendance.

The conference highlights were the four plenary sessions.

• The opening plenary was STD Prevention in the US: From Past to Present to Future by Willard Cates, Jr., the president of Family Health International. Cates was a CDC employee from 1974 through 1995, serving in various roles including the director of the Division of Sexually Transmitted Diseases and director of the Division of Training.

• Laurie Garret spoke on STD Prevention in Societies under Stress: A Global Perspective. Garrett has been a medical and science writer for Newsday in New York City since 1988. She is the only writer to ever have been awarded all three of the big “Ps” of journalism—the Peabody, the Polk (twice) and the Pulitzer awards.

• A plenary by Carolyn Westhoff was entitled STD-Related Infertility Prevention in 2002 and Beyond: Bridging New Policies to Practice. Westhoff is professor of clinical obstetrics and gynecology and public health (epidemiology) at the College of Physicians and Surgeons, Columbia University, and associate attending physician and medical director of family planning at Columbia Presbyterian Medical Center in New York.

• The closing plenary—Science, Politics, the Media, and STD Prevention in 2002: Harmony or Discord?—featured George Strait, Jr. Strait is the senior vice president for media distribution at the Dr. Spock Company. Previously, he spent 22 years at ABC News, where he served for 16 years as chief medical correspondent on health and science matters. He has received his industry’s highest award twice, the Alfred I. duPont Award.

Several of the large conference sessions, including all of the four plenaries, were web cast by Kaiser Family Foundation. They may be viewed at www.cdc.gov/nchstp/dstd. In addition, abstracts are posted on the conference Web site at www.stdconference.org. The next National STD Prevention Conference is scheduled to take place in Philadelphia on March 8-11, 2004.
"Knowledge is power."

As the Information Age continues to evolve, our lives, both personal and professional, are becoming increasingly dependent on the ability to gather, access, and disseminate information—virtually at the speed of light. This is more apparent in the post-September 11 world. This ability is perhaps most crucial in public health. The public health community holds the key to a vault of information that we literally cannot live without. Vital statistics, epidemiological trends, environmental hazards, bioterrorism preparedness—the list is endless. This information tells us about where we are and, more importantly, where we need to be to effectively promote the public’s health. To this end, APHL is pleased to offer its members APHL LabNet—a tool to meet the needs for immediate, accurate, and essential data and information on public health laboratories.

What is APHL LabNet?
APHL LabNet is an Internet-based repository that allows APHL members to submit, report, and analyze data on public health laboratory practice and administration. The system has been developed around The Annual Survey of Core Laboratory Capacities and Capabilities, which was designed to collect baseline information about laboratory administration (services, facilities/equipment, personnel, and funding), and laboratory capacities and capabilities (services, personnel, and infrastructure) for each core function. LabNet also allows the association to conduct ad hoc surveys that can help it better understand how the nation’s public health laboratories are developing. System users can generate reports in a variety of formats including maps with state-by-state details. Data summaries (that include the response rate for each question) are also available using the reporting function. Finally, LabNet has the flexibility to generate reports based on one or multiple laboratories, enabling analytical comparisons.

Why is APHL LabNet important?
The growth of the association’s membership and the attention APHL has received since September 11 have intensified the need to have data readily available about public health laboratories and public health laboratory personnel. It is imperative that APHL have comprehensive data on public health laboratories to effectively represent them. APHL’s data collection efforts must address the strengths of laboratories, as well as examine the gaps in laboratory infrastructure to optimize advocacy efforts. APHL member laboratories also have a need for data to assess their “position” among the nation’s laboratories when requesting support to improve or enhance lab capacity. LabNet provides a mechanism to collect this essential data. It also supports the association’s mission of promoting the role of public health laboratories by providing timely information on laboratory equipment and services, administration, and data management. In summary, LabNet has been designed to provide one-stop access to a cornucopia of information on public health laboratories, with the robustness of a survey database and reporting tools. It has the ability to store multiple years of data, so that laboratories can see how they have changed over time.

What data can you find on LabNet today?
This past March, LabNet was used to administer the Membership Profile Survey. This survey was designed to collect and document information about the background and expertise of APHL members and laboratory personnel. As of April 15, 2002, the association received 128 out of 332 responses (38.5%). You might be interested to know that:
Most APHL members live/work in:

<table>
<thead>
<tr>
<th>Region</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York</td>
<td>10.2%</td>
</tr>
<tr>
<td>California</td>
<td>8.6%</td>
</tr>
<tr>
<td>Georgia</td>
<td>4.7%</td>
</tr>
<tr>
<td>Michigan</td>
<td>3.9%</td>
</tr>
<tr>
<td>Utah</td>
<td>3.9%</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>3.1%</td>
</tr>
<tr>
<td>Mississippi</td>
<td>3.1%</td>
</tr>
<tr>
<td>Nebraska</td>
<td>3.1%</td>
</tr>
</tbody>
</table>

APHL members have expertise in:

<table>
<thead>
<tr>
<th>Field</th>
<th>Percent of Respondents</th>
<th>Average Number of Years of Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Health</td>
<td>15.5%</td>
<td>24 (N=26)</td>
</tr>
<tr>
<td>Clinical Laboratory Science / Infectious Disease</td>
<td>34.8%</td>
<td>27 (N=64)</td>
</tr>
<tr>
<td>Laboratory Information Technology</td>
<td>1.6%</td>
<td>29 (N=1)</td>
</tr>
<tr>
<td>Newborn Screening</td>
<td>7.6%</td>
<td>21.5 (N=9)</td>
</tr>
<tr>
<td>Other</td>
<td>11.9%</td>
<td>25 (N=36)</td>
</tr>
<tr>
<td>Environmental Health / Clinical Laboratory Science / Newborn Screening</td>
<td>14.3%</td>
<td></td>
</tr>
<tr>
<td>Environmental Health / Clinical Laboratory Science</td>
<td>8.6%</td>
<td></td>
</tr>
<tr>
<td>Environmental Health / Newborn Screening</td>
<td>7.1%</td>
<td></td>
</tr>
<tr>
<td>Laboratory Administration</td>
<td>58.6%</td>
<td></td>
</tr>
<tr>
<td>Environmental Health / Laboratory Information Technology</td>
<td>7.1%</td>
<td></td>
</tr>
<tr>
<td>All fields</td>
<td>11.3%</td>
<td></td>
</tr>
</tbody>
</table>

*Percentage comprised of number of respondents from “Other” (N=18).

APHL members have an extensive educational background:

<table>
<thead>
<tr>
<th>Last Degree Earned</th>
<th>Percent of Respondents</th>
<th>Last Degree Earned</th>
<th>Percent of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAV/BS</td>
<td>41.7%</td>
<td>MD</td>
<td>39%</td>
</tr>
<tr>
<td>DO</td>
<td>&gt; 1%</td>
<td>MFMV/DVM</td>
<td>&gt; 1%</td>
</tr>
<tr>
<td>DrPH</td>
<td>13.3%</td>
<td>MPA</td>
<td>&gt; 1%</td>
</tr>
<tr>
<td>DrPH/PhD</td>
<td>&gt; 1%</td>
<td>PhD</td>
<td>42.2%</td>
</tr>
<tr>
<td>MA/MHS</td>
<td>16.4%</td>
<td>JD/PhD</td>
<td>&gt; 1%</td>
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<tr>
<td>MA/HPH</td>
<td>3.1%</td>
<td>PhD/MD</td>
<td>1.5%</td>
</tr>
<tr>
<td>MPH</td>
<td>2.3%</td>
<td>DVM/PhD</td>
<td>1.5%</td>
</tr>
<tr>
<td>MBA</td>
<td>&gt; 1%</td>
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<td></td>
</tr>
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</table>
APHL Members speak many different foreign languages:

<table>
<thead>
<tr>
<th>Language</th>
<th>Percent of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arabic</td>
<td>3.9%</td>
</tr>
<tr>
<td>Chinese</td>
<td>&gt; 1%</td>
</tr>
<tr>
<td>French</td>
<td>12.8%</td>
</tr>
<tr>
<td>German</td>
<td>3.1%</td>
</tr>
<tr>
<td>Hindi</td>
<td>&gt; 1%</td>
</tr>
<tr>
<td>Portuguese</td>
<td>&gt; 1%</td>
</tr>
<tr>
<td>Russian</td>
<td>1.6%</td>
</tr>
<tr>
<td>Spanish</td>
<td>6.3%</td>
</tr>
<tr>
<td>Other</td>
<td>5.5%</td>
</tr>
</tbody>
</table>

Amharic (Ethiopian); Italian; Japanese; Malay; Nepali; Somali; Tagalog; Thai

While this data is very useful, it only tells part of the story about some of our members. How effectively can we argue that knowledge has power, when the knowledge is incomplete?

How can you gain access to LabNet?

APHL is available to all association members and designated CDC officials. Simply connect to www.aphl.org/labnet and submit a registration form. Once your registration is processed, you will receive notification by email. Members may submit a Membership Profile Survey to LabNet through May 15, 2002.

A PHIL members can also access LabNet via the members-only site at www.aphl.org once their registration is approved. To do so, log on to the members-only Web page and click on “Member Profile.” Scroll down to “LabNet Username” and enter your LabNet user ID and password in the appropriate fields. Scroll to the bottom of the page and click “Save Changes.” Now, you can click on the LabNet link from the main menu and enter LabNet directly. (Please note, if you change your password in LabNet, you will need to update your profile in Members-Only.)

Coming Soon to LabNet...

Bioterrorism Capacity Survey
The Annual Survey of Core Capacities and Capabilities

DON’T BE LEFT OUT!

For more information on APHL LabNet, contact Stacey Banfield-Capers, Research and Information Manager at sbcapers@aphl.org.

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1 Currently, LabNet can only administer surveys to member laboratories (state laboratories) and delegate members designated as “Lab Users” in the system. Survey was also administered via email and postal mail. As of April 15, 2002, data on 27 laboratory directors (21.1%) and 3 delegate members (.02%) were available on LabNet.
Public Health Data Standards Consortium Holds Third Annual Public Meeting

The Public Health Data Standards Consortium (PHDSC) Steering Committee convened in Washington, DC, on March 20-21, 2002 for its third annual public meeting.

An important consortium goal is to educate stakeholders about health data standards by working through member organizations. To this end, the standing Education Work Group, on which APHL is represented, has been very active. At the second annual meeting, several of the work group’s recommendations were adopted as the consortium’s highest priorities, and focus area work groups were organized. At this year’s annual meeting, the focus area work groups reported that several priorities have been achieved, including:

- Development of a Web-based resource center to track and provide educational resources on data standardization and standards implementation efforts, including those related to HIPAA.
- Creation of a health care service data reporting guide, migrating from state encounter data systems to national standards.
- Identification of funding to carry out the education strategy.

In addition to reports from other work groups and updates on the ANSI X12 and HL7 meetings, the meeting featured a number of keynote speakers. John Lumpkin, from the National Committee on Vital Health Statistics presented a broader vision of public health in an electronic world (the National Health Information Infrastructure) and noted that ultimately, “our performance in public health will depend upon our information systems.” (A 2001 NHII report and recommendations document is posted at www.ncvhs.hhs.gov/nhiilayo.pdf). William Yasnoff spoke about public health informatics and the recommendations formulated at the 2001 meeting of the American Medical Informatics Association.

The two-day meeting concluded with a panel discussion entitled “Encouraging Partnerships to Finance the PHDSC Agenda.” Input was provided representatives from government agencies, Robert Wood Johnson Foundation, the e-Health Initiative, the Academy for Health Services Research and Health Policy, Grantmakers In Health, the John Hopkins School of Public Health, and other organizations.

The PHDSC was established in response to recommendations from a 1998 workshop that explored the implications of the Health Insurance Portability and Accountability Act of 1996 (HIPAA) administrative simplification provisions. Established in January 1999, the consortium is a coalition of organizations committed to the promotion of data standards for public health and public health services research through the collaboration of state, federal, and private sector organizations. Since its inception, the consortium has grown to 32 organizations, including APHL. Many important activities have taken place during the PHDSC’s short three-year history, which can be reviewed at www.cdc.gov/nchs/otheract/phdsc/phdsc.
As HIPAA implementation gains momentum, the relationship between the required adoption of administrative and financial health care data standards in electronic transactions and public health will become more apparent. The consortium’s early recognition of added benefits for public health via HIPAA led to the unprecedented establishment of working relationships at standards development organizations, such as the American National Standards Institute-Accredited Standards Committee (ANSI ASC) X12 and Health Level 7 (HL7). For example, the consortium succeeded in its request for the mother’s medical record number to be added to the ANSI ASC X-12 standard, thus allowing a newborn’s medical records to be linked to its mother’s hospital discharge records (a linkage that facilitates identification of newborn health risks and perinatal treatment gaps).

APHL staff Stacey Banfield-Capers and Helen L. Regnery attended the third annual consortium meeting. The complete agenda for this meeting can be viewed at the PHDSC Web site. APHL members interested in joining the consortium may do so by contacting Helen L. Regnery at hregnery@aphl.org.

The National Laboratory Training Network (NLTN) exhibited at the 26th annual meeting of the Society of Armed Forces Medical Laboratory Scientists (SAFMLS) on March 17 – 21, in Spokane, WA. Because of their role in prevention and control of diseases in a worldwide military population, SAFMLS scientists—including pathologists, epidemiologists, and laboratory scientists from all branches of the US Armed Forces and civilian employees of military laboratories—are an important target audience for laboratory training on topics of public health significance. NLTN representatives Karen Breckenridge, Linette Granen, and Jane Willis took advantage of the opportunity to network with SAFMLS members and learned that many are very interested in NLTN products and services, even though they are not currently on NLTN mailing lists.

As can be expected, conference content revolved around research on and preparedness for biological and chemical terrorism agents. The general session, entitled “DOD Medical Treatment Facility Laboratories and Bioterrorism: Progress of the Laboratory Response Network (LRN),” featured Richard Kellogg of the CDC Bioterrorism Preparedness and Response Program. Poster sessions included one on the cooperative testing of possible anthrax samples by the three LRN Level B labs in San Antonio, Texas, including two military facilities and one public health laboratory.

In the near future, the National Laboratory Training Network will exhibit at the American Society for Microbiology’s annual meeting (May 20-22 in Salt Lake City, UT), the Clinical Laboratory Management Association/American Society of Clinical Pathology meeting (June 27-29 in New Orleans, LA), the American Association for Clinical Chemistry/American Society for Clinical Laboratory Science Clinical Lab Expo (July 30-August 1 in Orlando, FL), and the American Medical Technologists’ annual meeting (June 24-29 in Burlington, VT).
The New NLTN Online Lending Library Index

The National Laboratory Training Network (NLTN) announces its new online Lending Library Index. The NLTN Lending Library Index lists over nine hundred training and educational materials available for loan, free of charge, to laboratory scientists. Ideal for in-service training, cross-training, student education and self-study, the lending library items are available in a variety of formats, including videotapes, printed manuals, and electronic media. Topics include bioterrorism, microbiology, hematology, phlebotomy, quality assurance and safety, to name a few. To create your library user account, log onto the NLTN Lending Library Index, and begin checking out items online today at www.nltn.org.

Where are we going with TB? A new Webcast!

Visit the National Laboratory Training Network’s Web site at www.phppo.cdc.gov/nltm/nphcts/default.asp to view the NLTN’s first webcast, “Tuberculosis from a Clinician’s Perspective: Epidemiology and Laboratory Priorities.” Charles Daley, a physician with San Francisco General Hospital and the San Francisco Department of Public Health’s tuberculosis clinic, presented this one-hour talk as part of the national NLTN teleconference series.

This webcast was made possible through the efforts of CDC staff Mark White and Robert Hare, Daley, and NLTN staff.

The program was first presented as part of a series of all-day TB workshops offered in southern and northern California and Alaska. Basic sessions encompassed safety, specimen processing, culture media, acid fast staining techniques, identification of species within the Mycobacterium tuberculosis complex, and drug susceptibility. Advanced sessions addressed information and applications from sequencing the mycobacterium genome, use of reporter phage in mycobacteriology and progress in development of a vaccine for MTB. Joint sessions included the use of molecular methods in mycobacteriology and tuberculosis from a clinician’s perspective: epidemiology and laboratory priorities.

The workshops were co-sponsored by NLTN, California Department of Health Services (CDHS)-Microbial Diseases Laboratory (MDL) and the Alaska Public Health Laboratory. Edward Desmond, Research Scientist, CDHS-MDL spearheaded the planning process. In addition to Daley and Desmond, workshop faculty included Niaz Banaiee, Stanford University School of Medicine; Yvonne Jang, CDHS-MDL; William Probert, CDHS-MDL; Marguerite Roemer, San Francisco General Hospital/University of California, San Francisco; and Martin Voskuil, Stanford University. Thomas Shinnick, Chief, Tuberculosis/Mycobacteriology Branch, Division of AIDS, STD and TB Laboratory Research, NCID, CDC, joined the faculty for the Alaska workshop.

The NLTN aims to make its training programs widely available to clinical and public health laboratory professionals. As part of this effort, webcasts of the national teleconference series will be archived whenever possible and will be available at the Web site listed above. If there are topics that you would like to see presented in the national NLTN teleconference series or a topic that you would like to present, contact your NLTN office at 800.536.8656.
Annual PulseNet Meeting Focuses on Bioterrorism, New Program Applications

Over 150 people attended the 2002 PulseNet Update Meeting, held April 8–10 in Ann Arbor, Michigan. Among those present were state and local public health laboratorians; agricultural and veterinary laboratorians; officials from the CDC, Food and Drug Administration, and U.S. Department of Agriculture; and researchers from seven other countries. The number and diversity of attendees reflects the growth that has occurred in the PulseNet Program during the past year.

The theme for this year’s meeting was “The Role of PulseNet in the Public Health Response to Bioterrorism.” This theme was addressed from many perspectives, including that of the Laboratory Response Network, the Michigan Department of Community Health, the New York State Department of Health, the Center for Biological Defense, and the CDC. David Huxsoll, with the Plum Island Animal Disease Facility, delivered the keynote address, entitled “BT Response: Recent Past and Future.”

The annual PulseNet meeting continues to be a forum for practical applications and improvements to the program, which this year included the release of BioNumerics 3.0 and the launch of the new PulseNet Web board, which replaces the current messaging system. Panel discussions were held with members of the database team, the validation laboratory, BioRad, and Applied Maths. Paul Keim, with Northern Arizona University, delivered the Distinguished Lecture, entitled “Molecular Typing, Mutation Rates, and Probability Modeling”—topics that were especially relevant to the states awarded applied research contracts to develop the next generation DNA sequencing-based subtyping methods for PulseNet.

Several collaborating programs were also featured at the meeting, including the National Antimicrobial Resistance Monitoring System, CaliciNet, LITS+, and Fred Tenover’s Oxacillin-Resistant Staphylococcus aureus program in CDC’s Division of Healthcare Quality Promotion. International participants provided updates on PulseNet North, PulseNet Europe, and PulseNet Pacific Rim. PulseNet USA is eager to continue collaborating with each of these networks in 2002 and beyond.

The PulseStar award is presented annually by CDC/FDDLS and APHL to PulseNet participants whose efforts have contributed significantly to the advancement of program activities during the previous year. This year’s awardees are Wayne Chmielecki from the Pennsylvania Department of Health, Terry Kurzynski from the Wisconsin State Laboratory of Hygiene, and Leslie Wolf from the North Carolina State Laboratory of Public Health. Congratulations to our awardees and all the nominees for this year’s award. The next PulseNet Update Meeting will be hosted by the Texas Department of Health in 2003.
ANNOUNCEMENTS...

The APHL business meeting will be held on Sunday June 9, 2002 at the APHL Annual Meeting in Albuquerque, NM. *** This constitutes official notice to APHL members. The purpose of this meeting is to discuss items of strategic importance to APHL.***

APHL Laboratories Selected for Pilot Wild Poliovirus Survey

In mid-May, APHL member laboratories will receive a letter from Eve Slater, the US assistant secretary for health, requesting all laboratory directors to participate in the expanded phase of the pilot wild poliovirus laboratory survey.

This pilot of several hundred biomedical laboratories in different settings is a further step toward the nationwide survey of over 15,000 biomedical laboratories, scheduled for October 2002. APHL members were selected for the pilot because of their positions of leadership and because public health laboratories are likely to be viewed by other laboratories as sources of information and advice when the national survey gets underway.

The purpose of the survey is to alert laboratories to the impending eradication of polio, encourage disposition of all unneeded wild poliovirus materials, and establish a national inventory of laboratories retaining poliovirus infectious materials. Laboratories listed on the inventory will be kept informed of eradication progress and when to implement containment procedures.

Polio eradication is anticipated within the next few years. In the last 12 months, less than 600 cases were reported in ten countries. In conducting the survey, the US joins 122 other polio-free countries that have initiated or completed similar surveys over the past two years in collaboration with the World Health Organization (WHO).

For more information please go to: www.cdc.gov/od/nvpo/polio or contact Kim Koporc at 800.221.0916.
MARK YOUR CALENDARS...

Future Meetings of Interest

Future Meetings:

Global Health Council Annual Conference

The ASDWA State Drinking Water Security Conference
The Association of State Drinking Water Administrators and EPA’s Office of Ground Water and Drinking Water invites state public health laboratory directors to attend the ASDWA State Drinking Water Security Conference. The Conference will be held June 3-5, 2002 in Salt Lake City, Utah. To view the registration packet go to www.aphl.org/docs/Drinking%20water.pdf. Funding is available to travel one individual from the each state public health lab to this conference. If you have any questions you can contact Deirdre Mason at ASDWA at 202.293.7655.

Focus on Quality Workshop
The NLTN and the New Mexico Department of Health, Scientific Laboratory, are co-sponsoring this four-hour workshop. This quality assurance program immediately follows the APHL annual meeting in Albuquerque, NM, on June 12, 2002. The registration fee for APHL members and their staff is $20.00. For more information or to receive a copy of the brochure, call the NLTN at 303.692.3283.

The Public’s Health and the Law in the 21st Century
June 18-19, 2002, at the Sheraton Colony Square Hotel in Atlanta, GA. To register go to www.aslme.org/conferences. Registration will be limited to ensure a truly rich and interactive learning experience.

AFDO Meeting: Laboratory Counter Terrorism/Laboratory Resources Workshops
June 18-22, 2002, in Portland, Oregon. The Association of Food and Drug Officials (AFDO) will be sponsoring this meeting in conjunction with the FDA. The title of the meeting is Laboratory Counter Terrorism/Laboratory Resources Workshops. FDA will be funding travel for state health and agriculture laboratory directors to attend. For more information contact Charlie Parfitt at the FDA at 301.827.1033.

First Public Health Systems Research Affiliate Meeting: Transferring Research into Preparedness
June 22, 2002, Washington, D.C. This meeting will be hosted by the CDC and the Academy for Health Services Research and Health Policy. For more information view www.academyhealth.org/2002/affiliate. Direct questions to Tamar Klaiman at the Academy at klainman@ahsrip.org.

18th Annual Waste Testing & Quality Assurance Conference
The conference will be held in Arlington, VA, August 10-15, 2002. For additional information visit www.wtqa.org.

ASPH 3rd Annual Environmental Health Conference
The conference will be held in September, 2002, in Pittsburgh, PA. The theme for this conference is “Disaster Preparedness and Response.” A call for abstracts has been issued. More information at www.aphl.org/docs/calleh.pdf. A draft agenda may be found at www.aphl.org/docs/draftagenda.doc.
Brokopp said the biggest planning challenge for the laboratory was simply “being able to understand and coordinate all of the laboratory resources brought in to support the Olympic effort and to assure that they were not misused.” By the time the parade of athletes began Friday evening, February 8, 2002, laboratory services were available from dozens of entities including the US Department of Defense, US Department of Energy (DOE), Environmental Protection Agency, Federal Bureau of Investigation, Federal Emergency Management Agency, clinical and environmental labs in Salt Lake City, and more than two dozen fellow Laboratory Response Network (LRN) members that offered to provide surge capacity in the event of an emergency.

“Overall,” remarked Brokopp, “it was good to have that added capacity available. We had actually worked with most of the (federal) agencies for about three years and had a good idea who would be able to perform what kind of analysis.” In addition, he said, “We were fortunate that Richard Meyer (director of CDC’s Bioterrorism Rapid Response and Assessment Laboratory) and some of his staff were on-site . . . for the duration of the Olympics.”

Other preparations involved basic capital equipment upgrades and intensified staff training. Thus, while the luge track, slalom course, and skating rinks were being readied by others, Utah laboratorians were busy overseeing the installation of a new exhaust system in the biological safety lab and—under the direction of June Pounder, supervisor of the state molecular biology lab—purchasing equipment to do rapid polymerase chain reaction and direct fluorescent testing of possible bioterrorism (BT) agents. Pounder and the microbiology staff also worked closely with the CDC and DOE to make sure that all LRN procedures and reagents were “on-line” for immediate use.

These efforts were funded largely through Utah’s BT grant from the CDC, supplemented by general state funds. In addition, the Olympic organizing committee worked with the Utah Department of Health to secure an extra $500,000 from the US Congress. This money, said Brokopp, “arrived very late, but it was still useful.” Congressional funding was used to support enhanced disease surveillance, establish an epidemiology response center, and purchase additional equipment, supplies and staff time.

By the time the Olympics began, were Utah laboratorians ready? “We lost a lot of sleep,” said Brokopp, but “we thought we had done enough. We were eager to get on with the games.”

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**Utah State Public Health Lab At-A-Glance**

Director: Charles (Chuck) Brokopp, DrPH  
Location: Salt Lake City, across the street from Olympic Village and looking down into Rice-Eccles stadium, the site of the opening and closing ceremonies of the 2002 winter games.  
# Staff: 86  
BSL Rating: 3  
LRN Rating: Level C  
How Brokopp felt after the closing Olympic ceremonies: “Very relieved. Very tired.”
Just as in the planning phase, coordination was vitally important during the 27 days of the Olympic and Paralympic games. Brokopp stressed that “we would not have been able to manage all of the incidents and outbreaks without very close collaboration with local health departments and epidemiology,” collaboration that was perhaps enhanced by his previous tenure as Idaho’s state epidemiologist.

Although Utah’s epidemiology program is located across town from the public health lab, he noted that laboratorians were in constant communication with epidemiology staff. Conference calls involving many public health, public safety, and environmental health officials were convened at least twice daily; at 8:30 A.M. and 1:30 P.M. “Those calls were critical to staying on top of all the events going on across the entire Olympics,” averred Brokopp.

Susan Mottice, former director of Utah’s microbiology lab, served as the department of health liaison with the Utah Olympic Public Safety Center. Her laboratory background, said Brokopp, forged a valuable link between public health and public safety. Laboratory staff were able to communicate with safety and law enforcement personnel on a 24/7 basis via cell phones, digital pagers, satellite phones, and special communication software.

Fortunately, no major health or safety crisis occurred. A false-positive test result for anthrax in an air sample obtained as part of routine biomonitoring was, “one of the more difficult incidents that we needed to manage,” said Brokopp. “It was very exciting for about an hour and a half.”

Other incidents included several small foodborne outbreaks among support staff brought in to work the games, potential contamination of drinking water, and food safety violations resulting from improperly stored boxed lunches. An unknown chemical released in a hotel lobby turned out to be ammonium sulphide—the chief ingredient in stink bombs. In this case, hazardous materials teams were not able to identify the substance on-site, so samples of the contaminated carpet were brought to the lab for analysis.

Biological, chemical, and radiologic tests results were reported to one of three technical advisory groups, as appropriate. The purpose of this system, explained Brokopp, “was to make sure the policy making groups (governor’s office, etc.) not only knew the results of tests, but understood what they meant.” Health officials were particularly concerned about the results of field or handheld tests that were widely used by first responders. “We wanted to make sure that (policy makers) did not overreact to test results that may not have been reliable,” said Brokopp.

Overall, Utah’s state lab director called the games “a great experience” and said Utah laboratorians “look forward to sharing that experience with others who may be planning international events.”

In the meantime, now that the Olympic brouhaha has subsided, Brokopp and his staff are turning their attention to local matters. The lab needs funding to provide toxicology services—drug and alcohol testing—on behalf of law enforcement agents and the state medical examiner. “We’ve seen an significant increase in the number of people arrested in DUI charges in the past six months,” explained Brokopp. “In some cases, we cannot analyze blood and urine samples in time for court proceedings and so prosecutors and law enforcement agents agree to a lesser charge.” Health officials had hoped for a cash infusion from the state legislature, but this funding, said Brokopp “did not materialize.”

All in all, Utah’s Division of Epidemiology and Laboratory Services has no shortage of steady work or fresh challenges.
**Utah Laboratorians at Work**

Microbiology Bureau Director Barbara Jepson (in back) and Molecular Biology Section Chief June Pounder pipette a specimen at the Class 2 biosafety cabinet.

Microbiologist III Scott Wiedner loads capillary tubes in the Roche Lightcycler to perform a real-time polymerase chain reaction for *Bordetella pertussis*.

Dan Andrews in a BSL-3 laboratory.
“With the conviction growing that the genetic endowment of man will one day require an emphasis equal to that accorded to his environment,” Tompkins said in 1960, “the later years have found the laboratory seeking skills and insights for the future. The influence of genetic factors in disease susceptibility and other factors in the epidemiology of health certainly merit study. Already in diabetes, cystic fibrosis, hemoglobinopathies and some mental disorders, genetic factors are measurable. Detection of traits, the great problem of the heterozygote, is no longer a matter solely for eugenists, but for proper assessment of morbidity and mortality.”

While Tompkins and the New York Division of Laboratories & Research represented cutting-edge thought and technologies during the early 1960s, the reality was that many of the nation’s public health laboratories were still fulfilling the missions that they had been charged with since the 1930s. Pre-marital testing for venereal disease remained a top priority for many state and territorial public health laboratories. A national survey by the American Social Health Association in 1963 revealed that even with pre-marital testing, venereal disease continued to be a virtual epidemic in the US. The association estimated that the number of venereal disease cases in the country was approaching 1.5 million, although fewer than 400,000 cases were actually reported.

At the end of the 1950s, Florida’s public health laboratories were handling nearly 700,000 serology specimens a year. Most of the states conducting pre-marital testing for syphilis at the time were located in the South, although both Michigan and Massachusetts handled more than 400,000 specimens in 1959. Even North Dakota with its small population sent nearly 50,000 specimens to its laboratories in Bismarck and Grand Forks.

As late as 1964, immunology tests—the bulk of which were syphilis tests—accounted for more than half of the just over 13 million specimens reported in ASTPHLD’s first consolidated annual report. “The bulk of immunologic (serologic) testing for many years consisted of tests for syphilis,” reported Carl Blank, the longtime deputy director of the Utah state lab and later director of the Wyoming public health laboratory systems, and David Adcock, a CDC retiree who long served as the federal agency’s liaison to ASTPHLD. “In the late 1970s, many states dropped requirements for premarital/ prenatal testing,” Blank and Adcock noted in their recent survey of ASTPHLD consolidated annual reports. Approximately one percent of the more than seven million immunology tests conducted by ASTPHLD members in 1964 were Rickettsia specimens, and most of those samples were reported from laboratories in the Rocky Mountain states.

Still, state and territorial public health laboratories handled a wide variety of specimens other than serology tests in 1964. A analysis of bacteriology specimens remained an important function of the typical laboratory. Laboratories reported just over 1.9 million specimens, of which just less than one-third were naso-pharyngeal swabs for influenza. Mycobacteriology specimens accounted for more than 470,000 specimens, while laboratories reported 261,000 enteric samples and nearly 320,000 gonococcus samples. There were only 11,800 mycology specimens reported in 1964, most from the New York laboratories.

Intestinal parasitology tests totaled 370,000 specimens, while virology was an emerging area of interest in 1964. The 86,000 virology specimens reported were about evenly divided between rabies tests and viral isolations tests.

Public health laboratories had increased funding for virology specimens in the late 1940s and early 1950s as the poliomyelitis scare swept America. Laboratory personnel had gained valuable experience tracking polio outbreaks, although the introduction of the Salk and Sabin vaccines in the mid-1950s had all but
eradicated the incidence of polio by the mid-1960s. In 1964, only ten state public health laboratories were conducting tests on hematology specimens. More esoteric tests in the fields of immunohematology and hemoglobinopathy were being conducted by a handful of states, including New York.

Clinical chemistry was a growing area of public health laboratory interest in 1964. More than 1.1 million clinical chemistry samples were handled that year, with the great majority of the testing consisting of screening for inborn errors of metabolism. Already by 1964, environmental microbiology was a staple of many state and territorial public health laboratories, with a predominant number of the specimens consisting of water samples. The next largest batch of specimens were dairy-related, corresponding to laboratories’ longtime tradition of testing for food-borne illnesses. In the environmental chemistry field, water samples made up nearly half of the 407,000 specimens. Significantly, several state laboratories processed about 20,000 radiological samples in 1964, an indication of the increasing prevalence of the peaceful use of the atom for electric power and health care initiatives in the 1960s.

Perhaps the most interesting statistic from the 1964 consolidated annual report concerns annual expenditures of the 50 laboratories responding to ASTPHLD’s survey. Total lab expenditures came to just over $35 million, an average of $700,000 for each of the 50 laboratories. An earlier 1962 ASTPHLD survey revealed that only three states had an annual budget of more than $1 million. Of course, state laboratory director salaries averaged about $9,000 a year in the early 1960s.

From a facilities standpoint, state and territorial public health laboratories were relatively modern in 1964. The post-World War II economic boom coincided with a societal interest in medical and scientific research. As a result, 40 US states either built new or remodeled existing public health laboratories between 1950 and 1960. Colorado, Delaware, Georgia, Hawaii and Kentucky all built new public health laboratories in 1960 alone.

ASTPHLD’s member laboratories were doing much with little in 1964. Laboratory science was becoming increasingly complex, and society was primed to expect miracles from the personnel in the white coats. The federal government, however, was about to make its imposing presence felt in the public health and health care field.

The Great Society

On July 30, 1965, President Lyndon B. Johnson flew to Independence, Missouri to sign Medicare into law. With him at the public ceremony were former President Harry Truman and Vice President Hubert H. Humphrey. Medicare and its companion legislation, Medicaid, illustrated the triumph of politics in the field of public health. Johnson had been impressed by the plight of elderly and poor Americans during his campaigns for the vice-presidency in 1960 and presidency in 1964. His Great Society program aimed to ramp up federal support for patient care and to renew the government’s commitment to a broad range of public health initiatives.

Johnson and his Great Society congressional lieutenants crafted the Medicare and Medicaid legislation as an amendment to the Social Security Act of 1935. “That was politically the most feasible way to create a trust fund and create a program that would get health care to old people,” recalled Joseph Califano, a longtime Johnson intimate, “but Medicare was basically buying health services. And Medicaid was hooked on to the welfare system, because that was the only way we could pass Medicaid in 1965.”

The passage of the Medicare amendments had immense implications for the public health community. The official inauguration of Medicare on July 1, 1966 meant that the nation’s health care industry was, in effect, being regulated by the federal government. The Medicare Joint Commission—set up by the Johnson administration in the summer of 1965 to examine the efficient implementation of Medicare—had suggested scores of hospital health and safety requirements, including medical standards for laboratories, x-rays, and anesthesiology departments. The next year, those standards were applied to the nation’s public health laboratories.
The passage of the Clinical Laboratory Improvement Act (CLIA) in 1967 brought about sweeping changes for the public health laboratory community. Known by its acronym, CLIA '67 basically provided for federal regulation of all US laboratories involved in interstate commerce or that received Medicare reimbursement.

"CLIA is very important for the understanding of the history of public health laboratories in the US," explained Carl Blank.

For Blank and the nation’s other public health laboratory directors, the most important facet of the federal regulation brought about by CLIA was the licensure requirement for public health laboratory directors.

"Under CLIA," Blank said, "you could not direct a laboratory unless you had a doctorate in biological, physical or chemical science, an MD, or a doctorate of science in laboratory science."

Many of the ASTPHLD members in the 1960s already had doctorates or were MDs, but some of the directors, especially in the smaller states, often had only a master's degree. Blank’s boss at the Utah Department of Health laboratories, Russell Fraser, ran the day-to-day operations of the laboratories for 13 years. "He never asked to speak to the pathologists or the medical technicians," Blank recalled. "And in those days, MDs wouldn’t talk to you if you weren’t a doctor."

Part of the problem with licensure of laboratory directors stemmed from the fact that a state or territorial public health laboratory director in the 1960s frequently had greater need of finely-honed political skills than of medical or scientific expertise. "There were 56 states and territories back then," Blank said, "and there were 56 different ways of organizing a public health laboratory."

Utah was typical in the way it set up its public health laboratories. The Utah Department of Health in 1964 consisted of units, sections, divisions, and subdivisions, each headed by officials reporting to a higher-up in the chain of command. Public health laboratory employees, including department and division heads, were typically merit employees, with the commissioner of the board of health most frequently a gubernatorial appointee. The commissioner usually answered to a state board of health, also appointed by the governor.

Licensure had been an issue in the public health laboratory community long before the passage of CLIA. As early as 1940, Howard Bodily, the genial director of the California State Public Health Laboratories, had developed a laboratory licensure program in Sacramento. Bodily, who went on to become one of the CDC’s most influential laboratory consultants, built the California program into a model for the rest of the nation during the 1950s. New York and Pennsylvania also established licensure programs before the passage of Medicare in 1965.

Some states anticipated the licensure changes. Nathan Schneider, Florida’s laboratory director, had attended the Medicare signing ceremony in Independence. When he returned to Tallahassee, Schneider’s first priority was to work with the Florida Legislature, which passed a laboratory licensure law in 1965.

During the next two years, Schneider worked to bring his laboratories into compliance with the Florida law and the expected 1967 CLIA requirements. "Labs could do testing for Medicare under CLIA," Schneider explained. "But it involved a lot more than the inspection of laboratories. We had to set up proficiency testing, the examination of licensees, and workshops for laboratory personnel."

The Wisconsin State Public Health Laboratories "were involved heavily with CLIA," recalled Stan Inhorn, longtime director of the Madison laboratories. "Laboratory practice, in general, was unregulated at the time. Medicare defined three categories of laboratories: private, hospitals and doctors’ offices."

Inhorn, who served on the Medical Laboratories Service Advisory Committee, noted that CLIA “did put public health laboratories into regulation for the first time. We had to develop a cadre of personnel to maintain all of the testing programs. That was a big change in the 1960s.”

See CLIA on page 36...
When CLIA took effect, "Texas had never had a laboratory licensure law," recalled Charles Sweet, former director of the Texas State Health Department Laboratories. "There were three things we had to do."

The first task Sweet and his staff undertook was getting its regional laboratories licensed in one year after CLIA became law. "And many of those laboratories were located in dumpy buildings," he pointed out.

Number two on the priority list was to establish procedures to "begin to do tests we had avoided in the past," Sweet said. "We got into clinical chemistry tests we had never considered before."

The third and final change brought about by CLIA in Texas involved the establishment of fees. "We had always avoided fees like the plague," Sweet noted. "But after CLIA, we started charging for the first time. Since then, fees have become part of public health laboratories."

Some smaller and more rural states that were less equipped to deal with the new CLIA licensure requirements observed the letter, if not the spirit, of the law by hiring a figurehead pathologist as director of the laboratory. More often than not, the figurehead director rarely had to be on the scene to direct affairs at the lab.

Those laboratory directors who had already implemented licensure programs offered their expertise to help laboratories in their states and surrounding states comply with licensure requirements. Morris Schaeffer, director of the Bureau of Laboratories of the Department of Health for the City of New York, was particularly helpful in developing licensure statutes for neighboring Mid-Atlantic states.

Finally, the CLIA regulations magnified the importance of the doctor of public health program at the University of North Carolina - Chapel Hill. Established in 1961, the doctorate of public health program at North Carolina filled a prime need for the nation's public health community. During its 20 years of existence, it offered dozens of state and territorial public health laboratory directors the opportunity to get the hands-on and theoretical experience they needed to head an increasingly complex public health laboratory system.

"One of the things that led to the need of the North Carolina program was that the 1960s were a transition era," said Blank, a 1967 graduate of the program. "Laboratory directors needed more administrative work. There was a lot more federal money around with Medicare. Ironically, many of the old-timers fought it. They said that an MBA could manage a lab. But the director often had to be the buffer between the employees and state politics."

Overall, the 1960s were a decade of tumult and change for the nation's public health laboratorians. A STPHLD and its members emerged from the '60s with both increased prestige and professional credentials. They would need both to meet the public health challenges of the 1970s.
from a blood vessel in Irene’s leg were sent for analysis to the Pharmokinetics Laboratory in the National Jewish Hospital in Denver, Colorado. They showed that serum blood levels were as expected; the elephant was in fact absorbing her medicine.

The New Mexico lab also sent an isolate to CDC for confirmatory susceptibility testing, and “they too detected rifampin resistance,” said Ferguson. The TB and Mycology Section has since sent six isolates to three labs for strain typing: The Veterans Administration Medical Center hospital lab in Little Rock, Arkansas; the National Veterinary Services Laboratory in Ames, Iowa; and the Los Angeles County public health laboratory.

The good news is that Irene “never really showed any illness throughout her course of treatment” and has a good prognosis now. Though the TB and Mycology Section has not tested any TB-positive specimens from the pachyderm since February 2001, the zoo vet, Michael Richard, intends to collect monthly trunk washings from Irene for the rest of her life. Both Irene and Donna are now off display, enjoying much-needed seclusion and relaxation. Nonetheless, Ferguson encourages those visiting Albuquerque for the upcoming APHL annual meeting to stop by the Biological Park. “It’s a wonderful facility, and definitely worth seeing,” he said.

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week, French, who has a degree in epidemiology, attended the International Conference on Emerging Infectious Diseases in Atlanta where Hubbard was able to follow up with her and introduce her to the New Hampshire epidemiologist and lab staff.

Such relationship-building is a significant outgrowth of Hill Day, for it creates a desirable, symbiotic partnership between congressional staff and APHL members. According to Klawitter “one of the biggest benefits to participating in Hill Day each year is the opportunity to develop good working relationships with the legislative aides.” Klawitter said that a senatorial aide that she met with in 2001 and 2002 has come to view the Wisconsin State Laboratory of Hygiene as a trusted resource, especially during the bioterrorism crisis. Klawitter noted that she had been “contacted on a couple of different occasions by a senatorial aide...seeking information on Wisconsin’s bioterrorism preparedness and response plan.” She characterizes these interactions as “invaluable.” Already, several APHL members have written follow-up letters to aides with whom they met during this year’s Hill Day—attempting to solidify burgeoning relationships and to further their advocacy work.

As the meetings drew to a close on March 6, temperatures dropped with the oncoming dusk and APHL members packed their folders away, hurrying to return to their respective states where work was piling up. Briefly they were united, furthering a common cause, and afterwards they are united again in their laboratory work at home. Looking back on this Hill Day, Gilchrist reflected on how far APHL members have come in their efforts: “Hill Day has progressed over the last few years to a situation in which our legislative staff members recognize and identify APHL with important issues for which we advocate. Effective advocacy for the issues important to the public health laboratory community and promoting adequate funding for CDC is an imperative.” With public health moving to center stage in the political arena, this Hill Day and the upcoming Hill Days promise to be steps in the right direction.

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