State Public Health Labs Gear Up To Battle West Nile

“...there's a special providence in the fall of a sparrow... if it be not now, yet it will come: the readiness is all.”

William Shakespeare
Hamlet—V.ii.218-221

It is not sparrows, but crows and their Corvidae kin that are falling from the skies to die, their bodies showing up everywhere from the White House lawn to the Great Plains. State laboratorians and other public health staff are well aware what these avian fatalities portend.

The West Nile strain now circulating in the United States is particularly pathogenic to its Corvid reservoir hosts, so that its expansion across the nation is mirrored by shrinking populations of these sentinel flocks. According to Mississippi State Health Officer Ed Thompson, the virus will soon be endemic in the continental U.S. Thompson noted in a recent CDC videoconference, “There are two kinds of states (in America): those that have had West Nile virus (WNV) and those that are going to have WNV.”

John Roehrig, chief of the Arbovirus Disease Branch of CDC’s National Center for Infectious Disease (NCID), predicts that “once (the virus) spreads across the country and laboratorians become familiar with it, it will start to be handled as other diseases like this have been handled in the past.” That is, WNV testing will become routine. In the meantime, however, many laboratories are rushing to come up to speed before the first human cases surface in their states, while some labs are already struggling with large numbers of human infections.

Altogether, as of early September, a total of 673 human cases with laboratory evidence of WNV infection were reported to the CDC in 2002. The bulk of these—205 cases, including 8 deaths—have occurred in Louisiana. Other high-incidence states are Mississippi, with 104 cases, Illinois, with 122 cases, and Texas with 43. Although WNV first infiltrated the country in New York, that state had reported only 8 cases by September 3, roughly the mid-point of the period of peak WNV incidence. (Viral infections primarily occur in late August and early September when the virus amplification cycle crests and before the mosquito population dies down with the onset of cooler weather. However, cases can continue...
As the anniversary of the postal anthrax incident approaches, public health laboratories have shifted their focus from the immediate headline-grabbing emergency response activities to the quieter, longer-term business of expanding capacity and developing policies to increase preparedness for future events. Similarly, APHL has shifted focus in the aftermath, and is now evaluating its internal organization, governance, and activities so that it will be better positioned to pursue its mission and participate in the development of national public health policy. Three recent initiatives are part of this undertaking. The first is the prioritization of the APHL strategic plan by the APHL Board of Directors. The five priority objectives identified are:

Goal I Objective 4. Establish a Center for Public Health Laboratory Leadership to provide the necessary technical and management training of existing and future public health laboratory leaders.

Goal II Objective 1. Develop and implement a plan that communicates and markets the value of public health laboratories in protecting and improving health at the state and national level.

Goal III Objective 1. Develop and promote the use of effective laboratory information systems.

Goal IV Objective 5. Promote the continued development of an integrated network of public and private laboratories to assure the quality and coordination of testing.

Goal V Objectives 1. and 2. Refine APHL governance and board operations. Assess membership categories to determine their role in governance.

The second initiative is the publication of the APHL report on core functions of state public health laboratories in the *Morbidity and Mortality Weekly Report* (September 20, 2002). In this article, the public health lab community, for the first time, describes its vision of those services it considers to be the minimum essential offerings of state public health laboratories. It is intended to assist states and territories seeking guidance for the purpose of planning essential services and building public health laboratory capacity.

The third initiative is the establishment of a governance task force, charged with reviewing and assessing the structure and governance of APHL as it relates to its mission. The report of this task force will be used by the Board as a basis for the development of recommendations to the membership on ways in which APHL can restructure to more effectively and efficiently pursue its mission and meet the needs of its membership.

As an organization, the tragic events of this past year have presented APHL with many new opportunities and challenges. It is now time to undertake the quiet, longer term business of ensuring that the organization is structured and governed in a manner which will let us rise to the occasion.

Sincerely,

David Mills
EXECUTIVE DIRECTOR’S NOTE

Late last month I had the opportunity to attend an association meeting. Not unusual for an association head. This one was a little different for me, though, because it was my professional association, the American Society of Association Executives (ASAE). Yes, it’s true—there really is an association for everything and most of them are located within a small radius of downtown Washington, DC. What made this meeting so special was the opportunity for me to network with my colleagues, meet suppliers, and learn a few new tricks of the trade. The meeting was held in Denver (the location of APHL’s infectious disease meeting in March 2003), so the scenery was amazing, the weather was perfect, and yes, the educational sessions were top-notch.

Truth be told, I also liked all the pampering the city of Denver and the association supplier industries (hotels, transportation, entertainment) put on for the more than 5,700 persons attending. I discovered that $1.7 billion in revenue is generated from national association meetings. This made me wonder: how much collective buying power do APHL state and local members have? The answer to that will have to wait since the research has yet to begin. My estimate puts it in the tens of millions of dollars, at least for the next few years.

Another thing I took away from the meeting was how absolutely relevant APHL is on the national scene. When introducing myself with my affiliation, I also tacked on that our group is made up of the public health first responders, who handle such things as West Nile, anthrax, and newborn screening. This last statement stopped some people in their tracks. Over the three-day period of the conference, there were front page articles in the Denver Post dealing with each of these issues and quoting laboratory leaders—talk about timely!

Over the next six months APHL will host or co-host a series of meetings designed with you, the public health laboratory science leader, in mind. We begin our meeting tour this fall in Phoenix, Arizona, where, on November 4-7, we host the Newborn Screening and Genetic Testing Symposium. The next stop on the tour finds us in San Francisco, California, for the Fourth National Conference on Laboratory Aspects of Tuberculosis held on December 10-13. We then begin the new year right with a 50-state meeting on chemical terrorism laboratory preparedness, which is part of our assessment study being conducted by RTI (you will find more on this study inside, on page 11). And finally, the 2003 Infectious Disease conference, “Molecular Diagnostics, Impact on Public Health Practice, From BTs to STDs,” will take place March 5-7 in Denver, CO.

One board member asked me to share the single greatest benefit of my attendance of the ASAE meeting. I was quick to respond—the new information that I had gained from my peers. I’m hoping that you have a similar experience at one of APHL’s many upcoming meetings this year.

Sincerely,

Scott J. Becker
Connecticut Public Health Laboratory Recognized for Anthrax Testing; Preparing for Future Biological, Chemical Terror Threats

Anthrax officially reached Connecticut the first week of October, 2001. At least that’s when the testing began at the Connecticut Division of Laboratories in downtown Hartford. Diane Barden, the lab’s bioterrorism coordinator and the only full time staff person working on bioterrorism, reported in a telephone interview that the lab was processing hundreds of environmental samples in those early days of the scare. Then, just two days before Thanksgiving, the Centers for Disease Control and Prevention confirmed the presence of anthrax in a specimen from an elderly Connecticut woman who was hospitalized and dying. The lab kicked into overdrive.

Barden called in her Bio-response Action Team (BRAT), a group of six volunteer microbiologists with considerable training in bioterrorism. “I would be out flat if it weren’t for them,” said Barden. Katherine Kelley, the state director of public health laboratories, noted separately that “when things really started to happen, the volunteers came up to plate. There was a lot of testing to do.” Indeed. The crew ate Thanksgiving dinner at the lab.

By the time the crisis ended, the Connecticut Division of Laboratories had processed roughly 2,500 specimens: about a thousand related to the “mail trail” from the one Connecticut anthrax victim and another thousand related to the pre-cleaning and clearance sampling for the Wallingford postal facility, which suspended operations for a brief period until its premises could be declared anthrax-free. In fact, the Wallingford site was the first postal facility in the country to be re-opened after suspected anthrax contamination.

On July 17, the United States Postal Service (USPS) officially thanked Barden and her colleagues for their unstinting efforts. In a small, informal ceremony, USPS officials presented an award to Barden and a separate award to the laboratory “in grateful appreciation of . . . assistance provided to the United States Post Office during the anthrax testing.” The awards are emblazoned with a page of the first-day issue “Heroes USA” stamp and a large replica of the first-day issue “United We Stand” flag stamp. Gerald Newland, manager of human resources at the USPS, explained that “the stamps depict what (the Connecticut laboratorians) mean to us. They stood side-by-side with us through this whole anthrax crisis. They worked all hours and days of the week. And they’re heroes.”

Although anthrax is no longer a front-burner issue, Connecticut laboratorians do not have the luxury of resting on their laurels. The laboratory is bringing on the next set of Category A agents for which the CDC has developed protocols for Laboratory Response Network labs. In addition, Barden is spending a lot of time building relationships with hospital, local public health, and private commercial labs in the state.

“That outreach is very important,” said Kelley, “because when we did have the anthrax case, the hospital was aware that getting four positive blood cultures revealing gram-positive bacilli was a red flag. And they were
Beth Hochstedler Wins  
2002 Thomas E. Maxson Scholarship Award

Elizabeth “Beth” Hochstedler was named the recipient of the 2002 Thomas E. Maxson Scholarship Award at the June 2002 APHL annual meeting in Albuquerque, NM. In a special ceremony, Lou Turner, chair of the APHL Training and Education Committee, presented Hochstedler with a plaque and a check in recognition of her tremendous contributions to improving laboratory practice through training.

Mary Gilchrist, Director of the University of Iowa Hygienic Laboratory, nominated Hochstedler for this honor, indicating that Hochstedler has served as the Iowa state training coordinator since 1995. During her tenure, she has been instrumental in the development and delivery of a variety of laboratory training resources and in numerous efforts promoting the public health laboratory community. Whether facilitating training events, marketing the Healthy Iowans 2010 plan, playing a key role in the 1997 Partners for the Future Project, serving as gracious host to international fellows, or integrating new technologies for learners, Hochstedler has been a vocal and energetic leader in the public health arena. Colleagues credit Hochstedler with a passion for training, and note that she is a robust advocate of the National Laboratory Training Network, models a work ethic that is unparalleled, has a positive, “can-do” attitude, and shows an unwavering commitment to lifelong learning.

The Thomas E. Maxson Scholarship Award was established in August 1998 in memory of its namesake, an active APHL member who served on the APHL Training Committee, was a member of the APHL Board of Directors and was an enthusiastic and long-time supporter of the continuing education needs of the public health laboratory community. The scholarship award is given annually to a deserving public health laboratorian who has made significant contributions to the improvement of public health laboratory practice by creating continuing education opportunities.
EID Fellowship

EID Laboratory Fellowship Program Initiates
Record-size Class for 2002

APHL initiated the ninth class of EID laboratory fellows in August, with a week-long orientation program at the CDC in Atlanta. This is the largest class of EID fellows to date! A total of 30 pre-doctoral training fellows, five post-doctoral research fellows, and ten international fellows make up the incoming class. They will be posted at local, state, and CDC laboratories throughout the US.

This year, more than half of the US-citizen fellows will spend their fellowship assignments at APHL-member local and state laboratories, including: California Department of Health Services, Connecticut Department of Public Health, Florida Department of Health, University of Iowa Hygienic Laboratory, Massachusetts State Laboratory Institute, Michigan Department of Community Health, New Mexico Department of Health, Virginia Department of Public Health (Norfolk), North Carolina State Laboratory of Public Health, New York State Department of Health, Virginia Division of Consolidates Laboratory Services, and the Washington State Public Health Laboratory. Fellows will also be placed in CDC laboratories in Anchorage, Alaska; Fort Collins, Colorado; and Atlanta, Georgia.

Fellows begin their one- and two-year assignments in September. APHL looks forward to working with these fellows, their mentors, and host laboratories over the coming year.

A number of current fellows attended the 21st annual conference of the American Society for Virology (ASV) in Lexington, Kentucky, in July. Class VII Training Fellow Joe Anderson presented the poster “Determining virulence characteristics among geographically distinct strains of chikungunya.” Anderson’s host laboratory is the CDC’s Division of Vector-Borne Infectious Diseases in Fort Collins, Colorado. Renee Park presented the poster “Molecular Characterization of Divergent Sabin 2-Derived Isolates from Patients with Paralysis.” Park is a Class VII training fellow in CDC’s Division of Viral and Rickettsial Diseases in Atlanta, Georgia.

Also at the ASV conference, Class III International EID Fellow Hualan Chen presented the poster “Contributions of the Hemagglutinin, Neuraminidase and PB2 Polymerase Genes to Virulence of the Hong Kong H5N1 Influenza Viruses for Mice.” Chen works within CDC’s Division of Viral and Rickettsial Diseases in Atlanta, Georgia. She also has three publications in press, two in Avian Disease and one in Virology.

See Fellowship on page 18...
Biomonitoring Gains Ground

Biomonitoring—the assessment of human exposure to toxic substances by the laboratory measurement of these substances (or their metabolites) in specimens such as blood, urine, or saliva—has received renewed attention at APHL, CDC and other federal agencies, and in the U.S. Congress.

This summer, APHL and the CDC National Center for Environmental Health (NCEH) co-sponsored four workshops in Atlanta focusing on the CDC biomonitoring program. Participants toured the spectacular new NCEH labs, and CDC experts lectured on biomonitoring for cotinine, heavy metals, dioxins, pesticides, and volatile organic compounds. Representative attendees of each of the four workshops are creating a collective synopsis of the sessions for the association’s Environmental Health Committee. (Last year, CDC awarded grants to 33 states to plan for the development, implementation, and expansion of state-based biomonitoring programs, and next year CDC plans to award grants for the implementation phase of biomonitoring programs.)

The Agency for Toxic Substances and Disease Registry (ATSDR) and CDC partnered to build the National Environmental Public Health Tracking Network and to make several funding opportunities available to states this past summer. In June, ATSDR requested proposals from states to fund two to three projects examining the potential impact of environmental exposures on chronic disease outcomes. In July, CDC requested proposals for state health tracking pilot programs. Funding will be awarded to 15 states to monitor chronic diseases and their potential links to environmental factors. CDC is also awarding funds to three schools of public health to establish centers of excellence in health tracking and to research chronic disease and potential links to the environment.

Congress has taken up the issue of biomonitoring as well. The Nationwide Health Tracking Act of 2002 (S.2054/HR 4061) was introduced in March to increase public health personnel capacity and to establish state-based and nationwide health tracking networks. If the bill is enacted, biomonitoring capabilities would be substantially expanded, bolstered by up to $50 million of new funding per year for biomonitoring enhancement and up to $50 million per year for laboratories from 2003 to 2007. However, in late July, the Labor, Health and Human Services, and Education Subcommittee of the Senate Appropriations Committee marked up an appropriations bill that provides just level funding for CDC Environmental Health Laboratory biomonitoring activities. Because current funding falls short, APHL members have been asked to contact their legislators to discuss the importance of biomonitoring in their states.

If you would like more information before contacting your members of congress, or if you have already made contact, please contact Jennifer Liebreich, MPH, APHL’s senior manager for environmental health, at jliebreich@aphl.org.

Are You Advertising Jobs on JobSpectrum.org Yet?

The APHL/CDC/American Chemical Society (ACS) partnership making JobSpectrum.org available to state laboratories was announced at the APHL Annual Meeting. JobSpectrum.org is ACS’s online recruitment and career site, and through the partnership, services are available to APHL members at no cost for one year. APHL laboratories are currently advertising sixteen jobs on the site, and some postings have been viewed up to 79 times by job seekers. ACS has more than 163,000 members. By using JobSpectrum, you draw from a pool of highly qualified candidates with chemistry backgrounds. Contact Jennifer Liebreich, senior manager of environmental health, at 202.822.5227 x236 to begin advertising your chemistry and environmental health jobs.
XIV International AIDS Conference Bridges Gaps Among Research, Policy, and Practice

The lights in the vast sports arena dimmed, the crowd suddenly quieted. A soft hum of music played in the background, slowly growing louder and louder, until the chords became almost deafening. Lights flashed as colorful flags and banners were unfurled. Acrobats dropped from the ceiling and a woman’s voice chanted out sounds of welcome. This was not the circus, but the opening of the Fourteenth International AIDS Conference in Barcelona, Spain. Spotlights honed in on the banners extolling the theme of this important gathering: “From Knowledge, To Commitment, To Action.” Professionals, politicians, activists, people living with HIV, people affected by AIDS, and religious leaders all came together for one week to address the world’s growing burden of AIDS and HIV.

Among those in attendance were APHL staff members Bhavna Lall and Areana Quiñones, representing APHL’s Global AIDS Laboratory Program. It was a hectic week of sessions, workshops, and meetings. Speakers described the reality of the multiple worlds in which we live; a rich world where people with HIV have access to medications and proper testing, and a poor world where only 30,000 people out of 30 million with HIV receive treatment, where positives remain undetected or unreported, and where 2.2 million died of AIDS in the last year.

The conference theme served to bridge the gaps among science, activism, prevention, and policy. Scientific sessions examined the role of HIV rapid tests and the significance of quality laboratory practice. Social Science sessions delivered information on voluntary counseling and testing, prevention activities, and new approaches to AIDS education. Political sessions addressed the need for continued funding of AIDS research, the responsibilities of international donors and the pharmaceutical industry, and the need for policies to address the growing burden of disease in the developing world. Overall, the conference embodied a tone of constructive dialogue and advocacy for cooperative endeavors.

While the battle against AIDS is only just gaining momentum, the International AIDS Conference served as a forum to highlight successes and shed light on challenges. In his closing remarks, Conference Co-chair Jordi Casabona said, “The Barcelona Conference has given a boost to programmatic and policy issues. It has created a consensus regarding the scale and the characteristics of the response needed now, as well as a sense of global partnership that should help to push for globally effective responses.”

Through the Global AIDS Laboratory Program, APHL is a committed partner in the fight against the AIDS pandemic.
Newborn Screening and Genetic Testing Symposium To Feature Reports From States, New Lab Technologies

The 2002 Annual Newborn Screening and Genetic Testing Symposium will be held from November 4-7 at the Hyatt Regency Phoenix at Civic Plaza in Phoenix, Arizona. The symposium will continue its format of addressing state and national newborn screening, genetic testing, and policy issues important to public health laboratories, with a renewed emphasis on reports from state programs and the changes they face. Attention to new laboratory technologies such as tandem mass spectrometry, DNA analysis, and new immunoassays will be an important part of the program, as will a new session called “Meet the Manufacturer” or MTM, in which companies will be invited to present their latest technologies in an informal setting. The three-day program will include poster sessions, presentations drawn from submitted abstracts, and invited oral presentations. Input and participation by parents and advocacy organizations are encouraged.

The symposium is geared for public health laboratory directors, newborn screening and genetics laboratory professionals, program personnel and counselors, health care practitioners and other maternal and child health service providers, and other public health professionals involved with newborn screening and genetics issues. Oral and poster presentations will address program implementation and technical laboratory aspects. Invited speakers include:

- **Keynotes** – Muin Khoury, CDC, and James Hanson, National Institutes of Health
- **Ethics** – Trish Mullaley, Coalition for PKU and Allied Disorders
- **Tandem Mass Spectrometry** – Piero Rinaldo, Mayo Clinic
- **Follow-up** – Susan Panny, Maryland Department of Health and Mental Hygiene
- **Technology** – Brad Porovitch, Xenon Genetics, Inc
- **Emerging Issues** – Jennifer Puck, National Institutes of Health
- **Education** – Charles Myers, Louisiana Genetic Diseases Program
- **Policy Issues** – Michele Puryear, Health Resources and Services Administration

A pre-conference workshop, “QA/QC in Newborn Screening,” will be held Monday morning, November 4, from 8:30 A.M. to 1:00 P.M. Separate registration is required, but there is no additional fee.

For registration and further information, visit www.aphl.org/National_Conferences/2002newborn.cfm, or contact Jelli Ojodu, program manager for newborn screening and genetics, at 202.822.5227 x235.
The national bioterrorism readiness effort got a boost when APHL members from the 50 states and major metropolitan areas met in August to discuss their readiness plans with federal funders. The Focus Area C Meeting was named for the portion of this year’s $940 million public health infrastructure fund that went to state and local laboratories for bioterrorism preparedness. The unprecedented infusion of federal support was provided by congress following the 2001 anthrax attacks, and distributed by the Centers for Disease Control and Prevention in June. State and CDC officials had worked on preparedness plans during the spring, incorporating critical benchmarks for readiness into their plans.

More than 60 attendees from state and metropolitan public health laboratories, and more from a variety of federal agencies, found guidance and answers during two days of presentations jointly sponsored by APHL and CDC. James Hughes, director of CDC’s National Center for Infectious Diseases, had to postpone his introductory remarks to the group until the second day, as he was called to respond to the ongoing West Nile virus outbreak. APHL Immediate Past President Mary Gilchrist opened the meeting, noting that the warnings of public health professionals had come to pass in 2001, but that overall, the public health laboratory community could be proud of its response; earlier collaborations between APHL and CDC in building a Laboratory Response Network had paid off. Kevin Yeskey, director of the Bioterrorism Preparedness and Response Program (BPRP), welcomed the attendees and stressed the value of the partnership CDC shares with states in meeting this national challenge.

Welcoming remarks were followed by a panel of APHL members who presented “Success Stories and Lessons Learned” from the anthrax attacks. Ralph Timperi discussed the Massachusetts approach for integrating response plans. Carol Kirk shared Wisconsin’s achievements in outreach with clinical Level A laboratories. Elizabeth Franko relayed the constructive relationship developed between the Georgia lab and local FBI offices in sample intake and chain-of-custody procedures. Finally, Bruce Elliott described how Texas provided the lab infrastructure and coverage needed for a large and populous state. Elliott’s colorful remarks started a wave of state pride that carried throughout the two-day meeting!

Meeting attendees heard presentations on a variety of topics, including regulation of select agents of bioterrorism, future directions for the Laboratory Response Network and National Laboratory System, and ongoing protocol development for smallpox and other agents. Steve Hinrichs, director of the Nebraska Public Health Laboratory, discussed plans for improving laboratory information management systems. The meeting spawned a number of good questions, productive hallway caucuses, and a collaborative spirit.

Mike Miller, recently named director of the BPRP Laboratory Response Branch, stressed the strong partnership of the states and CDC in national laboratory readiness, and pledged the agency’s full support. In keeping with this promise, Miller introduced Myron Wettich, Elizabeth Weirich and Emery Meeks, the three technical project officers at BPRP, each assigned to manage the cooperative agreements for about one-third of the states. They will be clear points of contact for state lab directors as they sort through the subtleties and semantics that go with this year’s unprecedented funding levels for laboratory capacity.

For further information on topics discussed at the Focus Area C meeting, or to get contact information for the CDC technical project officers, contact Sarah Lister, director of public health preparedness, at slister@aphl.org or 202.822.5227 x207.
APHL Awards Contract To Study Chemical Terrorism Preparedness

Last fall, when anthrax attacks pressed state laboratories into national service against terrorism, an existing system of laboratories in all 50 states was ready to respond. Would the nation be ready for a similar event involving chemical agents, such as the release of Sarin gas in a subway, the bombing of a pesticide plant, or the intentional crash of a tanker trunk on a crowded city street? Many APHL members say that the bioterrorism response systems in place on October 5, 2001, when an unknown terrorist claimed the first anthrax victim, just don’t exist for chemical terrorism. A new study will provide the guidance needed to bridge this gap.

In September, APHL awarded to RTI, Inc., of Research Triangle Park, NC, a contract for “assessment of state public health laboratory capability and capacity to respond to chemical terrorism.” The six-month project, funded through APHL’s cooperative agreement with the Centers for Disease Control and Prevention, will engage members through selected site visits, a comprehensive survey, and a meeting of chemistry staff from all 50 state public health laboratories. A final report, with recommendations for national readiness, will be available in early 2003.

While all states had received some CDC funding to expand laboratory capacity for bioterrorism prior to October 2001, only five states—California, Michigan, New Mexico, New York and Virginia—are currently funded to prepare for chemical terrorism. The federal support network is also incomplete. CDC Bioterrorism Preparedness and Response Program staff have worked with APHL and subject matter experts to develop protocols and reagents for a number of priority bioterrorism agents, and delivered these readiness assets to state public health laboratories. CDC’s National Center for Environmental Health is rapidly ramping up to develop corresponding tools for chemical agents in human samples, though the center remains inadequately funded. In addition, the Federal Response Plan, the blueprint for federal agencies to provide assistance and support for disasters, including terrorism, charges the Environmental Protection Agency to develop testing protocols for environmental sampling during a chemical terrorism event. There has been no activity to date in this area, and it is not clear which program areas at EPA are responsible for beginning this work.

RTI will work closely with APHL to document the status quo for our national chemical terrorism preparedness programs, and to make recommendations for improvement. APHL will disseminate the recommendations to legislators, senior administration officials, state agencies, other policymakers and public health partners, the media, and the public. APHL leaders are hopeful that this project will provide the momentum the nation will need to mount a competent response to an chemical terror event, preventing as much death and injury as possible.

For further information about the RTI contract and the assessment project, contact Sarah Lister, director of public health preparedness, at slister@aphl.org or 202.822.5227 x207.
Joe Joseph Responds

On August 1, APHL staff, Maryland public health laboratory personnel and Baltimore community members assembled at a ceremony to honor the accomplishments of Joe Joseph, director of the Laboratories Administration of the Maryland State Department of Health and Mental Hygiene. APHL presented him with the Lifetime Achievement Award.

In response, Joseph wrote: “Thank you very much for coming to Baltimore to participate in presenting the APHL award and for your generous remarks. Dr. Benjamin and his staff made it a very special occasion by inviting many of my friends to participate. I was surprised to see Kati Kelley, a long-time friend and colleague, and to listen to her presentation.

I am most grateful for the APHL Lifetime Achievement Award presented on behalf of the APHL membership. Please convey my sincere appreciation to the members.”

The Lifetime Achievement Award presented to an individual who has provided significant leadership in the public health community through distinguished service to APHL, contributions to the advancement of public health laboratory science, and a positive influence on public health policy on a national or global level.

Recent Board Actions

The APHL Board of Directors met in Washington, DC, on September 12-14. A summary of board actions is provided below. For more information, or to request a copy of the board minutes, contact Shawna Webster via email at swebster@aphl.org or call 202.822.5227 ext. 200.

√ Approved the minutes of June 8 and 11.
√ Chose and adopted priority objectives from the association’s 2002-2005 strategic plan:
  • Establish a Center for Public Health Laboratory Leadership to provide the necessary technical and management training of existing and future public health laboratory leaders.
  • Develop and implement a plan that communicates and markets the value of PHLs in protecting and improving health at the state and national level.
  • Develop and promote the use of effective laboratory information systems.
  • Promote the continued development of an integrated network of public and private laboratories to assure the quality and coordination of testing.
  • Refine APHL governance and board operations. Assess membership categories to determine their role in governance.
√ Approved a charter from the Management and Information Systems Committee to involve APHL in the Public Health Informatics Institute.
√ Assisted staff from the Government Accounting Office with the design and implementation plan for their study of state newborn screening programs.
Jody DeVoll joined the staff as communications director on September 19. DeVoll comes to APHL from the Association of Maternal and Child Health Programs where she directed communications and membership. Previously she consulted with domestic and international non-profits on health communications issues. Favorite assignments included a campaign on HIV infection in women, which took her to China for the United Nations' Fourth World Conference on Women, and an exchange program for nonprofit organizations, which introduced her to Uganda. Earlier in her career, DeVoll managed communications, marketing and education programs for associations in the DC metropolitan area. She holds a master's degree in education from George Washington University. She is charged with developing the association's communications function, including implementation of its strategic plan for communications.

Dwayne Johnson accepted a position as a Consumer Safety Officer at FDA's Center for Food Safety and Applied Nutrition (CFSAN) in College Park, MD. At CFSAN, Johnson will be working on inspections and ongoing efforts to implement the food code nationwide. The position offers him a return to some types of work he has enjoyed in the past and an opportunity for new experiences. In almost two years at APHL, Johnson has led our project to define and build food safety capacity in state labs. He will be missed by APHL, but will continue his good works for food safety, and we look forward to future collaborations.

Chris Mangal joined the staff as program manager for emergency preparedness and response programs on September 19. Mangal has her MPH in tropical public health and communicable diseases from the University of South Florida in Tampa, and brings public health laboratory experience with her to APHL. While getting her MPH, she interned in the laboratory at the Tampa Branch of the Florida Department of Health, evaluating assays for West Nile virus. Among other laboratory experiences, she worked as manager of a chemistry laboratory for Hillsborough Community College in Tampa, and before that as a quality control technician in a chemical and microbiological research laboratory. She spent two years working in the fast-paced and stressful environment of a hospital blood bank, which should serve her well in her new role. Her duties will include coordination of APHL member laboratories in the Laboratory Response Network, member education on new programs, laws and regulations, and support for the Emergency Preparedness and Response Committee.

Jelili Ojodu joined the staff as program manager of newborn screening and genetics on August 19. Ojodu has an MPH in Maternal and Child Health from George Washington University. For the past four years he served as research associate for the National Institutes of Health-DC initiative to reduce infant mortality at Georgetown University Medical Center, where he also served as program manager for ten months. Previously he worked on prenatal care issues from a clinical angle as clinic manager for Pregnancy Aid Centers, Inc. in College Park, Maryland. His primary duties will be coordinating APHL genetics and newborn screening activities with federal partners and others, staffing the Newborn Screening and Genetics in Public Health Committee, and coordinating APHL Newborn Screening and Genetic Testing Symposia conferences.
On Your Behalf

For the second year, APHL exhibited at the annual meeting of the National Conference of State Legislatures, held in Denver, Colorado, from July 24-26. Linette Granen, Jeff Jacobs and Emily Mumford represented APHL and were positioned strategically near the Centers for Disease Control and Prevention (CDC) and Pfizer booths. This location assured maximum visibility for APHL and allowed an opportunity to speak to legislators from around the country.

Legislators from 41 states stopped to discuss their state public health laboratory. Almost all of them had an awareness of the public health laboratory’s role in last fall’s crisis. Many legislators acknowledged the funds arriving from CDC’s 2002 emergency supplemental funding. Legislators also showed tremendous interest in the newborn screening conducted in public health laboratories.

On September 10-12, Bobbi Albert, Jeff Jacobs, and Eva Perlman represented APHL at the Association of State and Territorial Health Officials’ annual meeting in Nashville, TN.

Nevada State Laboratory Leadership

Arthur DiSalvo, Paul Fugazzotto, and L. Dee Brown represented three generations of Nevada’s state laboratory leadership at APHL’s 2002 annual meeting.
into the fall and winter if mild weather persists.

Roehrig, whose laboratories have been instrumental in developing WNV test protocols, is quick to point out the limited utility of these tests in the 2002 virus season. “There’s really nothing that can be done for a person with WNV meningoencephalitis except to put them in intensive care and try to see them through this,” he said in a telephone interview. “There’s no therapeutic treatment. No vaccination. The value of laboratory tests is to get data to try to help make decisions on mosquito control activities to reduce the presence of the disease vector. Roehrig noted that a move from human-based surveillance to environmental surveillance will give most jurisdictions “a good idea how much West Nile they have in the area” before they get human cases.

Yet, the sheer volume of possible environmental specimens—including mosquito pools and dead birds—dictates that states make sometimes difficult decisions on the scope of its investigations. Laboratories “have to make decisions on the fly to determine what (their) capacity is,” said Roehrig. Once the virus is thoroughly documented in an area, further testing may be superfluous. “There’s never been a case where West Nile has gone away,” he noted. The occurrence of the virus “may change from year to year, but not during one mosquito season.” Roehrig reported that some states put limits on the numbers of specimens they will test from any one area. In Louisiana, for example, authorities have suspended all dead bird reporting and testing in at least ten state parishes where WNV is known to be active.

In many states, including Louisiana and Mississippi, state veterinary facilities are handling environmental and equine tests, with state public health labs processing only human samples. The CDC-defined IgM and IgG ELISA are the front-line tests for human serum and cerebral spinal fluid (CSF) specimens. Interpretation of ELISA test results, however, is complicated by a couple of factors. First, significant WNV-specific IgM antibody can be detected in sera of WNV patients as long as 500 days post-onset of infection, meaning that a positive finding can represent either an acute new case of WNV or a past infection from the previous transmission season. (The presence of IgM in CSF, on the other hand, is a clear indication of brain infection.) Second, the ELISA can cross-react between flaviviruses, making the test primarily useful as a screening assay.

CDC guidelines—posted on the Internet at www.cdc.gov/ncidod/dvbid/westnile/resource/wnv-guidelines-apr-2001.pdf—state that initial serologically positive samples should be confirmed by neutralization test and should also be tested against other arboviruses known to be present in the area. Mississippi, which tested about 650 human specimens in July-August 2002, does an arbovirus screen for four pathogens: WNV, St. Louis encephalitis, Easter equine encephalitis, and LaCrosse encephalitis. (So far, the Mississippi lab has detected one or two cases of LaCrosse encephalitis among the probable WNV samples.)

[Since no commercial kit is available for serologic diagnosis of WNV infection, laboratorians must prepare each ELISA from scratch, using reagents supplied by the NCID. One or two commercial companies are investigating the possibility of developing a test kit, which would not be available until future virus seasons. Currently, although three companies offer WNV testing, only one uses the ELISA as CDC has designed it.]

In practice, said Roehrig, it’s important to distinguish between testing in the midst of an outbreak and routine surveillance. In an outbreak situation, laboratories—including Roehrig’s own lab in Fort Collins, Colorado—can be expected to streamline their testing, focusing on only the most likely known pathogens, usually meaning at least WNV and St. Louis encephalitis. Once the emergency situation abates, laboratorians can go back to do “clean-up testing to weed out other flaviviruses.” The result, which can be very confusing to
Table 1. West Nile Virus Surveillance Case Definitions*

**Confirmed Case:** A confirmed case of West Nile (WN) encephalitis is defined as a febrile illness associated with neurologic manifestations ranging from headache to aseptic meningitis or encephalitis, plus at least one of the following:

- Isolation of WN from, or demonstration of WN viral antigen or genomic sequences in, tissue, blood, cerebral spinal fluid (CSF), or other body fluid.
- Demonstration of IgM antibody to WN virus in CSF by IgM-capture EIA.
- A ≥4-fold serial change in plaque-reduction neutralizing (PRNT) antibody titer to WN virus in paired, appropriately timed serum or CSF samples.
- Demonstration of both WN virus-specific IgM (by EIA) and IgG (screened by EIA or HI and confirmed by PRNT) antibody in a single serum specimen.

**Probable Case:** A probable case is defined as a compatible illness (as above) that does not meet any of the above laboratory criteria, plus at least one of the following:

- Demonstration of serum IgM antibody against WN virus (by EIA).
- Demonstration of an elevated titer of WN virus-specific IgG antibody in convalescent-phase serum (screened by EIA or HI and confirmed by PRNT).

**Non-Case:** A non-case is defined as an illness that does not meet any of the above laboratory criteria, plus:

- A negative test for IgM antibody to WN virus (by EIA) in serum or CSF collected 8-21 days after onset of illness; and/or
- A negative test for IgG antibody to WN virus (by EIA, HI, or PRNT) in serum collected ≥22 days after onset of illness.

the media and to the lay public, explained Roehrig, is that “you end up with official probable cases of WNV and not confirmed cases.” The CDC case definitions for probable, confirmed, and non-cases, are listed in Table 1.

Roehrig, whose Arbovirus Disease Branch has run a WNV training course in Fort Collins for laboratorians since 1999, is optimistic that laboratorians “will get through this.” The message that needs to get out,” he said, is that if laboratorians “use the training that they’ve learned . . . they can do this.” He stressed that it is “really important that there be good communication between the labs and epidemiology officials, since the CDC policy is to send confirmatory lab results only back to the submitting lab. “Hopefully that lab communicates with epi,” he said.

In both Mississippi and Louisiana, staffing has been a major challenge. Henry Bradford, who as director of the Louisiana Division of Laboratories is operating at the epicenter of viral activity this year, reported that his division has had to move people around and to require overtime in order to process an onslaught of human samples. Does Bradford have any advice for his colleagues across the country who have yet to experience West Nile firsthand? “Yeah,” he said in an interview. “Buckle up your chin strap.”

Aware of that because we had been talking to them. The hospital called Diane and sent samples to us to analyze for anthrax. That’s how it happened and that’s how it’s likely to happen again.”

In other areas, the Division of Laboratories is setting up an expanded newborn screening program, developing a training module for hospital labs on the laboratory diagnosis of rash illness, and working on its third year of testing for West Nile virus (WNV). “It’s very clear that WNV is established in the state,” said Kelley. “We just expect that that’s part of our work now, just like rabies.”

Kelley herself is devoting much attention to preparedness for chemical terrorism. The division has set up an ad hoc planning group with clinical chemists from hospital labs and from the state’s chemistry staff. “One of the key persons on the group,” noted Kelly “is the person in charge of the state poison control center. The first notice (of chemical terrorism) is likely to come through there if people are involved.” Laboratory staff are working with environmental health officials at the state and federal levels to secure desperately needed resources. “Already we have had situations where at least there was a suspicion that chemicals had been released into reservoirs or into a building,” said Kelley. She pointed out that most reservoir back-ups have only one half day of water. “You don’t have a lot of time to wait around” once chemicals are released into the water, she said. “You’ve got to be ready to do whatever you need to do as quickly as possible.”

Surprisingly, all of this work is taking place in a facility that Kelley noted is “well over its life expectancy.” Staff, said Barden, are “impatiently awaiting . . . state-of-the-art BSL 3 renovations to be complete on the fourth floor.” They are also in the design phase of a completely new facility, which will be built on the campus of the University of Connecticut Health Center in Farmington. It will take one year for the design and budget to be finalized and then, if funded by the state legislature, another year and a half for construction. The timeline “is really important,” said Kelley, “because I have to continually
remind people that we still have to function in this building.”

“Life after anthrax has definitely changed for the Connecticut Department of Public Health Laboratory,” explained Kelley. “We have many new and non-traditional partners, such as the FBI and the state police. We are much more aware and prepared to respond to inquiries, and we have been acknowledged for our important role on the response team. There is a strong sense of pride and confidence.”

The Connecticut lab director remembers when, not long ago, the workload used to abate a bit in November and December. “That just isn't the case anymore,” Kelley said. “It's pretty busy, it really is. But I love this work.”

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Class VI Research Fellow **Sandra Smole**’s research will be published in an upcoming issue of the *Journal of Clinical Microbiology*. The article is entitled “Clinical and epidemiological correlates of genotypes within the *Mycobacterium avium* complex (MAC) defined by restriction and sequence analysis of hsp65.” Smole also presented the poster “Use of sequence typing for characterization of virulence factors and for the development of a novel molecular typing scheme for *Listeria monocytogenes*” at the 89th annual meeting of the International Association for Food Protection in San Diego, California, in June. Smole works at the Massachusetts Department of Public Health State Laboratory.

The October 2002 issue of the *Emerging Infectious Diseases* journal will feature an article by Class VI Research Fellow **Rosa Moreno**: “A Specific, Sensitive and Quantitative Enzyme Linked Immunosorbent Assay for Human Immunoglobulin G Antibodies to Anthrax Toxin Protective Antigen.” Moreno works in CDC’s Division of Bacterial and Mycotic Diseases in Atlanta, Georgia.

**Kimberly Brouwer** had two posters accepted to the Molecular Epidemiology & Evolutionary Genetics annual meeting in July 2002: “Polymorphism of Fc receptor IIa for IgG (CD32) in infants is associated with increased susceptibility to perinatal HIV-1 infection in western Kenya,” and “Relationship between polymorphisms in Fc receptor IIa for IgG (Fc(RIIa) and placental malaria in HIV-1 positive women in western Kenya.” Brouwer is a Class VI research fellow in the Division of Parasitic Diseases at the CDC in Atlanta, Georgia.

Class VII Training Fellow **Kaci Klenk** continues to conduct research on Acute West Nile virus (WNV) infections of reptiles and amphibians at the DVBID in Fort Collins, Colorado. She has conducted acute syringe infection experiments with green iguanas, North American bullfrogs, Florida garter snakes, and red-ear sliders. In addition to working with the reptiles and amphibians, her research includes testing New York bird and Louisiana bird, mammal, and reptile tissues for WNV and field work in Texas to trap mosquitoes for WNV research concerning bird migration routes. She recently presented the poster “Acute West Nile virus infection in reptiles and amphibians” at the Wildlife Disease Association conference in Humbolt, California in July.

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**2003 EID Fellowship Program Timeline**

The deadline for submitting an application to host a fellow for the 2003 EID Laboratory Fellowship Program is March 3, 2003. The deadline for receipt of completed fellow applications is February 21, 2003. For more information, please contact Heather Roney, fellowship program manager, at hroney@aphl.org.
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