How the Lab Bench Affects the State House

From Homeland Security to House Paint, Lab Data Drives Policy (page 3)
A MESSAGE FROM THE PRESIDENT

Cutting-Edge Science Underpins Labs

On March 18, the California Microbial Diseases Laboratory celebrated its centennial birthday (one of at least three state public health laboratories to do so this year). It was from this laboratory—established at the height of one of the San Francisco plague outbreaks in the early 1900s—that the whole California public health laboratory system grew.

Reflecting on the history of this laboratory—and by extension, that of the entire national public health laboratory system—I am struck by two things. First, our core mission today remains unchanged from our mission a hundred years in the past; that is, to bring the best science to bear against the health problems of the day, whether plague or West Nile virus. Second, the best science available today is far more sophisticated than that available in 1900, and this conspicuous leap forward is due in no small measure to the contributions of public health laboratorians.

Dr. Michael Janda, who now heads the Microbial Diseases Laboratory, epitomizes the kind of scientist responsible for our progress. Like many public health laboratorians his work has often risen to the level of peer-reviewed articles and book chapters in the scientific literature: 150 articles (so far) to be exact. The *Aeromonas jandaei* bacterium was, in fact, named after him in recognition of his taxonomic work with this organism, which is isolated from blood and wounds.

While there have been no comprehensive surveys to tally our collective contributions to the science underpinning laboratory practice (and I know my colleagues groan at the mention of another survey), I think it is safe to say that those contributions are significant and have made a difference to public health practice and to public policy.

Perhaps the most dramatic recent example of public health laboratorians pushing the boundaries of existing science to respond to a crisis was the development of protocols for the collection and testing of samples suspected of containing anthrax. Under immense pressure and in little more than 48 hours, my colleagues from the state public laboratories in Iowa, Michigan, Minnesota and Nebraska, together with our staff in California developed standards for evaluating samples taken from US postal facilities. And while those preliminary standards are still being refined, the fact that we could pull together a team to make these decisions in the midst of a national emergency is a reflection of the high level of scientific expertise our team members brought to the task.

Quite simply, in public health laboratory practice, it’s part of the job to represent the best science available, even when that science is incomplete. On November 1, 2001, there were no standards for testing environmental samples for anthrax contamination. On November 4, 2001, there were.

Several APHL members are taking their scientific expertise to national policy-making venues. I will mention just two here: Bill Becker, who serves on the Secretary’s Council on Heritable Disorders in Newborns and Children that is issuing recommendations to strengthen state newborn screening programs; and Lou Turner, who serves on the Clinical Laboratory Improvements advisory committee that issues recommendations to assure the accuracy and reliability of clinical laboratory tests. In a future issue of *The Minute* we will highlight these and other members wearing their policy hats.

As health threats evolve and proliferate, I hope that our hundred-year history of service demonstrates to policy-makers our laboratories’ immense value as sources of objective, non-partisan scientific expertise.

Public health laboratories have been at the forefront of the nation’s response to high-profile threats ranging from bioterrorism to avian influenza. And we will continue to do this into the future.
Is America prepared for the release of mustard gas at a Super Bowl game? Or what about someone spraying a mixture of Salmonella and E. coli O157:H7 over a field of tomatoes? In the aftermath of anthrax in 2001, policymakers were well aware what a “conventional” bioterrorism (BT) attack might look like. But no one was focused on chemical terrorism (CT) or food security. Almost no one.

Mary Abrams, administrator of Oregon’s Department of Environmental Quality Laboratory, recalled that in 2001, “the nation was really pretty exposed. There was virtually no CT test capability across the country.” Public health and environmental testing laboratories, she said, lobbied the Environmental Protection Agency (EPA), the Department of Homeland Security and the CDC “to make this issue understood at the national level.” (While both biological and chemical agents can be deadly, Abrams said the big difference between them is that “with chemical agents, you’re talking about stuff that can kill you right away.”) After four years, “EPA is finally stepping up to the plate and trying to figure out how to address the problem,” she noted. “The laboratories were absolutely key in that. Nobody else was raising the issue.”

A similar shift in focus has taken place at the US Food and Drug Administration (FDA) and US Department of Agriculture. Bill Krueger, director of the Minnesota Department of Agriculture’s laboratory division, said that state food safety laboratorians were instrumental in expanding the mandates of those two federal agencies to include food defense. “By us working together and hammering on this issue,” he said, “food was finally identified as part of the national infrastructure that needs to be protected.”

The official pronouncement—Homeland Security Presidential Directive #9—was released in February 2004 to establish “a national policy to defend the agriculture and food system against terrorist attacks, major disasters, and other emergencies.”

Thanks to leadership from the nation’s public laboratories, government funds are now flowing—albeit in limited quantity—to help laboratories acquire the special instrumentation, containment facilities and training to handle chemical warfare agents and to ramp up what has come to be known as the Food Emergency Response Network.

**Laboratory Data Influences State Health Policy**

These two examples illustrate the important and unique role that America’s public health, environmental testing and food safety laboratories play to influence government policies to promote public health. Whether they are advocating for prudent measures to prepare for future emergencies or reporting on existing health threats, Abrams said laboratory leaders bring science-based knowledge to policy discussions. Indeed, APHL has identified policy development as one of 11 core public health laboratory functions, alongside specialized testing, disease surveillance and the like. And while laboratory advocacy does not often lead to presidential directives, laboratories routinely influence policies that impact Americans everyday on a surprising level, affecting everything from the gas people pump into their cars to the swimming beaches open for public use on a lazy summer afternoon.

Jim Pearson, director of Virginia’s consolidated laboratory, said that “the real value in the laboratory is providing the data to support issues.” For example, lawmakers have enacted a trove of legislation driven by laboratory data documenting elevated lead levels in people, including laws mandating lead-free house paints and gasoline. And laboratory data are often the basis for product recalls, such as a voluntary recall of syringes pre-loaded with heparin earlier this year. (The NYC public health labo-
Pearson explained that his facility—which conducts public health, environmental, and food safety testing all under one roof—generates data that are used as the basis for any number of public policies. Just one example: policies determining where watermen may harvest fish and shellfish in the Chesapeake Bay (based on concentrations of fecal coliforms in the water).

The Washington, DC, metropolitan area, he said, does not meet national air quality standards and is therefore a non-attainment area. This classification—based on laboratory findings—automatically triggers certain controls. Petrol in DC-area gasoline stations is formulated with a relatively high concentration of oxygenates so that it burns more cleanly, although it costs more. In addition, many local industrial plants must have scrubbers on their smokestacks or take other measures to reduce the release of pollutants.

In the town of Klamath Falls, OR, air quality data prompted policies in the 1980s that had a direct effect on local residents, who were asked to replace older wood-burning stoves with more efficient models to reduce unhealthy concentrations of particulate matter in the air.

Krueger recalled a landmark food safety investigation that took place in the mid-1990s and forever changed trucking and food handling practices in the US. The investigation was instigated by 224,000 acute cases of Salmonella enteritidis across the country. Laboratory and epidemiological data pointed to Schwann’s Ice Cream™ as the cause.

At the time truckers were allowed to haul pasteurized and unpasteurized products one after the other in the same vehicle with only a quick clean-up in between. Apparently, a milk product used as the basis for Schwann’s ice cream was hauled in a semi that previously carried raw egg products tainted with Salmonella. “The clean-up wasn’t sufficient to get rid of the Salmonella,” said Krueger, and it subsequently spread to the milk mix. But the interesting piece of the story is not the predictable isolation of the same microbe from the sick people and from the food, but the quantification of the number of microbes in the food; in some cases as few as 2 or 3 organisms per 100 grams of ice cream were sufficient to cause illness. This was new information. And it had a major impact on decision-making for the so-called hazardous analysis critical control plans (HACCPs) that regulate virtually every aspect of food processing and handling in the US. Needless to say, truckers no longer haul both pasteurized and unpasteurized foods in the same vehicle.

Abrams’ laboratory conducts routine air and water quality testing. In the past couple of years the laboratory has documented several toxic algal blooms in Oregon’s Willamette River. Laboratory data are forwarded to the Oregon Department of Human Services, which has the authority to issue health advisories indicating that people should not swim in the river. “This story isn’t over,” said Abrams. The laboratory is working with the human services agency to refine state policies governing when an advisory is necessary. “We all need to understand how the algal cell count relates to the toxins that are in the water,” explained Abrams, “so we don’t issue warnings too early and are able to lift them when it’s safe to do so.”

Mary Gilchrist, director of Iowa’s public health laboratory, based at the University of Iowa, said that she and her staff are asked to testify before state legislative
committees about public health and environmental issues. On February 1 the National Caucus of Environmental Legislators announced the creation of a six-state consortium (comprising IA, IL, MI, MN, OH, WI) on child environmental health. Laboratory data on childhood lead poisoning in Iowa contributed to the state’s decision to join the consortium, said Gilchrist, and a scientist from the University Hygienic Laboratory will be on the oversight board. (Gilchrist believes an APHL-sponsored meeting for state public health laboratory directors and state legislators in the upper midwest last summer may have generated some momentum for the consortium.)

But the laboratory’s influence on public (and private sector) policies is not always so straightforward; sometimes it comes by way of the press. A particularly media-worthy issue goes by the name concentrated animal feeding operation or CAFO, a practice of raising thousands of animals in relatively small enclosures. Possible CAFO health hazards range from contamination of groundwater with fecal matter to dangerous concentrations of hydrogen sulfide and ammonia in the air (sometimes enough to kill workers in enclosed areas). Gilchrist served on a committee to identify a matrix of practices that would limit health and environmental hazards. She focused on two potential health hazards: First, the use of low levels of antibiotics presented a concern for the introduction of new strains resistant to antibiotics that might affect humans and animals as well. Second, the housing of avians in close proximity to swine might be instrumental in creating a pandemic influenza strain.

Gilchrist focused on the belief that pandemic flu strains arising out of avians may become more infectious to humans during infections in swine. The last two pandemics were Asian flu and Hong Kong flu and one theory holds that the strains evolved because chickens and pigs are raised in close proximity. There is at least one Iowa CAFO complex, said Gilchrist, where a million chickens are housed within 200 feet of a facility built to house nearly 15,000 swine, with adjacent waste runoff lagoons that may be visited by wild ducks. If avian influenza were introduced into the complex, it would find an idyllic breeding ground.

Pigs in particular are sometimes infected with human flu bugs and are thus a potential site for dangerous viral reassortment, a process in which two or more viruses mix their genetic material. So far the H5N1 strain of avian influenza has shown limited ability for efficient person-to-person transmission. But such ability could be acquired from a human virus infecting a pig (co-infected with avian influenza contracted from a chicken).

Gilchrist said, “It’s a good idea to limit that proximity (between chickens and pigs).” Although no requirements have been enshrined in law, Gilchrist said the issue was raised at public meetings with state agency and industry representatives and subsequently reported in the media. The pork industry now includes guidance to limit proximity to chicken enclosures in its literature to producers. “I think we helped discourage the practice,” Gilchrist asserts, “and that was sufficient because the long-held theory of pigs serving as the mixing vessel is currently being questioned by influenza experts.”

Perhaps the most imposing laboratory-driven policy on a personal level is quarantine. Pearson said that US access to SARS diagnostic materials last year allowed public health laboratories to screen Americans who had traveled to Southeast Asia (the SARS epicenter) and prevented unnecessary movement restrictions. Conversely, he said, “In Canada the lack of the ability to test early contributed to the SARS outbreak in the Toronto area, with several deaths. What finally stopped that outbreak was the imposition of (quarantine) restrictions on personal activities. With good laboratory data those restrictions may have been put into place sooner.”

Said Abrams, “It’s important to note that most of the time our work (as laborato-
Dear APHL,

As usual I find the recent issue of the *Minute* of great interest, particularly the discussion of fiscal problems. The ‘imbalance between function and funding’ seems to have only one alternative: either increase funding or decrease function. The latter may be necessary out of reality. There has been a tendency for the public health laboratory personnel to accept the premise that increasing function is a mandate, but this may not be the most appropriate course. For example, should public health laboratories take on the tasks of environmental laboratories? Perhaps not and for several important reasons other than fiscal. If the self-serving concept could give way to objectivity it may well be concluded that the most aggressive approach is to develop a system of reduction in function. Otherwise, the final status may be an increased function that becomes inoperative because of inability to pay the piper.

The partial solution of establishing fee-for-service operations may seem an attractive solution, but it is fraught with danger, not the least of which is the liability which might be generated. This is particularly true if the testing can be interpreted as associated with individual clinical diagnoses. This is not the same as partnering with clinical laboratories which employ persons skilled in matters of laboratory business. If I were a director of a public health laboratory that was to make a choice to conduct tests for fee, my first step would be to obtain a reliable malpractice policy.

Public health officials, including laboratory directors, are traditionally protected from legal action because they are engaged in a public occupation that is based in statutory law of the state in which they operate. It is related to an old English concept of sovereign immunity which states that a public agency cannot be sued unless it agrees. A chain of case and statutory law has moderated this doctrine. In short, public health and other officials enjoy protection as long they apply a standard of care in executing the duties prescribed by the laws of the state.

The question now arises as to whether or not the providing of clinical diagnostic or environmental laboratory testing, essentially a commercial practice, is part of the intended public health procedure of the jurisdiction. If the answer is clearly negative, then the provider could be in the same status as a private laboratory regardless of who pays his salary. This would depend on the specific state statutes that are controlling and would vary from state to state. If a state laboratory decides to engage in such activities, a detailed conversation with the Attorney General of that state is in order. From a legal standpoint this matter can develop into a significant slippery slope.

There really is no simple solution to resolving fiscal problems that are, as suggested by federal and state budgets, to only become worse. If I were involved, it would be with great reluctance that I would begin to consider the real definition of “down sizing.” But on a more cheerful note, the considerations suggested by Norm Crouch and colleagues may lead to a partial solution such as: a) partnering, as a full and equal participant, with other public laboratories; b) partner with private laboratories but not in doing the same analytical work. Let each contribute their own skills, even if it means delegating certain activities (e.g. newborn screening) to private laboratories who can usually perform better in mass testing and at a better price; c) university-based activities have been proven to have a definite advantage for public health laboratories; d) marketing—one of the great deficiencies of state public health laboratories is that they are, for the most part, lousy sales persons. In my limited experience, a good sales pitch can reveal state money that was hidden from view.

The report has a good positive beat to it and is devoid of considering public health laboratories as a losing entity. But we of the choir know the tune; it’s time to send out the missionaries and convert the money lenders!

**Jim Prier, DVM, PhD**
Emeritus Member

I just wanted to take a few seconds to commend the APHL staff for the great January-February issue of *The APHL Minute*. The article topics and subject matter are proving particularly useful and timely. I have been able to use parts of at least five different articles to help me prepare for my budget hearings later this month.

For fun, see the Maryland Laboratories Administration’s Critical Link at [www.dhmh.state.md.us/labs/](http://www.dhmh.state.md.us/labs/).

**John (Jack) DeBoy, DrPH**
Director, Laboratories Administration
Maryland
Dear APHL,

In the LAB/oratory section of the January-February 2005 issue of the Minute was a letter from Dr. David Mills describing an opportunity for public health laboratories and newborn screening (NBS) programs to consider regionalization as a strategic way to offer comprehensive services. He correctly points out the need to consider nontraditional approaches as funding resources become increasingly scarce. The concept of regionalization is not new, of course, but the timing of this suggestion couldn't be better as the current challenges to public health in general and public health laboratories in particular are significant. As usual, NBS is on the “cutting edge” of public health challenges. A few of the recent discussions may provide a glimpse of what’s on the horizon.

If you subscribe to the NBS listserv, you’ve no doubt noticed that there are a number of opinions as to whether or not we should be screening for certain types of tyrosinemia. The disorder Tyrosinemia type I is included on the “core panel” of the ACMG/HRSA report. While some argue that detection of disease is difficult if not impossible using tyrosine as a primary marker, no one, including myself, questions the actual testing for the amino acid because it adds value to PKU screening. But this begs a question: how is it that any laboratory would test for (or screen if you prefer that term) an analyte and not provide some type of information about the meaning of the results; or if we aren’t sure what the results mean, just say so?

This is not a new concept for laboratory testing: for example, does anyone really know what a low positive single serologic test result means? We’ve been dealing with equivocal serologic test results for years, probably because for the longest time the serology results could be available before culture or perhaps it was the only testing possible. Now that we have developed better and faster detection tests, serology is less likely to be helpful. The evolution from unknown to known is universal in health care. Not knowing every physiologic or clinical fact about a disorder is not a compelling reason not to test for it. Further, the argument that we will somehow flood the health care system with false positive results along with the stress, additional testing and costs that result from false positive testing seems inconsistent with reality, especially when you consider the number of false positive results we all routinely generate in other disorders. Of course we will set the reference ranges at a level so as not to cause an excessive number of false positive results. That’s how we have been doing business for a long time. The development of a second level test is well known to all laboratories: can you say T4 or Western Blots? Therefore the recognition of false positives is a reason to be cautious or judicious, but it isn’t a reason not to screen.

Rather than quarreling about (okay, maybe that’s too strong—discussing) screening for any one disorder, let’s focus on the more important global issues of how we are going to pay for and provide universal NBS testing for all babies. How are we going to ensure that all babies are connected with a medical home that can provide for their needs or find the resources to assist them? Can we find nontraditional or novel ways to partner with academic medicine and the NIH to be on the cutting edge of the technology that will allow us to improve our ability to distinguish between affected and unaffected individuals for a myriad of metabolic, endocrine and possibly even extend this into the arena of infectious and chronic diseases? Regionalization of testing or clinical services is most certainly a potential solution for any state.

There are other major challenges to consider. The creation of a national NBS database could allow us to truly learn about these rare disorders—this would be a huge step in the right direction. This database, if designed correctly, would have to be patient-centric, with the appropriate safeguards for confidentiality, yet the ability to query the database by local, state and federal authorities would allow for population-based statistics that we are likely not obtaining today for any diseases. The topic of data and database integration in public health causes tremors in the silos of all federal and state agencies, but if you’ve been following trends in health care delivery then you know that decentralization of services is quickly becoming the rule, not the exception.

How will public health laboratories respond to these challenges? I hope that we will engage colleagues in medicine, in many levels of government, and the community to find the solutions to the challenges presented by newborn screening today. By addressing those challenges, we will be addressing some pretty big policy issues at the same time.

Respectfully submitted,

William Becker, DO, MPH, Medical Director
Ohio Department of Health Laboratory
Clinical Associate Professor
Department of Pathology
The Ohio State University
the Emergency Preparedness & Response (EPR) Committee met for two days in January in Miami, FL. On the first day, the committee reviewed their strategic plan, discussed progress and identified areas for improvement. Committee members noted that one of their priorities for the coming year was policy development, with a focus on articulating the role of public health labs in emergency preparedness and response, the use of hand-held assays, and the need for greater federal agency coordination.

The committee continues to address the four main priorities identified in last year's strategic plan:
- Federal agency coordination for terrorism preparedness
- All-hazards preparedness and safety in the laboratory
- LRN expansion and surge capacity
- Resources for a sustained workforce and laboratory materials.

Federal Agency Coordination for Terrorism Preparedness and Response
Committee members discussed engaging the various federal players at the state level and the need for state representation in the decision-making process. A policy statement, calling for federal agencies to coordinate with both state and local Laboratory Response Network (LRN) laboratories and other federal partners in the development of bioterrorism and chemical terrorism surveillance-related procedures and analytical protocols, will be developed. Federal agencies must also incorporate relevant state and local partners in the decision-making process associated with planning and implementation procedures.

All-Hazards Preparedness and Safety in the Laboratory
The group discussed the need for all-hazards preparedness and current gaps in environmental sampling and testing. APHL Environmental Health Program Manager Lauren DiSano reported on the activities of the Environmental Health Committee and their efforts to address these gaps. Members of the EPR Committee further discussed the lack of methods and certification for analysis of chemical terrorism agents in environmental samples and provided input to DiSano and the Environmental Health Committee board liaison, Dr. Norman Crouch. The committee will continue to address this critical need and will also work with the Department of Homeland Security, the Department of Defense, and the EPA to develop triage guidelines for public health and environmental laboratories.

Laboratory Response Network
Surge Capacity
EPR Committee members have made surge capacity a priority, recognizing that the demand for laboratory analyses has increased steadily with the proliferation of emergency response networks and biosurveillance systems. Many of these new programs rely on the Laboratory Response Network (LRN) infrastructure to meet the testing demands. The Office of Terrorism Preparedness and Emergency Response and the Bioterrorism Preparedness and Response Program at the CDC have also indicated that defining and assessing surge capacity is essential in order to make the case for the continued development of the LRN, and to make critical projections about the quantity of reagents needed to support the network and costs associated with developing a national LRN reagent stockpile. Dr. Sally Beatrice provided the committee with an update on the activities of the Surge Capacity Subcommittee. This subcommittee was convened in August 2004 and drafted working definitions of capacity. An assessment tool was later developed and piloted to five states in December 2004. Results of the pilot assessment will be analyzed and shared with APHL members, the CDC and other interested parties.

Proficiency Testing
A sub-committee will soon begin work to update current proficiency testing policies and discuss options for remediation.

Sentinel Laboratories
A standardized definition of sentinel laboratories is being developed in coordination with the American Society for Microbiology and the National Center for Health Marketing (formerly CDC/Public Health Program Practice Office).

Resources for a Sustained Workforce and Laboratory Materials
Many of the committee members indicated that workforce shortage continues to plague laboratories. The committee will provide input to APHL’s Workforce Development Committee on these issues and the resulting impediment to preparedness and response activities.

A Sampling of Additional Activities
The group discussed the use of hand-held assays and impact on public health. Further information on this issue will be highlighted in the committee’s upcoming position statement.

Preliminary findings from APHL’s 2004 Bioterrorism Preparedness Survey were discussed. These findings were also reported in last month’s publication of The Minute. A more detailed report will soon be published by the association.

For more information, contact Chris Mangal, cmangal@aphl.org.
Environmental Sampling for Bio-Threat Agents Conference Convened

In January, the Department of Defense, Department of Homeland Security, and the Technical Support Working Group held the First Annual National Conference on Environmental Sampling for Bio-Threat Agents. The conference attracted over 450 scientists, first responders, administrators, and policymakers. The purpose of the conference was to create a forum for dialogue between government, industry, academia, and first responders to address critical issues in environmental sampling. Representing the association at this meeting were members Mary Gilchrist, PhD, and Anthony Sambol, MA, and staff members Lauren DiSano, MPH and Chris Mangal, MPH.

The conference consisted of two days of presentations, discussions, and exhibits to identify gaps and define next steps for environmental sampling. Additional sessions were held on the following issues:

- Lessons learned from the anthrax attacks
- Statistical strategies and computational aids for sampling
- Agricultural and food sample collection
- Surface environmental sample collection
- Soil and air environmental sample collection
- Water environmental sample collection
- Sampling standards for suspicious powders.

Several federal agencies discussed their experiences in 2001 and lessons learned from the response activities. Captain Kenneth Martinez, regional operations director from the National Institute for Occupational Safety and Health (NIOSH), discussed sample intake capacity for public health laboratories, the need for consultation with subject matter experts, and the need for coordination with the Laboratory Response Network (LRN). He discussed the three phases used to address the events of 2001: surveillance, response and remediation. Captain Martinez emphasized that sampling has to be hypothesis-driven and it is a multidisciplinary issue guided by experience and intelligence.

Max Kiefer, assistant director for emergency response and preparedness at the CDC/NIOSH discussed environmental sampling experiences and perspectives. Kiefer stressed that the initial public health goals are to determine the exposed population, to limit the spread of contamination and to characterize the contaminant (particle size, ability to aerosolize and purity). Like many others involved in the 2001 events, NIOSH did not have a pre-existing bank of knowledge regarding emergency response, consequence management, technical resources and sampling requirements. The number of environmental samples was underestimated.

Doug Beecher, supervisory microbiologist from the Hazardous Materials and Response Unit at the FBI, discussed the role of the FBI at sites with Bio-Threat agent contamination. Law enforcement needs to maintain sufficient scientific rigor even in the face of operational realities, such as numerous sampling teams, adverse environmental conditions exacerbated by personal protective equipment, and lack of lab capacity to handle numerous environmental samples.

Representatives from the EPA, United States Postal Service (USPS), and the Florida Department of Health all discussed some of the lessons learned from their involvement in the anthrax cases of 2001. Mark Durno, an EPA on-scene coordinator, discussed the National Response Team’s Technical Assistance Document, which includes sampling guidelines. Kenneth Sturrock, regional advisor for the Florida Department of Health, provided a local perspective on dealing with white powders.

CODE RED is an acronym standing for:
- C = Control scene
- O = Open dialog
- D = Determine biohazard credibility
- E = Employ collection protocol
- R = Remove contamination
- E = Enter information
- D = Dispatch specimen

GAO Report
Sushil Sharma, PhD, DrPH, from the Government Accountability Office discussed its upcoming report on anthrax detection. This report will assess federal agencies’ activities to detect anthrax in postal facilities in 2001, the results of the testing, and whether the detection activities were valid. It is expected that the report will recommend that the Department of Homeland Security coordinate the necessary validation studies of the sampling and testing processes.

Need for Standards
Based on the discussions at sessions, the following national workgroups were created:
- Comparing efficiency/effectiveness—targeted versus statistical sampling methods
- Background Interference—how does background interference affect sampling?
- Collection Techniques—what are the current collection techniques, volume, quality control measures, matrix effect—and how can they be improved?
- Sample Viability—how to maintain sample viability?

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APHL will assist in identifying members to serve on these workgroups.

Bert Coursey, PhD, director, Standards Portfolio at the Department of Homeland Security (DHS), discussed their role in providing standards to first responders. The vision and mission of the Standards Portfolio is to develop and coordinate the adoption of national standards and appropriate evaluation methods to meet homeland security needs. Coursey stated that DHS lacks regulatory authority to issue standards, therefore adoption of these standards would be voluntary and consensus based.

Coursey emphasized the need for a national sampling standard and stated that this tool should include standard operating procedures and training. In order to accomplish this goal, DHS will be reviewing best practices, such as New York’s CODE RED brochure, hosting national forums to vet best practices, working with major training centers, and including a “sampling standard” as part of a universal protocol for responding to an “all-hazards” approach.

While this conference was a good first step towards addressing the gaps in environmental sampling standards, much remains to be accomplished. First responders at the conference emphasized that the lack of guidance at the national level hinders their ability to respond. Public health and environmental laboratories are also calling for the federal government to provide national guidance. Improperly collected samples or misuse of hand-held devices and kits can have a significant impact on the public’s health and the response capabilities of federal, state and local agencies. In addition to providing national guidance and standards, continuous training and coordination among the response partners are critical.

APHL members and staff will continue to participate in these discussions at national and local levels. For more information, contact Chris Mangal, 202.822.5227 x244, cmangal@aphl.org, or Lauren DiSano, x204, ldisano@aphl.org.

AHF's Environmental Health Committee (EHC) held its annual meeting at APHL headquarters in Washington, DC in January. During the two-day meeting, the committee addressed a number of the priority issues affecting environmental health. In addition to two days of fruitful dialogue and committee work, EHC members were able to partake in the first-ever “Hill Visits” made by an APHL committee.

Committee members visited Capitol Hill to meet with staffers for House and Senate leaders from their individual states. EHC members educated Congressional staff about the role of laboratories and stressed the importance of supporting the state public health and environmental laboratory systems in their states. Environmental health topics discussed with Hill staff included ensuring a robust infrastructure for emergency preparedness and response, and promoting and upholding environmental protection within and across state boundaries. Meetings were held with Congressional staff from Maine, New York, Vermont, New Hampshire, Rhode Island, Minnesota, Kansas, Oregon, Iowa, and Wisconsin. APHL Public Policy Director Peter Kyriacopoulos organized the meetings, which utilized members’ presence in Washington to help the association build key relationships with Congressional staff. As a follow-up, Senator Jeffords (VT) submitted a series of questions on APHL issues of concern to Governor Michael Leavitt during hearings to confirm his nomination as secretary of the Department of Health and Human Services.

The committee gave precedence to the following objectives and issues during discussion:

- Chemical terrorism
- Environmental sampling
- Environmental lab accreditation
- Triage facilities/SOP’s for sample collection in the field
- Laboratory networks (e.g. LRN, FERN, EPA Water Alliance, REALNet)
- Environmental health training needs.

Although each of the above topics involved lengthy discussions and generation of action items, one issue in particular, environmental laboratory accreditation, prevailed as a principal area of concern for members and resulted in action on ground rarely covered by APHL: environmental laboratory issues.

The committee considers laboratory quality and competency to be important national concerns that have been intensified by issues surrounding homeland security and chemical terrorism preparedness. Discussions on accreditation revolved around the EHC’s strong encouragement of the EPA becoming a National Environmental Laboratory Accreditation Program (NELAP) accrediting authority to provide federal accreditation to state environmental laboratory programs. The EHC and APHL desire to work collaboratively with the EPA towards their development and attainment of NELAP accrediting authority status, or towards the development of an alternative federal governmental accreditation process, similar to the current drinking water program. The EHC believes that this accreditation process should ensure reciprocity and serve to strengthen the states’ positions as providers of environmental health data of known, documented and consistent quality.

The critical need for a comprehensive certification/accreditation program led the committee to take two specific actions. First, the EHC created an APHL policy statement on the accreditation of environmental laboratories. The statement is currently under consideration by the APHL voting membership in order to be established as a formal association policy. Second, the EHC composed a letter to the EPA expressing the urgent need for an effective accredi-
Spotlight on EH Fellowship and Traineeship Programs

The Environmental Health (EH) Traineeship and Fellowship Program was re-designed and launched by APHL and the CDC in June 2003 to meet the ever-changing needs of state laboratories. Additionally, the program will help achieve the CDC’s prevention strategy goal of “strengthening local, state, and federal public health infrastructures to support surveillance and implement prevention and control programs.” The traineeship/fellowship program provides state public health laboratories with an opportunity to enhance environmental testing capabilities.

Environmental Health Fellowship
The EH Fellowship funds fellows who serve full-time for a period of 1-2 years in a state public health laboratory at which they are not currently employed. Fellows work alongside other laboratory staff, and receive short-term (2-6 week) trainings provided through other state and federal laboratories, or other appropriate facilities. Currently, APHL is sponsoring two such fellows in Alaska and Wisconsin. Ideally the fellowships will lead to permanent employment opportunities with the hosting state public health laboratory.

Alaska’s state public health laboratory in Anchorage is hosting fellow Marina Blake, PhD, this year. Blake comes from Russia, where she obtained her PhD in chemistry from the St. Petersburg Institute of Technology. Blake’s background is rich with studies in physical, organic, inorganic, analytical and colloidal chemistry, thermodynamics and electrochemistry. Her instrumentation experience includes work with mass spectrometry, nuclear absorption spectroscopy and chromatography. Her primary objective is to further her level of knowledge and experience in the applied field of clinical chemical analysis. Thus far, Blake has engaged in biomonitoring activities, such as the measurement of heavy metals and toxic elements in nearly 100 analytical batches of urine using DRC-II ICP-MS and the measurement of mercury in hair samples using the Milestone Direct Mercury Analyzer. The data obtained from this study has been used during instrument training and method validation studies.

“I have worked closely in the laboratory with my mentor David Verbrugge,” writes Blake. “He has helped me to operate the Elan ICP-MS software and hardware, and provides instruction and materials necessary for me to complete my projects. I’m very confident in performing the Multi-Element in Urine analysis procedure, including preparation of standard solutions, specimens and instrument calibration. I can interpret analytical results from this procedure, and continue to develop my troubleshooting skills.”

At the Wisconsin State Laboratory of Hygiene (WSLH), EH fellow Dr. Kristie Ellickson is also keeping busy as she sets up arsenic speciation measurement methods, writes a grant proposal for the Joint Solicitation, which funds research on groundwater issues in Wisconsin, and works on a project studying alveolar macrophages and their response to exposure to fine particulate matter. In addition to her work within the lab, Ellickson has participated in several short training courses in accordance with laboratory safety measures, such as: HIPAA, human subjects, blood-borne pathogens training and the review of the laboratory chemical hygiene plan. While at WSLH, Ellickson has given two presentations: “Methyl Mercury Analysis and Occupational Health Issues” and “Cellular Biology of Macrophages: A Prequel to the Macrophage Project.”

Asked about her fellowship experience, Ellickson writes, “This is an interesting post-doctoral experience, where I have been brought away from a small academic group to more of a bridge environment between academic research and a state laboratory environment. Overall, this has been an important transition for me from the mindset of a student to more expectations of leadership and academic independence.”

Overall, this has been an important transition for me from the mindset of a student to more expectations of leadership and academic independence.

Kristie Ellickson
Environmental Health Fellow, Wisconsin State Laboratory of Hygiene

For more information on APHL’s environmental health program, contact Jennifer Liebreich at jliebreich@aphl.org, 202.822.5227, x236.

Continued on page 12
Spotlight on Food Safety Training:
Laboratorians, Epidemiologists and Sanitarians Work as a Team

In October 2004, APHL awarded travel scholarships for two laborato-
rians to attend the Epi-Ready Team Training in South Bend, IN. The South
Bend Epi-Ready course was a collaborative effort between the CDC and the
National Environmental Health Association. Epi-Ready is a two-and-a-half
day training course designed to foster working partnerships among local
public health professionals involved in investigating and responding to
outbreaks of foodborne illness.

In many states, the working relationship
among laboratorians, epidemiologists,
and sanitarians has been traditionally
strained or limited. States in which these
groups work together well tend to be the
exception rather than the rule. However,
without cooperation among these groups, the ability of a state or
local public health system to respond
effectively to foodborne disease is
substantially impeded. The Epi-Ready
team training brings together state and
local teams of three – one laboratorian,
epidemiologist and sanitarian. The team
works together during the training,
building professional relationships that
will hopefully be mirrored by their colleagues back home.

The course is composed of units dealing
with subjects such as passive surveillance
and outbreak determination. Separate
units exist to show the work done by
epidemiologists, laboratorians and san-
tarians. All of these models allow the
attendees to gain an understanding of the
work done by the other two members of their training team, as well
as to see some of the difficulties caused
by the way the groups interact. For
example:

Environmental Assessment
For the environmental assessment unit,
participants are taught how inspectors
perform assessments under time pres-
sure, the difficulty of on-site data gath-
ering, and are exposed to the
construction of hazard analyses to iden-
tify the likely causes of a foodborne
disease outbreak. The unit highlights
the difficulty inherent in interviewing
managers and employees of a restaurant
implicated in a foodborne outbreak, and
some of the tools sanitarians use in inter-

APHL’s Epi-Ready Travel Scholarships

“As a new laboratorian at the Vermont Department of Health I had not had
the opportunity to interact with the VDH epidemiologists or environmental
health professionals involved in foodborne outbreaks until the ‘Epi-Ready
Team Training: A Workshop on Foodborne Illness Response Strategies’. This
workshop provided the perfect opportunity to work as a team member with
our outbreak response group and learn the skill sets required for investigat-
ing a foodborne outbreak. The resource materials provided during the
course, as well as the contacts were invaluable to my training and I am very
grateful to have received the APHL travel scholarship that enabled me to
attend the training.” Joyce Oetjen, PhD, microbiologist, Vermont Department of Health.

Although APHL is not currently
accepting applications for the EH
Fellowship Program, applications for the
EH Traineeship Program are accepted
on a continual basis. For additional
information, visit www.aphl.org/docs/
EH_Fellowship_and_Traineeship_Appli-
cation1.pdf to view the application, or
contact Heather Roney, hroney@aphl.org, 202.822.5227 x301.

Supporting the Epi-Ready program
was a natural choice for APHL. In
previous trainings, laboratorians
were underrepresented. While the
unit was still able to share the labo-
atory perspective with participants,
the laboratorians were left behind in
the development of the working
relationships so critical to the Epi-
Ready training. As a result, APHL
decided to use CDC cooperative
agreement funds to offer member
public health laboratories travel

scholarships in order to encourage
laboratory participation. The
response was voracious, and addi-
tional Epi-Ready Team Trainings are
planned. APHL gives priority in
awarding scholarships to laborato-
rians attending as part of a state
team. For more information on the
Epi-Ready course or the APHL travel
scholarships, contact Jeremy Gillissen, food safety program
manager, jgillissen@aphl.org or
202.822.5227 x245.
Spotlight on Newborn Screening Training: Tandem Mass Spectrometry Workshop a Success

In October and November 2004, representatives from eleven state public health laboratories participated in “Newborn Screening by Tandem Mass Spectrometry: A Course in Understanding Issues and Interpreting Test Results.” The five-day, intensive workshop held at Duke and Baylor universities targeted primary operators of tandem mass spectrometers from states new to the use of tandem mass spectrometry (MS/MS). Attendees were selected based on experience in validating instrument operations, establishing a plan for laboratory operation based on MS/MS, and attendance at a manufacturer’s training course. Since May 2002, 47 state public health laboratories from 27 states have participated in nine MS/MS workshops.

“Dr. Millington and his colleagues presented a very balanced program incorporating everything from laboratory principle and practice to understanding of biochemical pathways, patient referral and follow-up, confirmatory and diagnostic testing and the manufacture and treatment of disorders of aminoacidopathies, organic acidemias and fatty acid oxidation defects.”

Donna M. Johnson, supervisor, Metabolic Laboratory, New England Newborn Screening Program

The workshop covered metabolic pathways and diagnostic metabolite evaluations in urea cycle disorders and amino-acids disorders, description of clinical response to abnormal MS/MS screening results, theory and practice of labeled internal standards, procedure for establishing cut-offs, review of manufacturer instruments, software and support, and related topics. Dr. Millington, director, Biochemical Genetics Laboratory, Duke University, and Dr. Sweetman, Institute of Metabolic Disease, Baylor University Medical Center, developed the curriculum and organized the workshops. Speakers included faculty members from both universities, Gary Hoffman, of the Wisconsin State Laboratory of Hygiene newborn screening program, and manufacturers of tandem mass spectrometry instrumentation. In addition to lectures, participants discussed technical problems related to setting up MS/MS screening and problem solving techniques.

“I entered the course very much in the dark about how we were going to make it all work, and finished the course feeling very confident with a plan in place to present to our advisory board that would take us from the pilot phase to going live with reporting the full panel of MS/MS disorders.”

Patrick Hopkins, senior laboratory scientist, Missouri Newborn Screening Laboratory

What is a tandem mass spectrometer? A tandem mass spectrometer is a specialized instrument that detects molecules by measuring their weight (mass). Mass spectrometers measure weight electronically and display results in the form of a mass spectrum, a graph that shows each specific molecule by weight and how much of each molecule is present. Millington, Kodo, Norwood and Roe published the first report describing the potential of MS/MS in detecting diseases in newborn blood spots in 1990. State public health laboratories use tandem mass spectrometers to screen test are made, and how specimens should be submitted. Chain of custody issues are also highlighted as well. Since non-laboratoriens may have unrealistic expectations about what labs can and cannot do, this unit helps clear up some misunderstandings and explains how submission and collection procedures are not arbitrary, but are key to the proper performance of laboratory duties. David Carpenter, chair of APHL’s Food Safety Committee, was instrumental in updating this unit, and also serves as an Epi-Ready trainer.

Epidemiologic Investigation
The epidemiologic unit takes trainees through the basics of what epidemiologists do in the wake of an outbreak, from establishing case definitions and developing epidemic curves to calculating the likelihood that a food item was the source of the illness and interpreting the data collected. Participants then work through several outbreak exercises, building a case definition and hypothesis, calculating measures of association and interpreting the data. The purpose of these exercises is not to make the non-epidemiologist competent in the performance of epidemiologic duties, but simply to provide a venue for understanding how the various inputs from sanitarians and the laboratory fit together in an epidemiologic investigation.

Laboratory Guidance
The laboratory unit touches briefly on what laboratories actually do in a food-borne outbreak, and focuses primarily on sample collection, how decisions to

“Learning the theory and learning to use that theory to think through a problem and make an interpretation, was the most useful tool that came out of the workshop.”

Allen Bergum, Program Chief, Inborn Errors of Metabolism Laboratory, New Jersey Department of Health and Senior Services

Continued on page 14

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thousands of infants for metabolic inborn errors and organic acidemias, using blood spots collected on filter paper. The application of tandem mass spectrometry has had a major impact on state laboratory newborn screening programs, enabling them to screen an expanded panel of tests. Laboratories can now screen for a spectrum of diseases using multi-disease screening tests. This has led to early diagnosis of more children, including those from ethnic groups deemed susceptible to certain diseases.

“Newborn screening programs are encouraged to support the expansion of APHL training activities related to this important technology and should be required to participate in future offerings to assure the consistent high quality of newborn testing services.”

David Worsely, Connecticut Department of Public Health Laboratory

As of January 2005, 34 states have mandated newborn screening testing using MS/MS\(^1\). Six additional states use MS/MS testing to screen selected populations or limited pilot programs (not mandated). Several other state newborn screening programs have started to look into MS/MS testing, in expectation of recommendations for a uniform expanded panel of newborn screening tests from the Department of Health and Human Services. The recommendations (expected soon) will likely recommend screening a core panel of 29 disorders.

The NLTN, CDC and the National Newborn Screening and Genetics Resource Center co-sponsored the workshops. Another round of MS/MS training workshops is being planned. If interested in attending, contact Jelili Ojodu, program manager, newborn screening and genetics, 202.822.5227 x235, jojodu@aphl.org.

Other state public health laboratories that participated at the workshop were from Ohio, Georgia, Missouri and New Jersey. There were presentations describing the analytical methodologies and discussions on tandem mass spectrometry and its importance in diagnosing and identifying diseases. The course work also dealt with the basis of the inherited diseases, with special emphasis on amino acid metabolism and molecular biology techniques in the identification of diseases. This intensive course work ran for eight hours everyday. From a practical point of view, we were shown the instrumentation, operation and maintenance of ion sources. In one class session, we had the opportunity to analyze and comprehend the actual patient’s data. This gave an opportunity to interpret the various amino acid levels, acylcarnitine profiles, and fatty acid levels in actual patients. After careful analysis, we had to come up with a disease diagnosis for the patient. This was a valuable experience in evaluation and patients’ health profiles.

We had homework every day and the answers were discussed the next morning. This kept us very busy even after hours. Invariably, at the dinner table, we informally exchanged our thoughts and ideas about the subject. At the end of the coursework, we appeared for a test of the principles and procedures we learned in the course. Though we were apprehensive, Dr. Millington was very complimentary of all the students, and I am glad to report that we all passed.

We enjoyed our visit to the North Carolina state public health laboratory and the evening at Chapel Hill. All my colleagues would certainly agree with me when I say we learned a lot about tandem mass spectrometry and are convinced that Dr. David Millington was the ideal person to teach it.

As a token of our appreciation to Dr. Millington, the participants honored him with a plaque during their monthly seminar at the mass spectrometry center. We will do our best to keep learning and adopt this emerging technology that ultimately will help identify the undiscovered metabolic disorders in newborns.

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2 Although 34 states mandate MS/MS testing, three states have not implemented MS/MS testing.
Many of APHL’s EID fellows attended the November meeting of the American Society for Tropical Medicine and Hygiene in Miami. Four fellows had poster presentations at the meeting. **Michelle Crum**, a Class IX research fellow at the New York State Department of Health presented “Heterologous Glaviviruses Can Package WNV Replicon.” Fellows from the CDC’s Division of Parasitic Diseases were well represented at the meeting: Class IX Research Fellow **Katie Kurkjian** presented “Immunologic Profiles of People Living in a Visceral Leishmaniasis-Endemic Community in Bangladesh.” Class X Training Fellow **Caroline Grady** presented “Monitoring Filarial Transmission Using Entomologic Measures after Four Rounds of Annual Mass Treatment.” Class IX Training Fellow **April Price** presented a poster detailing her research and that of previous (Class VII) EID Fellow **Aiyshah Wilson**, “Macrophage Migration Inhibitory Factor is Associated with Protection Against Anemia in Infants Residing in a Holoendemic Region for Malaria.” Price was also the co-author on three other posters at the conference!

Class V International EID Fellow **Ivan Kuzmin** and Class IX Research Fellow **Ann Schmitz** co-authored a poster at the XVI Meeting on Rabies in the Americas in the Dominican Republic: “Experimental infection of big brown bats (Eptesicus fuscus) with Asian bat lyssaviruses, Irkut, Aravan, and Khujand.” The poster was based on their work in the CDC’s Division of Vector-Borne Infectious Diseases.

**Pierre-François Humair** co-authored a chapter in the upcoming book *Lyme Disease in North America and Europe: Diagnosis, Treatment, and Prevention*. The chapter, “The Spirochetes and Vectors Ticks of Borreliosis in Nature,” focuses on the ecology of Lyme borreliosis in North America and Europe. Humair was a Class VI international EID fellow who recently completed his fellowship at the CDC’s Division of Vector-Borne Infectious Diseases.

**Class X Research Fellow Angela Fritzinger** published the article “Modulation of a “CD59-like” protein in *Naegleria fowleri* amebae by bacteria” in the *Journal of Eukaryotic Microbiology*. Fritzinger works in the Virginia Division of Consolidated Laboratory Services in Richmond.

As part of her work on a pilot study to investigate the immunopathology of cognitive/neurological sequelae from cerebral malaria (CM), **Renée Ned** spent a month in Jabalpur, India, in October 2004. While in Jabalpur, she helped set up a newly-renovated lab at the Malaria Research Center (MRC) and trained the laboratory personnel on the blood processing procedure. The lab will process patient samples and perform immunological assays. She collected patient samples and worked on many of the logistical issues related to setting up the study, which will estimate the neurological/cognitive burden associated with cerebral malaria in India and increase the capacity of the CDC to plan future prevention efforts to reduce CM-associated neurological and cognitive sequelae. In addition, collaborative activities between the CDC and Indian scientists will be strengthened. Ned, a Class IX research fellow in the CDC’s Division of Parasitic Diseases, described the experience as “eye-opening in terms of the lab resources available there and the public health infrastructure that is in place.”

**Environmental Health Traineeship**

APHL and NCEH/CDC offer the Environmental Health Traineeship Program, which provides travel for current laboratory staff to attend relevant conferences or trainings, or short-term (1-6 week) specialized training in environmental health technology and testing methods at another state health department, NCEH/CDC, or other state or federal agencies (such as ATSDR, EPA, NIEHS or NIOSH). For more information or an application, contact Heather Roney, fellowship program manager, at hroney@aphl.org.
Whitaker Receives Thomas E. Maxson Scholarship Award

Vickie Whitaker, laboratory improvement coordinator for the North Carolina State Laboratory of Public Health, received the Thomas E. Maxson Scholarship Award for 2003-2004. Whitaker has been a long-standing, active participant in the National Laboratory Training Network since 1993. She has been integral to all of the training activities at the North Carolina State Laboratory of Public Health. Whitaker is the creator and director of the annual State Laboratory Roundtable program presented through the NC Division of Public Health’s distance learning network. Most recently, she has coordinated and directed several CDC co-sponsored workshops on new rapid HIV tests. Whitaker is a stalwart advocate for quality continuing education for laboratory workers, and an example of dedication to excellence in public health.

Becky Perdue, APHL member, presents the award to Vickie Whitaker.

Lab Systems & Standards

Comprehensive Laboratory Services Survey Results

APHL’s Laboratory Systems & Standards Committee (formerly the Leadership Committee) recently collected baseline data from state public health laboratories for the Healthy People 2010 Initiative. Healthy People 2010 (HP2010) is a Department of Health and Human Services 10-year program with a goal to increase the quality and years of healthy life and to eliminate health disparities. One objective in HP2010 (23-13) states: “Increase the number of state and tribal public health agencies that provide or assure comprehensive laboratory services to support essential public health services.” This objective contains 11 sub-objectives, each based upon APHL’s Core Functions of a Public Health Laboratory document.

In response, the committee created the Comprehensive Laboratory Services Survey containing representative questions for each of the core laboratory functions. For two core functions which were recently surveyed, (i.e. food safety, emergency response), representative questions were selected from the surveys to determine the laboratory’s compliance in providing comprehensive laboratory services.

A scoring system for the survey was devised during a committee meeting in Washington, DC, in October 2004. If a state public health laboratory receives 70% or greater in the point system for a core function, it will have met the goal of providing or assuring comprehensive services for that area.

Forty-eight states and territories responded to the survey. A subcommittee of the Laboratory Systems & Standards Committee will analyze the aggregate data to identify areas of public health laboratory activity that require attention and/or assistance. Ideally, these findings will be published in a peer-reviewed journal. Individual laboratories that participated in the survey will soon receive a confidential summary of their results. The committee would appreciate feedback from participants regarding the sub-objectives.

Initial survey results

To fulfill CDC requirements that data be collected to determine whether provision of essential public health services has improved during the decade, end-of-year targets were developed. The committee will prepare biannual Comprehensive Laboratory Services surveys to assess the ability of individual facilities to satisfy core laboratory functions. Data will also provide useful information about areas of weakness that may require system changes.

Initial survey results:

<table>
<thead>
<tr>
<th>Sub-objective</th>
<th>Core Function</th>
<th>% states meeting sub-objective</th>
<th>End of decade objective</th>
</tr>
</thead>
<tbody>
<tr>
<td>23-13a</td>
<td>Disease Prevention, Control, Surveillance</td>
<td>89.5%</td>
<td>98</td>
</tr>
<tr>
<td>23-13b</td>
<td>Integrated Data Management</td>
<td>68.8%</td>
<td>85</td>
</tr>
<tr>
<td>23-13c</td>
<td>Reference &amp; Specialized Testing</td>
<td>64.6%</td>
<td>80</td>
</tr>
<tr>
<td>23-13d</td>
<td>Environmental Health &amp; Protection</td>
<td>31.3%</td>
<td>70</td>
</tr>
<tr>
<td>23-13e</td>
<td>Food Safety</td>
<td>2.0%</td>
<td>50</td>
</tr>
<tr>
<td>23-13f</td>
<td>Laboratory Improvement &amp; Regulation</td>
<td>93.8%</td>
<td>99</td>
</tr>
<tr>
<td>23-13g</td>
<td>Policy Development</td>
<td>22.9%</td>
<td>50</td>
</tr>
<tr>
<td>23-13h</td>
<td>Emergency Response</td>
<td>23.2%</td>
<td>85</td>
</tr>
<tr>
<td>23-13i</td>
<td>Public Health Related Research</td>
<td>64.6%</td>
<td>85</td>
</tr>
<tr>
<td>23-13j</td>
<td>Training &amp; Education</td>
<td>85.1%</td>
<td>90</td>
</tr>
<tr>
<td>23-13k</td>
<td>Partnerships &amp; Communication</td>
<td>47.9%</td>
<td>75</td>
</tr>
</tbody>
</table>

1At this time APHL possesses no tools for measuring tribal agencies.

The Infectious Diseases Committee met in December 2004 in Washington, DC. The meeting began with an update from the CDC’s Influenza branch. Ann Moen, deputy director, reported that the threat from the outbreaks of highly pathogenic avian influenza in southeast Asia is considered extremely high due to the potential for the virus to adapt to human hosts or re-assort with circulating human viruses. The CDC is actively supporting surveillance efforts in the region and is pursuing vaccine options.

Continuing this influenza update, Dr. Alexander Klimov, chief of the strain surveillance team, reported on a meeting with representatives of the USDA’s National Animal Health Network and the CDC’s Bioterrorism Preparedness and Response Program. The meeting was organized to discuss coordinated surveillance and testing options; in its wake, workgroups have been assembled and studies comparing CDC and USDA laboratory methods are being planned. As part of annual human surveillance efforts in the US, the CDC encourages public health laboratories to submit isolates and clinical samples to the CDC throughout the season. Original clinical material from positive samples is needed to identify a strain that will grow well in eggs for annual vaccine production.

This committee discussed the progress of several strategic initiatives:

- A checklist developed by an APHL sub-committee to assist public health laboratories in planning for and responding to infectious disease outbreaks was approved by the committee. This tool was recently released at the APHL Infectious Disease Conference and will be shared with members via the Web site.

- The Public Health Clinical Laboratory sub-committee presented a comprehensive report outlining the many issues and gaps involving—and possible solutions to improve—the level of coordination and collaboration in the laboratory community. The subcommittee recommended that a model five-year strategic plan be developed to assist states in defining the essential components of an effective laboratory system. To address one of the recommendations, members of the Infectious Diseases Committee expressed the desire to work with appropriate regulatory agencies to explore the creation of a consensus regulation on requirements for biosafety cabinets in all laboratories that perform comprehensive clinical microbiology.

- The HIV Steering Committee continues to address expansion of incidence testing, quality assurance and training for rapid HIV testing, and the application of NAAT for acute infection testing. APHL members have been engaged in planning the CDC HIV Diagnostics Conference, held February 28-March 1, in Orlando, FL.

Further CDC Updates

Dr. Dale Hu, associate director for laboratory science, at the CDC’s National Center for HIV, STD and TB Prevention (NCHSTP), explained that the Division of HIV, STD, and TB Laboratory Research (DASTLR) has been dissolved and the laboratory sections have been moved into their respective program divisions within NCHSTP.

Dr. Janet Nicholson, associate director for laboratory science at the CDC’s National Center for Infectious Diseases, discussed the agency’s reorganization further. She also highlighted the agency’s new emphasis on environmental microbiology, as well as increased efforts to coordinate emergency preparedness and response among the federal agencies.

New APHL TB Steering Committee Formed

APHL will begin to implement the recommendations of the 2004 TB Task Force report, The Future of TB Laboratory Services, A Framework for Integration, Collaboration and Leadership. Heading this endeavor is a new APHL TB Steering Committee, a joint venture between APHL members, CDC staff, a National TB Controllers Association (NTCA) representative, and laboratorians from the clinical sector. It will also be tasked with reviewing other important TB laboratory and cross-cutting programmatic issues.

**TB Steering Committee Members:**

- **Nancy Warren**, Chair, Pennsylvania
- **John Bernardo**, NTCA representative
- **Edward Desmond**, California
- **Wendy Gross**, Veterans Affairs Medical Center, Connecticut
- **Bruce Hanna**, New York University School of Medicine
- **Nancy Hanna**, Maryland
- **Ken Jost**, Texas
- **David Warshauer**, Wisconsin
- **Michael Iademarco**, John Ridderhof and **Tom Shinnick**, CDC
New Chief of PulseNet USA
Dr. Peter Gerner-Smidt joined the Foodborne and Diarrheal Diseases Branch at the CDC in January and assumed responsibility for coordinating the activities of PulseNet USA. At the CDC, he will oversee the PulseNet Methods Development and Validation Laboratory, the PulseNet Database Administration Team, and the Epidemic Investigations and Surveillance Laboratory. Gerner-Smidt, an internationally recognized public health scientist, is no stranger to PulseNet—he spent a year working as a World Health Organization fellow with the PulseNet Task Force and has participated in past PulseNet Update meetings. Additionally, he served as the coordinator of PulseNet Europe and was instrumental in getting funding from the European Union for the program.

Results for 4th PT Survey
With assistance from APHL, the CDC continues to administer yearly proficiency testing (PT) for the PulseNet USA Program. The PT exercise that was conducted in the fall of 2004 was the first to be sent simultaneously to all laboratories certified for *E. coli*, *Salmonella*, and/or *Listeria*. Previously, half were asked to complete PT in the fall and half in the spring. This new, combined process is more efficient for the evaluators and allows for more timely distribution of national results. Nationally, 48 of 49 laboratories passed the *E. coli* PT survey, 48 of 50 laboratories passed the *Salmonella* PT survey, and 25 of 26 laboratories passed the *Listeria* PT survey. A complete national summary, as well as individual laboratory results, were sent to laboratory directors in early February 2005.

New Coordination of QA/QC Program
In December of 2004, Christine Steward left her position as the contractor responsible for the PulseNet QA/QC program. Steward first completed the analysis of the 4th PulseNet PT survey, wrote drafts of several standard operating procedures for work at the federal, state, county, and local levels, and analyzed or requested resubmissions of all certification sets which had been submitted to the CDC prior to November 1, 2004. The CDC’s Jennifer Kincaid has since assumed Steward’s duties. During the transition, Kincaid has striven to keep the certification process on track. APHL contractor Deb Sheehan will continue to analyze Shigella certification submissions, as she has done for the past nine months.

New Data Security Requirements for PulseNet USA
In order to comply with heightened Department of Health and Human Services’ security requirements, PulseNet is now required to implement additional data security measures. At this time, people who have access to the PulseNet WebBoard have been asked to sign a non-disclosure agreement. A Memorandum of Understanding and a Terms of Reference document have also been created. These have been vetted through the PulseNet Steering Committee and official CDC clearance, and will soon be forwarded to each state to gather the appropriate signatures.

2005 PulseNet Meeting
Registration for the 2005 PulseNet Update Meeting opened in February. The theme, “PulseNet: Molecular Epidemiology in Action,” reflects the concurrent foodborne epidemiology meeting. The epidemiologists will join the laboratorians for the keynote address, for an opening plenary on foodborne outbreak detection, and for a break out session where PulseNet laboratorians and foodborne epidemiologists will have the opportunity to discuss specific successes and challenges at the state and local level. Epidemiology and Laboratory Capacity (ELC) and Emerging Infections Program (EIP) grant funds are provided by the CDC so that laboratorians may attend the PulseNet Update Meeting. Visit APHL’s Web site, www.aphl.org/conferences/2005_PulseNet_Update_Meeting.cfm, for more information about the meeting, or contact Shari Rolando, srolando@aphl.org.
APHL’s New Membership Structure: Opening Doors to the Future

Previous articles in the Minute have detailed the careful revision of the association’s membership structure. The Full association members supported the proposal overwhelmingly at the September 2004 Business Meeting, ensuring that the new structure be in place for the following membership year. To read more about the structure, visit www.aphl.org/docs/New_Membership_Structure.pdf.

Seeking to close the final technical loop in APHL’s new membership structure, the Board of Directors met in January to establish a dues plan for the upcoming fiscal year, which begins officially on July 1, 2005. The Board of Directors reviewed a proposal provided by the Membership and Recognition Committee, and then decided upon the following:

Public Health Institutional-State Members
The dues are unchanged. Currently, state public health laboratories pay on a population-based scale, ranging between $1,000 and $4,000, and receive four memberships (one member-representative and three delegates). Additionally, under the new structure, these members may also purchase additional delegate slots at $100 apiece.

Public Health Institutional-Local and Associate Institutional Members
These institutional categories are new. Eventually, these categories are likely to be assessed dues amounts based on a sliding population-based structure, similar to that of the state public health laboratories. However, for the first year of the new membership structure, the Board of Directors chose to institute a lump sum, trial dues arrangement.

Local public health laboratories and the Associate Institutional members will each pay $500 for the 2005-2006 fiscal year, and receive four memberships (one member-representative and three delegates). During this year, APHL staff and members will work to develop appropriate benefits and recruit new members. These institutional members can also purchase additional delegate slots at $100 apiece.

Individual Members
The dues will be $85.

Student Members
The dues will be $50.

Emeritus and Honorary Members
These groups are not required to pay dues.

Sustaining Members
APHL’s Sustaining Member program has also undergone a renovation. The new program is devised around a four-tier system, with dues ranging between $5,000 and $25,000. The program is explained fully on APHL’s Web site; visit http://aphl.org/article.cfm?ArticleID=81 to learn more. Also visit a list of APHL’s Sustaining members at www.aphl.org/Join_Aphl/Membership_Categories/sustaining_members.cfm to learn more about these valuable partners.

Dues Implementation Schedule
Dues invoices are typically delivered in mid-to-late April with an expected payment date of June 30, 2005. Members will receive invoices for the new dues amounts at this time; the subsequent payments will extend each membership through June 30, 2006. In some cases, due to the new structure, members will be shifted into a new category first and then billed accordingly.

Elections: How Will This Work Under the New Structure?
The new structure will augment the Board of Directors by adding two, voting, member-at-large positions, bringing the total to nine board members. The new positions will be filled by one Public Health Institutional-Local member and by one Associate Institutional member. These board members will be nominated and elected by the represented categories.

The elections process for this transitional year will be conducted in two waves. The first wave of elections will proceed normally this spring, electing the open board positions filled by state public health laboratory directors. The second wave of elections will begin when the structure becomes official, shortly after July 1. The two new board positions will be filled at that time.
Illinois Department of Public Health Laboratories: Preparing for “Nearly Anything”

Bernard (Tom) Johnson, acting director of the Illinois Department of Public Health Laboratory, calls his state “the middle of the Midwest.” With 12.5 million people dispersed across “every size town and city you can think of,” Johnson said his biggest challenge is simply being prepared for “whatever the state might need.”

In 1998, for example, 66 athletes fell ill with a febrile condition that turned out to be leptospirosis, a zoonotic disease that is uncommon in the United States, and particularly so in northern states. Although epidemiologists never pinpointed the source, Johnson said the bacterium was probably transmitted in Lake Springfield during the swimming portion of a triathlon. The laboratory responded by developing a polymerase chain reaction (PCR) test that can distinguish between pathogenic and non-pathogenic strains of the disease in one procedure.

More recently, the laboratory has responded to fears of anthrax (testing 2000 samples in 2001), West Nile virus (testing 9,500 specimens in 2002 when 884 human cases were confirmed in Illinois), and monkeypox, an exotic disease that was contracted by 10 people in Illinois in 2003 from prairie dogs sold as pets. The laboratory also has been called upon sporadically to rule out respiratory illnesses (specifically, avian influenza and SARS) as the cause of illness in airline passengers passing through O’Hare International Airport.

Just last year Illinois responded to 107 food and waterborne outbreaks involving several thousand people, and reported 51 rabid animals, 50 of which were bats. This was the largest number of food-related outbreaks and the largest number of positive animal rabies ever documented in the state in one year. Illinois also has been part of the national BioWatch surveillance program for bioterrorism agents since the program’s inception, conducting daily testing on samples collected in Chicago and in Milwaukee. (No confirmed positives to date.)

“We’ve been able to meet every challenge so far,” said Johnson. “We have an incredibly dedicated staff and all of our success belongs to them.”

The many challenges facing the laboratory are perhaps to be expected in a state as diverse as Illinois. The busy Chicago metropolitan area is home to five million people and the world’s busiest airport, but the prairie state also supports a significant agricultural base—producing corn, soybeans, hogs, cattle, and dairy products—as well as a mix of heavy industries—turning out automobiles, tractors, machinery, electric equipment, and chemical and fabricated metal products.

The Department of Public Health Division of Laboratories consists of three facilities strategically located across the state: an administrative and testing laboratory in Springfield (35 employees), a laboratory in Carbondale in southern Illinois (nine employees), and a 65,000 square-foot laboratory on the west side of Chicago (94 employees).

Most of the state’s public health testing takes place in the Chicago laboratory, a 35-year-old building that is shared with the University of Illinois School of Occupational and Environmental Health and the midwest regional office of the National Laboratory Training Network. The building is located near downtown Chicago and Johnson said it was built to be energy efficient, which in 1969 meant no windows. In part because the laboratory was not designed to meet BSL-3 safety standards, Illinois is attempting to secure state and federal funding for a new facility—hopefully with windows.

The biggest chunk of the laboratory’s routine work is newborn screening: the laboratory tests approximately 180,000 infants a year for 34 different metabolic and genetic diseases. Johnson said his shop has been “ahead of the curve” in the use of tandem mass spectrometry, implementing the new technology three years ago with the full support of the Illinois legislature and the state’s newborn and metabolic advisory council.

Other high-volume clinical work requires the annual testing of approximately 200,000 sexually transmitted disease (STD) specimens, 90,000 HIV specimens and 95,000 pediatric blood lead specimens. The environmental workload encompasses dairy testing, analysis of swimming beach water and private and commercial well water, and testing of environmental samples suspected of lead contamination as a follow up to positive pediatric blood lead tests.

In addition to general disease surveillance for the state, the Illinois Department of Public Health Laboratories performs testing on behalf of 95 local
public health agencies, including the city of Chicago. Johnson explained that Chicago’s public health laboratory was combined with the state laboratory in 1993, a union resulting in “a major culture shock for everybody.” But the addition of the city’s workload has meant increased economies-of-scale, particularly for STD and food testing. The state laboratory also acquired new technical expertise and inherited a close relationship with Chicago fire, police and FBI officials.

Johnson, a self-described “lab rat” who worked previously as a scientist in private environmental laboratories and as a high school science and math teacher, said it is “difficult to be everything to everybody.” However, his biggest challenge is recruiting qualified staff to fill critical vacancies.

Budget cuts, a problem for many public health laboratories, have not been particularly severe in Illinois, a situation Johnson credits to “a growing recognition over the years of the role that public health plays.” “You usually can’t pick up the paper without seeing a foodborne outbreak or something that involves public health,” he said. And “while there’s never the luxury of enough funding or extra funding, we’ve been able to meet our challenges.” The laboratory gets roughly one half of its operating budget from general state funds and the remainder from grants and fee-for-service testing.

Looking towards the future, Illinois is building the laboratory infrastructure for emerging infectious disease testing and expanding its molecular (PCR, PFGE) program to complement traditional methods to check for enteroviruses and enterotoxigenic and enterohemorrhagic E. coli. Staff are also exploring the feasibility of adding cystic fibrosis to the state’s newborn screening panel. Software for a new, NEDSS-compatible laboratory information management system was recently purchased and implementation is underway.

“To me, the biggest challenge is to be ready for nearly anything.” Johnson said, “Basically, it’s just a matter of being prepared.”

Behind the Membership Scenes:
Little-Known Benefits Sweeten APHL Membership
Most APHL members are familiar with the basic benefits provided by the association. The E-Update and the Minute arrive regularly; national meetings on hot topics are arranged; fourteen active member committees work to influence policy and effect change on behalf of the laboratory community; workforce development and training needs are addressed through strategic surveys, hands-on courses, and discounts to services like our online Career Center. (Unfamiliar with the online Career Center? See http://careers.aphl.org/home/index.cfm?site_id=249.)

The list could easily go on, but these are the benefits that are easy to list. The benefits of APHL membership aren’t always tangible. And yet, the collaborative work of the association results in a better workplace, improved training opportunities, increased funding, and recognition in the wider scientific and policymaking communities. A few recent highlights:

Advocacy—Effecting Change
In 2004, the FDA, citing regulatory concerns, seized thousands of newborn screening test kits that were in production, causing a crisis for the nation’s public health laboratories. APHL intervened with the FDA and shortly thereafter the agency agreed to release the test-kits for use with special quality control safeguards.

Additionally, public health laboratories have long identified significant gaps in the nation’s approach to protecting against chemical terrorism—the association’s focused advocacy on this subject has captured lawmakers’ attention. In 2004 public health laboratories received funding under Focus Area D of the CDC Cooperative Agreement on Public Health Preparedness and Response for Bioterrorism dedicated to chemical terrorism readiness.

Rapid Test Deployment During Emergencies
Due to an effort led by APHL in partnership with the CDC and Centers for Medicare & Medicaid Services, laboratories can now temporarily deploy newly developed tests during crises (such as SARS) using alternate quality control methods when it is impossible to meet the original requirements of the Clinical Laboratory Improvement Amendments of 1988.

Building a Solid LIMS
The association released the Public Health LIMS Design Document, a blueprint that laboratories can use to develop Laboratory Information Management System (LIMS) software that is inter-operable across laboratories at the local, state and national levels.

Grant Monies Distributed to Members
Among other awards, APHL granted a total of $250,000 to six state laboratories to develop innovative and transferable methods to improve food safety.

Poised Ahead of the Thought Curve
A team of APHL members released a report under the auspices of the National Public Health Leadership Institute outlining strategies public health laboratories can use to correct the growing imbalance between laboratory funding and public health mandates.

Workforce Development: Facing a Crisis
APHL’s fellowship program boosted its recruiting efforts and was rewarded with a thousand downloads of the application packet within a month.

The National Center for Public Health Laboratory Leadership hosted its first orientation for incoming state laboratory directors, began work on A Practical Guide for the Public Health Laboratory Leader, and conducted several regional leadership forums and skills-building workshops on risk communication, team and leadership building, media relations and grant-writing.
A Bright New Day for Erie County Public Health Laboratories: After Risk of Closure, Laboratory Has Plans for Expanded Testing Programs

Director
Since 1994, the Erie County Laboratories have been headed by Scott Zimmerman, DrPH, MPH, HCLD, the former vice president for analytical services of a medical device manufacturer. Zimmerman said his private sector experience instilled in him a business perspective on finance and budgeting that has led the laboratory to develop a “fairly strong” fee-for-service program that now generates about 55% of the laboratory’s revenue. However, he has no wish to return to the world of commerce. “My goal,” he said, “has always been to be in a public health laboratory.”

Location
About 16 miles from Niagara Falls and three miles from downtown Buffalo on the campus of the Erie County Medical Center. The site is strategic to the main thoroughfares of upstate New York. Said Zimmerman, as a regional laboratory, “access is really important. People don’t have to drive into downtown Buffalo to get to us.”

Facility
The laboratory occupies two one-story, 1960s-era cinderblock buildings that underwent a multi-million dollar renovation when the laboratory relocated from a site in downtown Buffalo in 1999. Altogether the state-of-the-art facilities take up 25,000 square-feet, including about 1,500 square-feet of BSL-3 space. Heliport access is an added feature.

# Staff
30—up from 17 in the mid-1990s.

Distinguishing Characteristics
▶ Largest local public health laboratory in the state outside of New York City.
▶ A member of the Laboratory Response Network (LRN) since 2004.
▶ First public health lab in upstate New York to perform both clinical and environmental lead testing (in 1970).
▶ Piloted the PKU Guthrie bacterial inhibition assay in the 1960s as a newborn screening tool. At that time, the assay—developed by Robert Guthrie at SUNY-Buffalo—was the state-of-the-art test for PKU screening in infants. “A great example of how public health laboratories have been instrumental in the development and validation of new assays.”
▶ The laboratory’s local watershed surveys prompted a statewide ban on the use of phosphates in detergents in the mid-1970s.
▶ Located just 16 miles from the infamous Love Canal, the laboratory was very active in Superfund testing in the 1970s and 1980s and continue to perform landfill testing today.

Highest Volume Testing
About 40% of the laboratory’s workload is dedicated to regional STDS control programs, with an emphasis on gonorrhea and chlamydia (about 125 specimens/day) and an aggressive program for viral hepatitis. Next in line is lead testing (about 80-100 samples/day).

Notable Success Stories:
Conversion in the mid-1990s from a county to a regional laboratory, serving about a third of upstate New York. When Zimmerman first came on board he said, “We just didn’t have sufficient volume to do routine testing. Weeks might go by before we ran a batch of hepatitis tests, for example. The lab was teetering on the verge of shutdown.” Zimmerman turned to his public health partners—including local health agencies and hospitals—to gauge their interest in using his laboratory resources on a fee-for-service basis. The answer was “a resounding yes.” Said Zimmerman, “We were able to attain a critical mass (of testing) to increase our efficiency and our proficiency. The more we did something, the better we became at it.”

Continued survival. At the end of 2004, the laboratory was almost closed as a result of local funding problems. A combination of several factors—including a written campaign requesting support from laboratory clients, an active staff presence at public legislative hearings, positive media coverage, and communications with state and national health officials—helped the laboratory budget be “reinstated at the 11th hour.”

Said Zimmerman, “I’d like to believe that we’re out of the woods on that completely, but we’re probably not.”

Start-up of an emerging infections and bio-defense laboratory. The Erie County laboratory has only just recently joined the LRN. But Zimmerman, who is averse to having staff “twiddling their thumbs waiting for a white powder event,” is making his new BSL-3 space do double-duty by using newly trained staff and new technology for “daily public health initiatives,” including testing for SARS, monkeypox and other emerging infectious diseases. “We don’t have regional capacity anywhere else to do that.”

Becoming a successful training site for students in the laboratory sciences at SUNY-Buffalo and local colleges, as well as residents in preventive medicine. The Erie County laboratory is the only local public health laboratory that has hosted an APHL Emerging Infectious Disease fellow. “Training has been a really important aspect of what we do. That has been a success story for us.”

Biggest Challenges
Funding. “When public health is doing its job, we tend to be invisible, so we don’t have advocates; people think that we’re not necessary. Our challenge is to market to politicians and their constituents. Public health services like disease surveillance are life insurance policies for the county. Getting that message across is a challenge; there’s no question about that.”

Staffing. “The pool of candidates that we have to choose from is dwindling; there are fewer and fewer academic institutions that are putting out laboratory-trained scientists, and it’s very difficult to find laboratorians familiar with molecular methods. We need to figure out where to go to find those folks.”

# Vacancies: 5

Goals
Expand emerging infections and bio-defense capabilities.

Continued on page 24
I’m writing this column as I return from the 2005 APHL Infectious Disease Conference, held in Orlando in early March—literally. I’m on an airplane yet again—that makes almost one flight a week since the beginning of the year. For me, that’s a lot less productive time but a good opportunity to catch up on journals and the like. Before boredom overtakes me yet again, I have decided to concentrate on a few of the organizational imperatives that emanated from the past few days of excellent scientific content. I would like to share some of those perspectives with you.

First, by all accounts, it was a wonderfully rich program covering many of the contemporary infectious disease issues facing public health laboratories today, including HIV, influenza, bead-based assays and blood safety, among others. But it was the final sessions on partnerships that got me thinking about how seriously APHL and its member laboratories are committed to this approach.

We recognize that success in public health laboratories goes beyond a correct test result. It’s about how we report that result and how we communicate it. Without collaboration among public and private health partners, critical health information would be stalled at the lab, useless. Likewise, on an institutional level, success depends on our ability to integrate the work of public health and environmental labs with our parent agencies, the broader laboratory community and even across the globe.

Perception is another key element of success. This point was brought home to me by a small study conducted in Arkansas by Mike Loeffelholz and his team from the Arkansas Department of Health. By asking a few questions of clinical laboratory leaders in their state, the team discovered that these leaders held an outmoded view of the public health laboratory. In response, the team developed communication tools and outreach strategies to communicate a current profile of the lab which reflected the many advances that had been made over the years.

I submit that our collective efforts to improve partnerships will change perceptions. But this effort has to be sustained. We can’t assume that because we have identified our partners that our job is done. In fact, it’s just beginning. Sustaining, maintaining and nurturing partnerships—that’s what it’s all about. APHL is committed to its partners—and also to changing the perception of public health and environmental labs.

APHL is approaching the issue of perception as seriously as it takes partnership development. This has to be a full assault on the long held beliefs about public health and environmental laboratories. As you know, many are just not accurate. The board and association leadership will take up this issue in upcoming strategy sessions. I look forward to working throughout the organization to further linkages, partnerships and strategic alliances aimed at changing these perceptions.

Thanks to the many members who took time to send an email or call about the newly redesigned Minute. Over the next year, you will see additional improvements in APHL products and services as part of APHL’s drive to reshape the perception of public health laboratories. For example, our Web site is undergoing a year-long, two-phase transformation: look for enhancements soon.

I knew the captain would announce that we are soon landing—so I will end here. The flight attendant thanked everyone for being a good flying “partner.” That’s a new one for me to add to the list.

Scott J. Becker, MS
Executive Director
Develop regional public health virology laboratory capacity. In particular, the laboratory has long-range plans to develop respiratory testing and food-borne illness panels using real-time PCR and other rapid methods.

Create field liaison positions to make laboratory expertise readily available to first responders regarding specimen collection/transport and the use of handheld testing devices in the field.

Lena Lago, MPH, has been hired as APHL’s new Laboratory Response Network (LRN) program manager. Effective January 10, Lago assumed charge of the coordination of public health laboratories into the LRN. Lago earned a master’s degree in public health, with a focus on tropical public health and communicable diseases.