The Next Indispensable Skill for PHL Practice: Public Relations (page 4)
Community Outreach Takes Many Forms
APHL President Jane Getchell and Executive Director Scott Becker discuss community outreach from the laboratory and association perspectives

Scott Becker: Laboratory outreach is central to what labs do. But when you talk about reaching out to the community, it can be surprisingly challenging to define “community” … We often define it as “clinical laboratories,” but it’s much bigger than that. For starters, the physical community around the laboratory can’t be ignored.

Jane Getchell: Remodeling our BSL-3 lab in Delaware has really brought those relationships to the forefront. The project has required us to work with the local community more closely than we’re accustomed. It’s been a novel experience. Two fire marshals, the planning commission in Smyrna, obtaining all the required permits. Quite a bit of interaction with the local government.

Becker: The laboratory building boom seems to have fostered that kind of external growth. It requires a lot of teamwork to construct lab facilities—from obtaining funding to community support to political support.

Getchell: It’s different everywhere. Other labs have engaged the local community more than we have as part of their building process—but we’re in a smaller area and there hasn’t been much interest. Yet the breadth of the remodeling job has really linked us with new partners and organizations. You have to be an exquisite politician to make it all come together.

Part of the challenge for me has been that you must rely on the expertise of others. I’m not an engineer or an architect—and I don’t have any on staff either—so I’ve had to focus on picking the right people for the job, and trusting them. It’s very important to have good guidelines in place for selecting those people.

Becker: That kind of strategy is important. APHL actually chose to build “outreach” into our four-year strategic plan. We identified specific areas where we need to build connections to achieve our goals. For example—nurturing relationships with academia to further our workforce development goals. It’s important to think about who you want to reach out to.

Getchell: As well as how you reach out. APHL helps ease the lab into new relationships with some of the information it sends. The NLTN [National Laboratory Training Network] sent an email message recently about funds available for schools with medical technology training. I sent it to our university, and they were very pleased about receiving the information. Even the small connections help.

Becker: Community outreach is a hot topic across the entire public health field right now. The importance of being connected to the wider community keeps emerging as we talk about funding, emergency preparedness, pandemic preparedness … First we started talking about working more with our colleagues in disciplines that overlap with ours, like the clinical laboratories, and now we’re seeing support for that.
Getchell: Like with CDC’s Clinical Laboratory Integration Project. All levels of our field are placing emphasis on outreach. These funds are available to help public health labs work with clinical labs to improve relationships, reporting, testing practices.

Becker: But we’ve already taken it a step further, and now the conversation has moved toward “How do we reach outside of our practice area? What will that mean for us?”

“...You have to be an exquisite politician to make it all come together.—Jane Getchell, on navigating the complexities of community relations

Getchell: In line with that, CDC’s Division of Global Migration and Quarantine recently convened a meeting to discuss community mitigation strategies for pandemic flu. The input was amazing. Representation was very broad—from businesses such as UPS and Coke to church leaders to school boards to local government to public health experts to legal analysts. Discussions converged around what communities could do if pandemic flu strikes, and focused on social distancing—canceling events, closing schools—laws that impede public health work in emergencies, and key lines of communication. It was the big picture of the massive response effort necessary to contain the outbreak, with many of the key players present. Obviously the lab’s major role is early detection in each affected community.

Becker: Although, of course, our pandemic flu policy statement lays out the deeper role of public health laboratories. Early detection is the big one. But labs will also be working behind the scenes with the clinical labs and doctors in the event. And before any outbreak, the labs will have been training other labs on the rapid flu tests and talking to vet labs about current flu activity in animal populations. And that is definitely community outreach, even if it hasn’t been labeled that way.

Getchell: Look at our rabies work—that’s about as traditional a role as the lab can play, and the community interaction is there too. We identify the infected brains, but also participate in identifying who was exposed, how they should be treated. Just recently 13 states have been tracking the fallout from exposure to bats at a summer camp. The campers went home, carrying the potential exposure with them. This is routine work for us. And now, of course, many labs are making a huge effort to connect in new ways.

Becker: As is APHL. We’ve made some staff changes recently to help solidify our efforts to work externally. We now have two new senior advisor positions—for scientific affairs, and for laboratory practice and management. In those roles, working with our partners and members, Rosemary Humes and Ralph Timperi will help build a framework for APHL’s broader goals.

Getchell: It makes sense that APHL has had to change, that staffing needs would be re-evaluated as the association’s work and influence expands.

Becker: It’s an exciting time for the association. We’ve had some significant successes—we’ve really made some inroads and worked with people who have backed us when it really mattered. This kind of effect is why I’ve also chosen to enlarge our senior leadership team by incorporating our communications and policy directors—both representatives of outward-looking functions. To promote public health laboratories well, it is vital that our messages come through the filter of a well-rounded team.

Getchell: Everything we do in the laboratory has a direct effect on the public. Our data are the fuel that public health programs run on. Community outreach—it’s an attempt to show the public who we are and what we do, to remind our partners of the laboratory role in the big picture of public health.
The Next Indispensable Skill for PH Laboratory Practice: Public Relations

“Don’t be afraid to go out there.”—Michael Smith, director, South Dakota public health laboratory

The list of skills required for modern public health laboratory practice keeps growing. Right alongside new scientific specialties such as biomonitoring and antimicrobial susceptibility testing, some public health laboratories are developing expertise in an area surprisingly far afield: public relations.

Not only are they bringing in television crews, students and legislators for tours and educational programs, but many public health laboratory leaders are going out into the community to engage neighbors, businesses and other constituencies.

Don’t wait to reach out to your community, to make the connections to build your constituency until you need it.

It needs to be a proactive, ongoing, sustained effort … —Ann Willey, director, Office of Laboratory Policy and Planning, The Wadsworth Center

Hosting Workshops for Legislators

The Wadsworth Center is one of the largest state public health laboratories in the country and is unusual in having an office dedicated to community relations. In a telephone interview, Zdeb and her colleague Ann Willey, director of the Office of Laboratory Policy and Planning, discussed at least half a dozen outreach activities the center has conducted.

Two of the most successful are long-running programs targeting state officials and the public-at-large. Since 1993, Wadsworth has hosted an annual workshop—spread across three consecutive mornings—for legislative staff, policy and budget staff from the governor’s office and health department attorneys who draft regulations.

“We cover topics that may be before the legislature and may be of particular interest to their constituents,” said Zdeb. This year’s program focused on pandemic influenza, and past workshops have addressed everything from newborn screening to food safety monitoring and response.

Presentations are brief and followed by interactive activities such as tours of the biodefense or other specialty laboratories and demonstrations of scientific procedures, so participants, said Willey, “get to see what the money coming from the state is paying for.”

To maximize the program’s impact, all registrants—whether they actually attend the workshop or not—receive a notebook filled with an annotated outline of each presentation, glossary, suggested reading list, speaker bios and other resources. That notebook, said Willey, ends up “on somebody’s desk somewhere over there in the legislature. But more importantly, they have contact information… And I’m sure anecdotally that some of these materials have been sent to constituents.”

Offering Free Courses for the Eager-to-Learn

A related effort is the Wadsworth Center’s 12-year-old, free, public lecture series, offered “to educate and excite the public about biomedical science.” The lectures are held one evening per week for six weeks each spring and touch on such issues as genomics, cross-species disease and nanotechnology.

Who comes? “We get people with doctorates, we get high school students, we get just ordinary people from the community,” said Zdeb. “We’ve had high school biology teachers assign attendance to their students.” In fact, the series is so popular—thanks to word-of-mouth, a growing mailing list and a free advertisement in the largest, local daily newspaper—that the 100 available seats are always filled, and there is usually a lengthy waiting list.

Willey said teachers have been known to use the lectures and handouts to help craft their own class-
room presentations. “We’ve had members of the press or the freelance press come. Business folks. Members of the medical community, if the topic is medical in nature.”

The series, said Zdeb, is based on the mini-medical school model. “It grew out of the sense that as a community with scientific expertise… we felt an obligation to share some of that science with the community [at large]. But also it was to educate them about the Wadsworth Center and what it is that goes on here.” The program concludes with an informal reception that puts doctoral-level scientists on the same plane as the audience. Zdeb said, “Juice and cookies help grease that activity.”

Personalizing the Effect of Laboratory Science

In Iowa, community outreach is also an integral part of the activities of the state laboratory, the University of Iowa University Hygienic Laboratory (UHL). Here, the lab has employed a slightly different tactic to capture the attention of legislators and the public: the age-old art of story-telling.

Mary Gilchrist, the UHL director and chief raconteur, conceded that story-telling does not always come easily to scientists. But, she said, it is a skill that needs to be learned.

“Our tendency [as scientists] is to be introverted and to think what we do justifies our existence. That’s why bad outcomes happen to good causes: we don’t communicate effectively to people. [Laboratorians] think people should understand their work inherently for some reason, and brag about what they do rather than talk about what people are interested in… We have to find the things that people are motivated to value so we can get support for what we do.”

One compelling example of the use of stories is the UHL’s district report, a series of newsletters tailored for the lawmakers and staff serving each of Iowa’s national congressional districts. The newsletters relate information about the laboratory’s tandem mass spectrometry program, parasitology testing and DNA-based analyses, but restrict the science to subtexts. Instead, the headlines proclaim:

- A Star is Born in Waterloo—featuring a photograph of smiling baby Zarchariah Zwerlein, who tested positive for MCADD, a rare hereditary disease.
- Tick Invasion in Bellevue, Guttenberg and Sabula—featuring a photograph of an engorged tick, prominently held aloft in tweezers.
- Got Milk-Got Sick in Jones County—featuring a photograph of a man with a milk mustache and fur hat, presumably one of the 31 people infected with Campylobacter jejuni after drinking raw milk at a Jones County banquet for raccoon hunters.

In these stories, the work of the laboratory is not merely explained, it is dramatized in a way that conveys value to the citizens of Iowa.

Boosting Outreach with Speaking Engagements

The UHL takes its story-telling mission so seriously that it worked with the University of Iowa to establish a speakers’ bureau. Beth Hochsteder, the UHL training and outreach coordinator, said, “We have people out [speaking in community settings] literally every day. They just schedule themselves and go out and do it. It’s an important part of their work and what they do for the community and they enjoy it.”

Gilchrist herself had 22 speaking engagements in the first half of this year, addressing civic clubs, chambers of commerce, professional associations, senior citizens’ groups, church groups, students and teachers in secondary and post-secondary education and other audiences. A sample Gilchrist presentation is Plagues and Pandemics: From the Black Death in the Middle Ages to Bird Flu in the Age of Science, a talk that was accompanied by images of medieval paintings and woodcuts. (This particular talk was presented to students at the University of Iowa and Grinnell College, seniors at the Oaknoll Retirement Center in Iowa City and a group at Zion Lutheran Church, also in Iowa City.)

Bringing Science Education to Children

The UHL’s zeal to communicate good stories, however, is not limited

On the List in Iowa

It can be difficult to keep track of all the people a laboratory has befriended through outreach activities. Iowa’s public health laboratory has solved this problem by maintaining a list of friends. Every adult who participates in a laboratory activity is asked if his or her name can be added to the list so that they can be called upon to write a letter or make a phone call on the laboratory’s behalf when needed. Hundreds have signed up, and laboratory officials credit their support for the recent legislative approval of $36 million for a new facility.
to adult audiences. Two years ago, to mark the laboratory’s centennial anniversary, the UHL teamed up with Iowa Public Television and created a K-12 series of televised programs with names like Edible Aquifers, Germs Make Me Sick and Mom, Why Do My Hands and Feet Hurt? (about sickle cell disease). The programs are broadcast directly into school classrooms at teachers’ request using a statewide broadcasting system.

The laboratory also has a “traveling bug show” that brings the scientists themselves into elementary classrooms for hands-on demonstrations. Said Gilchrist, “We want to reach these students at an early age so they understand who we are and that there are a lot of career opportunities [in laboratory science].”

And while several public health laboratories invite high school and/or college students into the laboratory for internships, volunteer work or job shadowing, the UHL also sponsors a grant program through which it helps high school students devise and carry out science projects under the guidance of a laboratory mentor. On occasion, private businesses have been recruited to donate small sums for project supplies. “If [students] end up taking their project to a fair, [our name] is out there for the whole community to see, and that’s nice as well,” said Gilchrist. The UHL has just begun to track these students, some of whom have kept in touch with their laboratory mentors well past high school graduation.

New York’s Zdeb, who is also involved with programs to bring high school students into the laboratory, cited an added benefit: “Remember, students have parents and that’s one way of engaging the community. Students also have teachers and teachers have school boards and school boards are elected officials.”

**All in a Day’s Work for Mom and Dad**

With so much emphasis on outreach beyond the organization, however, it can be easy to overlook a built-in group of laboratory supporters: the family and friends of public health laboratory employees. The Wadsworth Center, with its staff of 1,200, does not take this audience for granted.

Every year, Wadsworth hosts a family open house complete with presentations for various age groups, microscopy exhibits, an employee awards ceremony and a reception with food. “We do not allow children under 14 in the lab at any other time,” said Willey. At this open house, however, all are welcome (under constant supervision). “They can be grandkids, nieces, nephews, cousins, etc.”

Said Zdeb, “You have to start at home and you need to let your own staff know what’s going on in your organization and they can be your best ambassadors. Or not.”

The best advice for good community relations, said Willey, is to just do something. “Don’t wait until you need it. Don’t wait to reach out to your community, to make the connections to build your constituency until you need it. It needs to be a proactive, ongoing, sustained effort that will take you into a lot of things. When you start them you may not be sure why you’re doing them. The outcomes may not be appreciated until long after you’ve finished the event.”

**Support External Colleagues As Much As Possible**

A good case in point is South Dakota. The South Dakota public health laboratory has a longstanding relationship with the state’s rural water association, which represents all the rural water systems serving state residents. This past summer the association’s newsletter—mailed to rural water customers, county officials and state and national lawmakers—featured a front-page article touting the work of the public health laboratory.

How did this come about? Said Michael Smith, laboratory director,
“They came to us.” But as with most seemingly effortless good fortune, this gift was earned. The public health laboratory laid the groundwork through a quarter century of work with the water association, not only conducting bacterial water analyses but also speaking and sponsoring activities at the association’s annual meeting. The publicity is a boon in a state where rural water stakeholders are a powerful political force.

Smith attributes other recent publicity to the laboratory’s relationship with the state public information officer (PIO); someone, he said, it is worthwhile to know. The PIO has directed television film crews and journalists to the laboratory on several occasions and regularly posts laboratory news on the state Web site. Most recently, a Web item about the laboratory’s presence at the popular Sturgis Motorcycle Rally led to an article about their mobile laboratory in the Rapid City Journal, the largest newspaper in western South Dakota.

Of course, Smith is also proactive about sending staff to speak in professional and community venues. “Even if we don’t have anyone speaking at a particular meeting,” he said, “we’ll have someone attend just so there’s a laboratory representative there walking around with a sticker with our name on their lapel.”

All of this publicity has made a difference. Said Smith, “I’ve been here for a long, long time. I’d often get asked, ‘Who do you work for?’ And I’d say, ‘The state public health laboratory.’ ‘Oh, didn’t know we had one.’ Now when you say it, they say, ‘Oh yeah, you guys are doing that mumps stuff.’ This is good awareness that might lead to something else. You need to have your name out there. Don’t be afraid to go out there.”

Washington State Public Health Laboratory: A Professional Approach to Public Relations

The Washington State Public Health Laboratory has been reaching out to local communities for some years to educate them about the laboratory’s public health mission and high-tech services. However, the laboratory’s director, Romesh Gautam, said that past outreach was “mostly passive, without much structure” and with little attention to the community-at-large beyond the school system. After the laboratory secured ownership of the land it has been renting for the past 20 years, Gautam decided it was time to adopt a more structured approach, “to make an investment in educating the local community and make sure that people know that we are here to stay.” The cancellation of plans for a new research laboratory at the nearby University of Washington—due to funding and community concerns—no doubt reinforced his commitment to “build an educated public that is not mistrustful or afraid of laboratory activities.”

To further this goal, the Washington laboratory became possibly the first public health lab in the country to hire an outside firm, Norton-Arnold & Company, to help develop its public relations program. Norton-Arnold, said Gautam, has been asked to foster “a clear, transparent understanding between us and the community. How can we become a good citizen to the community? Do people like us? We want to make sure we don’t miss anything in educating our citizens.”

Margaret Norton-Arnold, the firm’s president, said employing a neutral outsider to design consistent and clear messages—and especially an outsider who understands the local community—can be helpful. “We brought them a little bit more depth and perspective. We know who the stakeholders are and what the key issues are. I think it can be easy for those who are working day-to-day in the lab to have little blind spots. Plus, there aren’t a lot of people up there [in the laboratory] who have a lot of extra time to do this.”

Plans include an ongoing program of outreach to community groups, speaking engagements, interviews with opinion leaders, laboratory tours and open houses, allowing the use of laboratory space for public meetings and expanded opportunities for students to learn in the laboratory.

Initial community contacts can be a little bit risky. If laboratories have operated under the radar for a long time, they’re not sure what will happen when they begin to talk publicly about what they’re doing.

Norton-Arnold added, “Indications are that there’s a lot of positive feeling [toward the public health laboratory]. From our earlier research, the lab has an excellent reputation in the community and we want to cement that. They have a great story to tell.”
**Newborn Screening & Genetics**

**50-State Web Conference on Newborn Screening Contingency Planning**

APHL’s Newborn Screening and Genetics in Public Health Committee hosted two 50-state Web conference calls to discuss newborn screening contingency planning in June and July 2006. Newborn screening contingency planning was one of four committee priorities approved by the association’s Board of Directors in light of recent man-made and natural disasters in the US.

Speakers for the first Web conference were members of the Contingency Planning Subcommittee of the Newborn Screening and Genetics in Public Health Committee. The chair of the subcommittee, Eldridge Hutcheson, PhD, discussed the local—or state-specific—approach to newborn screening contingency planning. The subcommittee is devising a framework model for preparedness that will provide risk mitigation strategies to state newborn screening programs. Hutcheson also noted that the subcommittee will draft a position statement for policy use.

Thomas Hickey PhD, a member of both this subcommittee and the New York-Mid-Atlantic Consortium (NYMAC) for Genetic and Newborn Screening Services under the Health Resources and Services Administration Regional Collaborative Grant, discussed regional newborn screening contingency planning concepts. According to Hickey, the main objective of the NYMAC group is to develop a regional and inter-regional back-up system for newborn screening in case of emergency shutdown. He noted that one of the short-term goals of the workgroup was to have each state newborn screening laboratory prepare a standard operating procedure for a backup plan. The NYMAC plans to use the Clinical Laboratory Standards Institute’s report, Planning for Challenges to Clinical Laboratory Operations During a Disaster, as a guidance document. The APHL Contingency Planning Subcommittee will continue to work with the NYMAC on this issue.

Discussions about a national newborn screening laboratory model were led by Ken Pass, PhD. Pass first suggested the idea of a national newborn screening laboratory that can handle states’ screening needs in times of crises during the 2005 APHL Annual Meeting in St. Paul, MN. Pass noted the history of fires and floods in newborn screening facilities around the country, from the Missouri flood of 1993 to Hurricane Katrina in 2006. Pass proposed that the national newborn screening laboratory be located at CDC, with two permanent staff members. The proposed laboratory would be able to handle 1000 specimens/day and would have all existing newborn screening technologies, with a 30-day supply of reagents and a generic computer system. The permanent staff would maintain all systems in operational mode and participating states would rotate their staff through the national laboratory at least once annually. Pass also suggested that the Newborn Screening Quality Assurance Program staff could use the national newborn screening facility for research and development during downtimes.

The second Web conference featured presentations from three newborn screening vendors—Bio-Rad Laboratories, PerkinElmer Life and Analytical Sciences and Whatman. They shared their extensive contingency plans and activities with state public health laboratorians.

**Arizona to expand screening program for newborns**

On Aug. 31, Arizona officially began an expanded program to screen every newborn for 28 potential diseases, twice as many as before. Three spectrometers will do most tests.

State officials said the 14 new screenings probably will lead to 10 more babies being found with one of the disorders. The new tests will put Arizona near the forefront of newborn disease testing.

Arizona is expected to pilot screening for cystic fibrosis, the final recommended disorder, in the spring.

To handle the expanded screenings, the Arizona Department of Health Services bought three spectrometers for a total of about $800,000. The cost to families is $70 for two screenings, which is covered by most insurance.

—compiled from The Arizona Republic
The Laboratory Response Network (LRN) Joint Leadership Council is comprised of staff from CDC/Coordinating Center for Infectious Diseases, CDC/Coordinating Office for Terrorism Preparedness and Emergency Response, CDC/Bioterrorism Preparedness and Response Program, CDC/National Center for Environmental Health, FBI/Weapons of Mass Destruction Directorate, FBI/Hazardous Materials and Response Unit and APHL staff and members.

The council continues to address key issues, such as surge capacity, proficiency testing for both sentinel and reference level laboratories and long-term funding for biological and chemical laboratories.

The LRN Joint Leadership Council met at APHL headquarters in July to discuss strategic issues within LRN oversight. The group reviewed an updated notification policy, which—when cleared by CDC—will be posted on the secure Web site and made available to all network reference laboratories. The notification policy outlines the steps necessary to inform relevant public health and law enforcement officials of significant laboratory results for threat agents. It is critical for LRN reference laboratories to adhere to this policy since the overall response strategy to potential bioterrorism threats or other public health emergencies is dependent upon timely notification.

The council discussed the current funding for Level 1 LRN Chemical Laboratories and the need to develop a long-term funding strategy. Other discussion topics included the role of commercial laboratories in the network, opportunities for collaboration with the NIH Regional Centers of Excellence for Biodefense and Emerging Infectious Diseases, a proficiency testing program for sentinel laboratories, coordination with the FBI Weapons of Mass Destruction and Laboratory units, need for validation data for LRN assays and operational issues, such the re-qualification of LRN laboratories.

In May, the LRN leadership met with representatives from the larger commercial laboratories, who expressed interest in serving as network reference labs. However, at this recent meeting, the Joint Leadership Council had continued concerns about LRN expansion, including a limited supply of reagents, the prohibition on research and security of protocols. Additionally, much of LRN testing is in support of law enforcement and is often beyond the traditional patient diagnostic testing. CDC will meet with the representatives from the commercial laboratories later this fall and will provide clear guidelines on the LRN reference level system and discuss their concerns about expanding this structure beyond governmental- or state-approved assets.

Another hot topic was the need for CDC/LRN to provide relevant validation data for LRN-approved assays to its reference laboratories. APHL has requested this data since they are needed to meet CLIA requirements. The list of elements that meet CLIA requirements was submitted to CDC/LRN for review and implementation. The council also addressed the importance of coordinating with FBI colleagues in validation studies and selection of equipment for analysis of threat agents.

The committee also discussed several operational items, including the updated and new security measures for the LRN Web site and the re-qualification process for all LRN reference level laboratories, and the best structure to support the diverse needs of emergency response for WMD and emerging diseases. The re-qualification process is critical to the network’s infrastructure as it will provide comprehensive and accurate information on laboratory capacity, capabilities and relevant contacts. The council continues to address key issues, such as surge capacity, proficiency testing for both sentinel and reference level laboratories and long-term funding for biological and chemical laboratories.
Loan Repayment Programs: Improving Public Health Workforce

Legislation that will lead to improvements in the public health workforce (S. 3678, The Pandemic and All-Hazards Preparedness Act) was passed by the Senate Health, Education, Labor and Pensions Committee on July 19, 2006.

APHL is especially pleased that its efforts to include provisions that will create the Public Health Loan Repayment Program were successful. This new program will significantly enhance the public health laboratory workforce by enabling states to provide a meaningful incentive for people to pursue a career in public health by establishing loan repayment programs in exchange for a commitment to public health service. Under these programs, states would receive federal funding from the Secretary of Health and Human Services to operate loan repayment programs that would pay the principal and interest of federally-guaranteed educational loans for individuals who agree to a period of service in a public or nonprofit health service entity.

APHL sent letters to authors of the bill, Senators Richard Burr (R-NC) and Edward Kennedy (D-MA), commending their efforts to seek input from a variety of sources in the development of the bill. The dynamic and healthy exchange of ideas created by that process allowed for the production of legislation that will provide increased levels of preparedness for public health emergencies.

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APHL is also pleased that the bill preserves the existing method of dedicating federal preparedness funds to states. States are currently responsible for assuring that the requirements of the bioterrorism preparedness grants are fulfilled, and any reduction in federal funding for states would have severely compromised their ability to complete these tasks and resulted in a fragmented and ineffective approach to preparedness.

The bill now moves to consideration by the full Senate this fall; no similar legislation has been developed in the House.

On August 24, a team of APHL senior staff met with the staff of the CDC Washington DC office in the Hubert Humphrey Health and Human Services office building. Donald Shriber, director of the office, and nine other staff members attended; Scott Becker, Rosemary Humes, Eva Perlman, Ralph Timperi and Peter Kyriacopoulos represented APHL. In addition to describing the role of public health laboratories and the history of the association, the APHL group provided an overview of the key federal issues that APHL is pursuing this year.

The CDC Washington office has about 17 staff and is organized to represent the interests of the scientific and medical programs of CDC on federal policy and legislative matters. There was a robust discussion on the benefits of identifying areas of mutual interest and developing a collaborative work plan to advance those interests. This first visit has already led to inquiries on how to advance specific items in the APHL advocacy plan, and this will result in additional communications in the near future.
Technologies Unveiled at TB Controllers Workshop

At the 2006 National Tuberculosis Controllers Workshop, representatives of two state public health laboratories presented new methods for detecting drug-resistant tuberculosis in hours or days, rather than the month previously required. At a plenary session and in a poster presentation, Max Salfinger, MD, of the New York State Department of Health presented Wadsworth Center’s evaluation of the Genotype MTBDR Assay from Hain Lifesciences in Nehren, Germany. In a breakout session, Edward Desmond, PhD, of the California Department of Health Services described the performance parameters and public health impact of a molecular beacon assay developed in the California laboratory. Both methods are used directly with acid-fast smear positive clinical specimens and can give a result within a day or two.

In an era when strains of the Mycobacterium tuberculosis complex with extensive drug resistance are emerging (see MMWR 2006; 55:301-305), detection of multi-drug-resistant strains within 48 hours can have an important public health impact by enabling doctors to treat patients quickly. The Genotype MTBDR assay will be submitted soon for FDA clearance. The molecular beacon assay is not a commercial product yet, but has been studied extensively at the California public health laboratory for three years. Desmond reports that it has a high level of agreement (96-97%) with conventional drug susceptibility testing; the assay has proven useful in cases in which drug resistance is suspected, conventional drug susceptibility testing is slow or impossible, patients are critically ill or large numbers of patients may be affected by quick detection of drug resistance.

More details regarding these assays were provided in the following presentations and publications:
1. Somoskovi, A, Dormandy J, Rivenburg J and Salfinger M. 2006. Rapid direct detection and susceptibility testing of the Mycobacterium tuberculosis complex for isoniazid and rifampin in smear positive clinical specimens by the PCR-based Genotype MTBDR Assay. Poster at the 2006 National TB Controllers Workshop [Readers who would like to receive a copy of the poster may write to salfinger@wadsworth.org].

New STD Committee Focuses on Priorities

In March, APHL’s Infectious Diseases Committee formed a sub-committee to improve communications on sexually transmitted disease issues among CDC, APHL and public health laboratories. Earlier sub-committees that focused on HIV and TB were effective in determining diagnostic priorities and addressing needs by conducting research and translating data into programmatic functions. The new STD Steering Committee has begun to address its priorities:

Chlamydia/Gonorrhea Laboratory Guidelines

Committee members agree that CDC-developed guidelines are invaluable to public health laboratories and advocate for revision of the 2002 recommendations to reflect current scientific literature. As CDC explores the need for this revision, committee members urge colleagues to submit data that reflect recent advances in scientific knowledge. In particular, data on the utility of repeat-testing positive specimens are critical. Since the development of revised guidelines may be a protracted task, small amendments to the earlier document may be released through the CDC’s Morbidity and Mortality Weekly Report.

Continued on page 12
Lymphogranuloma venereum (LGV) Testing
CDC announced the development of a real-time PCR assay for the detection of the LGV biovar of Chlamydia trachomatis. A clinical trial of this test will commence in September 2006; once a suitable number of specimens have been tested (at least 50 LGV positive rectal specimens), the test will be offered for deployment as a home-brew assay. The steering committee will assist through communication to public health laboratories, development of verification protocols, training, transport media, regulatory issues and referral procedures.

Syphilis “Best Practices”
Perceiving a need for guidelines on testing algorithms, including point-of-care tests, the committee gathered and shared this information with public health laboratories.

Development of Quality Control Panels
Committee members have discussed the need for a quality control panel for chlamydia and gonorrhea nucleic acid amplification tests that is more stringent than commercial proficiency test specimens. Such a panel would aid public health laboratories in training personnel and monitoring result quality, including lot-to-lot and test-to-test variations. These panels would need to be applicable to all commercially-available nucleic acid amplification tests. A workgroup will form to address this project. The July 2006 issue of the Medical Laboratory Observer describes this topic in detail; see www.mlo-online.com/articles/0706/0706cover_story.pdf.

Examining the Goals of EPA-APHL Cooperative Agreement
Early in 2006, the EPA signed a cooperative agreement with APHL for $600,000 over three years to address shared environmental laboratory concerns. The funding will be used to enhance capacity and capability of environmental laboratories, establish APHL as a “home base” and build educational programs and tools for environmental laboratories.

Funds will help environmental laboratory administrations maximize their organization to handle a surge of samples, develop new testing methods and improve analysis of the human health impact of environmental chemical exposure. The agreement also seeks to establish a point-of-contact for state environmental laboratory membership in the Laboratory Response Network (LRN). APHL will organize and sponsor conferences and training opportunities for environmental laboratorians.

The ultimate goal of this cooperative agreement is the establishment of a principal association that represents public health and environmental governmental laboratories and can coordinate resources and enhance laboratory capabilities. APHL will coordinate efforts for protection of the public’s health in the event of a terrorist attack by building capabilities and capacities in environmental as well as public health laboratories. APHL will continue to work with federal partners to support development of security technologies that detect and monitor contaminants and prevent security breaches.

Some of the specific tasks outlined in the project plan include:

- Development of communications procedures to ensure environmental laboratories are well-informed during major events;
- Implementation of a LRN membership application;
- Establishment of an APHL environmental laboratory subcommittee and maintenance of an electronic discussion group for environmental laboratory directors; and
- Development of resources for sharing information to promote quality laboratory practices.

An overarching goal of the agreement is to support APHL’s ability to represent both public health and environmental governmental laboratories. Funding will permit greater staff support for environmental laboratory issues and the development of membership benefits that are tailored to the needs of these labs. Strong relationships among public health and environmental labs can lead to better-coordinated resources, enhanced capabilities in overlapping practice areas and improved emergency response.

For more information, contact Diane Davis at 240-485-2798 or diane.davis@aphl.org.
APHL’s Laboratory Management and Leadership Workshop was developed initially for Zimbabwe’s laboratory community. Training needs assessments were conducted in 2002 and 2003 with questionnaires and focus groups. Then the Laboratory Management Curriculum Working Group—comprised of University of Zimbabwe laboratory specialists, Harare laboratory support specialists and APHL staff and training specialists—developed the first training module. “Enhancing the Leadership Skills of Laboratory Managers” addressed these core topics:

- Laboratory Management Overview
- Communication
- Financial Management
- Inventory Control
- Leadership
- Motivation
- Organizational Structure
- Team Planning
- Strategic Planning
- Problem Solving/Decision Making

APHL members, staff and training specialists developed lecture presentations, workshop exercises and case studies for Zimbabwe’s public health laboratory system. They then shared these draft teaching materials with colleagues in Zimbabwe for feedback. The training program was then piloted in Darwendale, Zimbabwe, in April 2004.

**Extending Training Beyond Zimbabwe’s Borders**

In collaboration with CDC and in support of the President’s Emergency Fund for AIDS Relief (PEPFAR) initiatives, this workshop has now been enhanced and shared with countries beyond Zimbabwe. This training package does not tackle all of the components of establishing and maintaining a quality laboratory system; a separate training—the Quality Systems Workshop—produced by CDC Atlanta, APHL and other partners, addresses those needs. The leadership workshop instead introduces basic managerial concepts and methods used for day-to-day public health laboratory management and strategic planning. The curriculum is customized for each host country to hone in on pertinent issues.

**Recent Workshops in Ethiopia and Namibia**

The CDC Ethiopia office, the Ethiopia Health and Nutrition Institute (EHNRI) and APHL’s global health program held a week-long Laboratory Management and Leadership Workshop in Adama, Ethiopia, in July. Twenty-five people attended, representing different geographical regions and tiers of the Ethiopia laboratory system. APHL consultants Brad Hill DBA, Tom Rush DrPh, Kim Lewis and California’s public health laboratory director, Paul Kimsey PhD, served as faculty.

Ethiopia’s workshop focused on the importance of networking and strategic planning. With APHL’s assistance, Ethiopia established the Ethiopia Public Health Laboratory Association; the networking benefits that could emerge from this group were highlighted throughout the workshop. APHL faculty and Ethiopian laboratory leadership also examined the critical components of their strategic plan and explored individual roles in the implementation. The Ethiopian training program was well received, and APHL has been asked to offer more training later this year.

The following week, CDC’s Namibia office, the Namibia Institute of Pathology (NIP) and APHL’s global health program held the workshop again in Windhoek, Namibia. The faculty was comprised of Brad Hill, DBA (APHL consultant), Bruce Hanna, PhD (American Society for Microbiology member), Dave Mills, PhD (New Mexico’s state public health laboratory director) and Sally Liska, DrPH (San Francisco’s public health laboratory director). Participants included laboratory managers and supervisors from numerous NIP facilities.

At the request of local laboratory leadership, the training in Namibia included a presentation on customer service and ethics. Inventory control was also emphasized to complement the launch of Namibia’s new electronic laboratory inventory system. United States Ambassador to Namibia, Joyce Anne Barr, and the director of NIP, Tangeni Angula,
provided closing remarks. These dignitaries thanked the audience for participating in the important training and for contributing to the improved health and quality of life of Namibians. CDC Chief of Party Tom Kenyon, MD, also addressed the group, emphasizing the importance of partnerships in tackling the HIV/AIDS epidemic and highlighting both APHL and NIP as key CDC partners. APHL will return to Windhoek to train additional laboratory managers and supervisors in the coming weeks.

**More Help Needed**

APHL is seeking faculty for the Laboratory Management and Leadership Workshop. Trainings usually require a one- to two-week commitment and involve travel to a foreign country. All interested parties should contact globalhealth@aphl.org.

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**APHL Staff Notes**

Paula J. Fernandes joined APHL in July as senior program manager, global health. Prior to APHL, she worked with the Institute for Human Virology, University of Maryland. She has a PhD in genetics from the Gonville and Caius College, University of Cambridge.

Rosemary Humes, has agreed to serve as APHL’s first senior advisor, scientific affairs. This new role will provide scientific leadership and technical expertise on a broad spectrum of public health laboratory science issues to inform and guide disease outbreak preparedness and response, technology transfer issues including assay development and refinement, association policy development and implementation, training development and delivery and funding recommendations. Humes has a master of science in clinical laboratory science from the University of Illinois at Chicago.

Nerissa N. Majid joined APHL as staff associate, APHL/GWU Institute, in August. She previously worked at the Harvard School of Public Health in the International Health Systems Program. Majid has a master of public health from George Washington University.

Mary F. Shaffran joined APHL as senior director, public health programs, in August. Prior to APHL, she worked at the Association of State and Territorial Health Officials, where she served as principal director, public health systems. She has a master of public administration from the University of Georgia.

Nickisha Shell resigned in August as APHL’s global health grants and contracts manager.

Ericka Sykes resigned her position as information system manager in July.

Ralph Timperi has agreed to serve as APHL’s first senior advisor, laboratory practice and management. This new role will provide leadership on association issues that cross-cut laboratory practice and management and will be available to work collaboratively across all APHL programs. He has a master of public health from Boston University.

Patina Zarcone, director, strategic initiatives & research, gave birth to Gennaro Michael Angelo DeLeo on July 28, 2006.
Fellowships

This summer, APHL’s Emerging Infectious Diseases (EID) fellows worked and presented research abroad in record numbers.

Eric Chambers spent July in American Samoa, working on a CDC research study comparing methods of testing for filarial worms in mosquitoes. The project was in collaboration with the Samoa Department of Health in support of the Pacific Program for the Elimination of Lymphatic Filariasis (PacELF).

Kim Keene traveled to Guatemala in June to participate in an ongoing arbovirus surveillance project. She collected bird and mosquito samples to test for the presence of antibodies and viral RNA/virus.

At the US Naval Medical Research Center in Lima, Peru, Kristen Mueller spent part of June training local laboratory workers to perform and troubleshoot microsatellite analysis.

Rebecca Garten presented the poster, “The 3’ and 5’ Untranslated Region of Influenza A Virus Genomes,” at the Negative Strand RNA Virus meeting in Salamanca, Spain, in June. at the 16th Congress of the International Society for Human and Animal Mycology’s (ISHAM) June meeting in Paris, Christina Scheel presented the poster, “Evaluation of Antigen-Capture ELISAs for Detection of Histoplasmosis in Urine of Immuno-compromised Patients.”

Molly Freeman and May El-Sherif were co-authors on a poster at the 7th International Rotavirus Symposium in Portugal in June. They collaborated on “Rotavirus Strain Surveillance in the Vaccine Era: Why Should We Characterize Strains?”

While Prather may have helped teach several of the research students to conduct PCR, he says they taught him something even more important: “I think I finally understand how to play cricket.”

RNA Virus meeting in Salamanca, Spain, in June. at the 16th Congress of the International Society for Human and Animal Mycology’s (ISHAM) June meeting in Paris, Christina Scheel presented the poster, “Evaluation of Antigen-Capture ELISAs for Detection of Histoplasmosis in Urine of Immuno-compromised Patients.”

Donald Prather spent June at the National Institute of Malaria Research in Jabalpur, India. His goal was to provide training and increase the capacity of the research station to use molecular techniques such as PCR in order to diagnose malaria and identify potential drug resistant mutations in Plasmodium falciparum. “The staff and students were all amazingly talented and extremely dedicated. They are certainly not limited by their human resources in any way, only by the limited availability of scientific equipment and reagents,” Prather said. “The research building is even nicer than the malaria research buildings at the CDC in Atlanta, although the absence of air conditioning in the central Indian heat certainly makes you move at a little slower pace.”

While Prather may have helped teach several of the research students to conduct PCR, he says they taught him something even more important: “I think I finally understand how to play cricket.”
**Other Fellow Events…**

Scott Shone served as the chair of the Technical Design Subcommittee of the New Jersey Lab Response Network Sentinel Communications and Operations Preparedness Exercise (SCOPE). This was New Jersey’s first bioterrorism laboratory drill. Shone’s work included collaborating with five local hospital-based labs to devise an appropriate exercise to test the state’s ability to respond to an outbreak of a biothreat agent.

When the recent mumps epidemic occurred in Iowa, Bradley Changstrom put his regular projects aside and served as one of the primary technicians for mumps testing. He also answered phones for the mumps call center. Changstrom noted, “Participating in this outbreak investigation has been substantial in my training in public health… I have been able to follow the outbreak across the entire ‘epidemiological curve’ and from the laboratory to the public.”

May El-Sherif presented a poster at the July American Society for Virology (ASV) meeting, “A Norovirus Outbreak at the National Naval Medical Center: Usefulness of CaliciNet to Apprehend the Causative Strain.” El-Sherif also co-authored a manuscript for the Bulletin of the World Health Organization, “The Epidemiology of Rotavirus Diarrhea in Countries of the Eastern Mediterranean Region.”

Pragya Yadav’s research results were accepted for an oral presentation at ASV, “Genomic Comparison of Ganjam Virus M Segment with That of Crimean Congo Hemorrhagic Fever Virus.”

Kelsea Jewell served as a teaching assistant for a medical mycology course taught at the Arizona Bureau of State Laboratory Services.

**APHL Selects Class XII EID Fellows**

Following two days of interviews in June in Atlanta, APHL extended offers to 27 young scientists for the 2006 class of EID Fellows. The fellows will begin their assignments in state and CDC public health laboratories in the coming months.

Former fellows serve on the selection committee for the Class XII EID Fellowship Program. Pictured are (l-r): Laura Povinelli, Karen Dobos-Elder, Kimberly Musser, Joel Montgomery and Brian Sauders.
New Laboratory Director Orientation

In June, four new public health laboratory directors participated in the National Center for Public Health Laboratory Leadership-sponsored orientation program in Atlanta. Kati Kelley, APHL’s immediate past president and Connecticut’s laboratory director, joined participants Myra Kosse (ND), Stephen Martin (LA), Francisco Davilla Toro (Puerto Rico) and Chris Whelen (HI) to share her rich perspective on public health laboratory leadership. This cohort of laboratory directors participated in a full-day risk communication and message development workshop conducted by Merrick Communications. Directors learned principles and techniques that equip them to communicate effectively to different target audiences. The course staged mock news conferences, combining didactic training with an experiential approach, so participants could forge concept with practice and apply their new skills. Workshop faculty videotaped the exercises and then provided critiques to the students.

APHL staff Scott Becker, MS, Carol Clark, CPA, MS, Peter Kyriacopulos, Eva Perlman, MPH, and Pandora Ray, MA, provided a comprehensive orientation on the association. Key staff members from CDC described their focus, current projects, interactions with the public health laboratory community and fielded questions. Participants received copies of The Practical Guide for the Public Health Laboratory Leader, a publication written by former and current public health laboratory directors; it is geared to the first 100 days in office and offers tips and thought-provoking narratives to assist the new director.

Extending Life of Laboratory Learning Links

The NLTN’s popular Web/teleconference series, Laboratory Learning Links, is now available anytime, anywhere. The 2006 series—covering emerging infectious diseases, antimicrobial resistance, molecular testing, influenza pandemic preparation and parasitology—can be accessed as Web conferences, with interactive polling, or as audio conferences. Three courses are archived and available at www.nltnt.org/courses; more will be added in the near future.

Changing Course Delivery for Ease-of-Access

The NLTN is delivering training asynchronously and with a modern edge. Using Mediasite equipment and Sonic Foundry Web hosting, NLTN staff can edit content, offer courses online and uplink customers easily. Students can view a live speaker and presentation slides simultaneously, enhancing the learning experience.

Looking to the Future

After a year of funding uncertainty, the NLTN is now fully funded and looking to the future. The schedule for the 2007 Laboratory Learning Links Series is being finalized and will again feature public health “hot topics.” The use of the Mediasite system to extend the life of training courses is only one of the ways that NLTN will be delivering training at the customer’s convenience. For more information, email nltnmktmgr@nltnt.org.

Frances Whalen, director, NLTN, uses MediaSite equipment to offer courses and presentations online.

Issue 5, September-October 17
In July, public health laboratorians from 16 states gathered at a one-week Public Health Series laboratory course, “Laboratory Investigation of Foodborne Illness.” Sponsored by the NLTN and Virginia’s Division of Consolidated Services, the lectures and laboratory exercises were held in the state public health laboratory’s training suite. Faculty drawn from academic food safety programs, CDC, FDA, USDA, public health laboratories and the FBI discussed technical aspects of current and future methods used to investigate foodborne illness.

Speakers addressed the difficulty of isolating microorganisms from complex matrices, the use of molecular techniques to demonstrate viruses and parasites in food and the use of chrome agars and rapid testing for staphylococcal enterotoxin. Participants used both conventional and fluorescent microscopy to identify foodborne parasites. Several laboratorians presented case studies of actual outbreaks, describing the role of their labs in the investigation.

There was also a discussion on legal issues to consider when serving as an expert witness.

Manufacturers provided instruments and expertise in the application of molecular methods to investigate foodborne illness. Participants compared conventional sample preparation methods to the new Microgen Bioproduct Pulsifier; they also worked with Invitrogen Dynabeads and MATRIX Micro-Sciences systems. The LightCycler and SmartCycler were used to demonstrate the presence of pathogens in food. A vendor fair gave participants and vendors an informal opportunity to discuss new test kits, reagents and instruments for the food laboratory.

**E. coli Detection in Beach Water Samples**

“E. coli Detection in Beach Water Samples,” an audio conference sponsored by the Minnesota Department of Health, Public Health Laboratory, the Wisconsin State Laboratory of Hygiene Environmental Health Division and the National Laboratory Training Network Chicago Office was held June 8. A total of 485 participants from 91 sites throughout the U.S. were in attendance. The participants represented state public health laboratories, municipal water or wastewater treatment labs, county or district government labs, commercial labs and universities. In addition to the lecture handout, each site received a set of three educational CDs, developed by the Minnesota Department of Health and the Wisconsin State Laboratory of Hygiene. The CDs are entitled Collecting Beach Water Samples for E. coli, E. coli Detection in Beach Water Samples and Lab Resources for E. coli Detection in Beach Water Samples. Ninety-seven participants applied for continuing education credit, for a total of 9.7 CEUs awarded by CDC.

More than 100 individuals completed the online evaluation. More than 90% of respondents felt that the objectives can be accomplished, the content was appropriate and the speaker demonstrated expertise in the subject matter. More than 85% of respondents indicated that the quality of the course materials was excellent and the course was worth the time and money invested.

The most common change that respondents indicated they would make was changes in quality assurance or quality control protocols. A follow-up impact survey will be sent in approximately four months to determine whether participants made changes based on the information presented in the course and how they have used the educational CDs.
NY State Food Laboratory: Making a Name in Listeria, Forensic Chemistry

Director
Dan Rice, director of the Food Laboratory Division in the New York State Department of Agriculture & Markets, began his career in wildlife diseases research. After earning a graduate degree in veterinary epidemiology, however, he segued into food safety as a researcher at Washington State University College of Veterinary Medicine. “Many of the foodborne pathogens that people are interested in,” said Rice, “have a food animal reservoir.” At the time of the infamous E. coli O157:H7 outbreak in Jack in the Box® restaurants, Rice’s laboratory was one of the few in the nation doing O157:H7 research. “We were in a great position from then on to compete for food safety research funding, and our program grew immensely,” he said. But after 17 years working on food safety from the farm to processing, Rice was ready for a change. Hence, when the opportunity presented itself three years ago, he moved to the East Coast and began his current position, which emphasizes food safety at the consumer level covering processing to retail. Said Rice, “The opportunity to be the director of a lab like this is really a once-in-a-lifetime opportunity.”

Location
The laboratory is situated in a state office complex in Albany, next to the State University of New York campus—a location that offers two advantages. “Albany is the capital of New York, so all allied state agencies have their offices here. Our current location also puts us in close proximity to farmland, livestock production facilities and food processing plants. New York actually has a large agricultural base; people don’t often recognize that.”

Facility
The food laboratory occupies 25,000 square feet of a 43-year-old structure that was not designed to house a laboratory. The building supports food and dairy microbiology, chemistry and pesticide residue laboratories. Unfortunately, the building cannot support BSL-3 laboratory space, so staff is limited to working under BSL-2 criteria. “The building has its challenges,” said Rice, “but we still do excellent work here.” Rice has just begun the design process for a new food laboratory facility; a task he describes as “a rare opportunity and something I’m really looking forward to.”

Staff
43 permanent staff, including 36 bench scientists and analysts, 4 administrative personnel and 3 quality assurance/safety staff. The laboratory also employs up to 5 hourly staff.

Revenue
The laboratory’s total budget is about $3.9 million/year, much of it from the state to fund regulatory testing. However, the laboratory also earns roughly $100,000/year doing fee-for-service work for universities and state agencies and receives about $2 million in federal contracts. Federal dollars support the federal Pesticide Data Program (a multi-state effort to evaluate pesticide residues in drinking water and produce), the Microbiological Data Program (a multi-state program to evaluate selected pathogens in produce) and the Food Emergency Response Network (FERN). Said Rice, “Our capabilities have advanced significantly in the last three years in large part due to the ability to acquire state-of-the-art instrumentation.”

Distinguishing Characteristics
• One of a few state laboratories whose analytical results are accepted by the FDA as the basis for food recalls.
• Expertise in the ecology and epidemiology of Listeria monocytogenes in retail foods and environments. “As an agency, we’ve been working with producers and retail stores on (Hazardous Analysis Critical Control Points) plans for Listeria control.”
• A close relationship with other government laboratories. “We meet...”
frequently with (staff from other state laboratories) and have plans for cross-
training programs with our health department’s biodefense laboratory.
We also work closely with allied staff from Cornell University.”

• One of ten state agricultural products testing laboratories that comprise the National Food and Agricultural Laboratory Committee (NFALC). NFALC is currently developing a Web site—
www.foodshield.org—with a directory of agricultural laboratory capabilities and capacity throughout the US.

• A multi-purpose laboratory: “Although we are called ‘the food lab,’ we are not all about food; we also test liquor, wine, hard cider, pet food, animal feed, fertilizer and lime.”

**Highest Volume Testing**
Collectively, the laboratory’s three sections—food microbiology, food and dairy chemistry and pesticide residues—analyze about 22,000 samples/year (performing roughly 118,000 tests). “Food presents a varied and complex matrix for testing and often necessitates creativity and ingenuity when really odd samples arrive for testing. New York ranks third in the nation in terms of dairy production and much of our testing is dairy-related,” said Rice. Another major emphasis is on imported food products, an important focus since about a third of the nation’s imported food comes through New York. “The majority of samples are regulatory in nature—labeling issues, compliance issues and adulteration. We’re trying more and more to go to risk-based testing programs for specific hazards in foods to get the biggest impact we can from the work that we do.”

**Notable Success Stories**
• Forensic chemistry testing. “One of our big pushes right now has been implementing poison/toxin screening methods. We have had several recent events where we used these methods in forensic investigations to respond to suspected food tampering cases and even an attempted murder case involving food. These events have fostered closer working relationships with the NY state police, FBI and the FDA. Being a member of the FERN helped us get moving in this direction, but most of our progress comes from having highly competent staff and excellent instrumentation.”

• A program to screen food for antibiotic residues, currently focusing on dairy products and honey, with an emphasis on imported products.

• Work identifying chili spice coated candy with high lead content, getting these products off the market and educating the public.

• Identifying substandard infant formula imported from China in the US market.

• Tracing disease outbreaks in livestock to livestock feed.

• Being the first laboratory to identify aflatoxin contamination in dog food involved in an international outbreak of dog poisonings.

**Biggest Challenges**
• Keeping technical staff current on the latest technology with a limited budget for training and training-related travel.

• Hiring and retaining “top-notch” staff in a bureaucracy with an outmoded civil service hiring system.

• Trying to do state-of-the-art work in a 43-year-old building.

**# Vacancies**
2. “It seems we’re always looking for a chemist or a microbiologist and we currently have one of each (position) open. Right now we’re experiencing a fair number of retirements along with the usual turnover of staff, and we seem to be hiring several new staff each year.”

**Goals**
• We are always looking for new and improved ways of doing what we do: methods that are more safe or more sensitive or let us test for more things. One of our pushes right now is DNA-based detection methods for pathogens in food. Food and other agricultural products can be very challenging to test, and we are doing our part to facilitate the process of getting rapid methods validated.”

The laboratory tests imported and domestic honey samples for antibiotic residues.
• Begin testing certain food origin bacterial isolates for antimicrobial resistance.

• Expand the use of pulse field gel electrophoresis (PFGE) and integrate the laboratory’s work with PulseNet. “We perform PFGE, but we’re not a PulseNet-approved laboratory.”

• Develop the capability to perform fish speciation using PCR methodology.

• Replace the current laboratory information management system and develop an electronic submission form for samples. “We’re just in the early process of evaluating some potential systems.”

• Achieve A2LA accreditation to the International Organization of Standards 17025 and ALACC standards for food testing laboratories.

• Expand the use of LC-MS/MS (liquid chromatography tandem mass spectrometry) for detecting a variety of contaminants in food and beverage samples.

• Design and construct a new laboratory facility.

News from APHL’s Board of Directors

In June, the Board of Directors met in conjunction with APHL’s annual meeting. They approved the annual budget and discussed member services, product development and member recruitment and retention. McKinley Marketing presented its final report on the NLTN marketing plan, and the board approved a policy program for the fellowship program. They heard reports from APHL’s global health and infectious diseases programs and met with CDC Director Julie Gerberding.

The board met via conference call in July to respond to committee needs. Board members approved a motion submitted by the Environmental Health Committee to address concerns around the National Environmental Laboratory Accreditation Conference. The board approved a pandemic influenza policy statement for interim use, and it will now be submitted to the larger membership for final vote. A motion submitted by the Newborn Screening & Genetics Committee to cosponsor a conference with the International Society of Neonatal Screening was approved. At the request of the Food Safety Committee, the board agreed to support the LabDIR Web site, accessible through FoodSHIELD (http://www.foodshield.org/).

The directors then reviewed the annual priorities established by each committee and provided feedback.

Board Liaisons to APHL Committees

• Emergency Preparedness—Susan Neill
• Environmental Health—Yvonne Hale
• Finance—Susan Neill
• Food Safety—Yvonne Hale
• Global Health—Francie Downes
• Infectious Diseases—Kati Kelley
• Informatics—Steve Hinrichs
• Knowledge Management—Victor Waddell
• Laboratory Systems & Standards—Scott Zimmerman
• Membership & Recognition—Scott Zimmerman
• Newborn Screening & Genetics—Bill Becker
• Public Policy—Bill Becker

APHL Presence at 2006 NCSL Meeting

The 2006 National Conference of State Legislatures (NCSL) Annual Meeting and Exhibition convened in Nashville, TN, August 15-18. The NCSL annual conference is the biggest of its kind and brings together thousands of key legislators and senior legislative staff to meet with representatives from corporations, members of the association community and federal policy makers.

The meeting exhibit hall featured more than 250 diverse booths of trade associations, healthcare organizations, philanthropic organizations, corporations, educational entities and federal agencies. Anna Dillingham, Karen Breckenridge and Linette Granen exhibited for APHL, with back-up from the staff of the Tennessee NLTN office, Bobbi Albert and Pam Moleta. The booth and staff provided information regarding the critical work of state and local public health laboratories and the association’s activities. During the course of the conference, staff distributed a variety of APHL publications, networked with legislators and legislative staff members from 48 different states and territories and interacted with the other associations and agencies that were present. Also available at the APHL exhibit booth were Labs Are Vital brochures, which promote a new collaborative effort between industry and laboratory organizations aimed at recruiting individuals into the profession and raising public awareness about the critical work performed by laboratories.

APHL also distributed recent issue briefs, Ready Set, Respond: Chemical Terrorism Preparedness in the Nation’s State and Public Health Laboratories and Bioterrorism Capacity at the educational session, “ABCs of Emergency Preparedness: Avian Flu, Bioterrorism and Other Calamities.”
Wyoming PHL: At Home on the Range

With nearly 100,000 square miles of territory—encompassing virtually all of the spectacular Yellowstone and Grand Teton national parks—Wyoming is the ninth largest state. And with not quite 500,000 residents, it is also the least populous.

Richard Harris, manager of the Wyoming public health laboratory (WPHL), said of his home, “This is a frontier state. This is the range.” With more pronghorn antelope than people—and not more than 50,000 people in any one locale—the major engines of commerce are mineral extraction, ranching and tourism. Unsurprisingly, the official sport of the “cowboy state” is rodeo. Said Harris, “If you haven’t been out West, Wyoming is hard to figure out … Everything is a matter of scale.” A Salmonella outbreak affecting over 100 people in a youth facility not long ago qualified as “a big event.” So did an *E. coli* O157:H7 outbreak, ultimately traced back to the spring-fed water system of a small town. “Could have been wildlife contamination,” said Harris. In 2001-2002, snowboarders in the Big Horn Mountains became infected with norovirus and carried it home to six states. Authorities estimate that as many as 200 people were infected. Another big event.

Investigations for each of these incidents were ably supported by microbiologists at the WPHL. As the only source of clinical public health laboratory services in the state, Harris’s staff of 30 does everything from PulseNet testing to bacteriological drinking water analyses to bioterrorism-related work.

“Being part of a smaller health department,” Harris said, “you can network a lot better.” Laboratory personnel have a close working relationship with public health program staff and state veterinary laboratories, with whom they collaborate to investigate outbreaks involving organisms that infect both people and domesticated animals, such as horses, cattle and buffalo. WPHL staff members were even recently involved in a pulse field presentation at a national veterinary laboratory conference.

“Over the last six years,” said Harris, “we’ve implemented molecular techniques. We never had them before.” Now in addition to classic microbiology, the laboratory performs real-time polymerase chain reaction (PCR) testing, nucleic acid sequencing and pulsed field gel electrophoresis—a DNA-based subtyping method—to characterize organisms associated with infectious disease and food and waterborne illness.

“Chlamydia is one of our major problems,” said Harris. “West Nile virus was very big in 2003. We’ve been seeing increases in pertussis. Norovirus is fairly random, but we’ve been seeing a lot in nursing homes. Hepatitis is associated with a major methamphetamine problem. Being in a western state, plague and Brucella are endemic in our wildlife, and we also have hantavirus. We test for all of those.”

The single highest volume service performed by the laboratory, however, is drug testing. The WPHL performs screening and confirmatory testing on over 50,000 specimens a year on behalf of state and local agencies operating offender, probation and/or rehabilitation programs. State agency support for this service represents about 15% of the laboratory’s $2.5 million annual budget; the remainder comes from general state revenue and federal grants.

The laboratory also runs the state’s Intoximeter breath analysis program, including a large training component for police officers. Earlier this year, Governor Dave Freudenthal presented the WPHL with an award for its support for Wyoming’s impaired driving program. The public health laboratory is currently in the process of implementing oral fluid testing for drug screening.

“Substance abuse is a common western problem,” said Harris. Three years ago, a Hepatitis B outbreak linked to intravenous drug use affected 50 people in one location—another significant event in this rural area.

Four years ago, the WPHL became one of the founding members of the Rocky Mountain Biomonitoring Consortium, a group of six state public health laboratories sharing resources to monitor human exposure to environmental contaminants in the Rocky Mountain region. So far, the consortium has conducted baseline studies on exposure to
arsenic in drinking water and on exposure to thiodiglycol, an industrial chemical that also happens to be a mustard gas metabolite. The WPHL contributed administrative and quality assurance support, as well as clinical specimens from state residents.

Perhaps the most innovative laboratory activity of late has to do with development of the Wyoming Laboratory Response Network—a chain of laboratories with varying responsibilities for the detection of public health threats such as bioterrorism and emerging infectious diseases. Using federal bioterrorism funding, the WPHL has provided capacity-building grants—on the order of $5,000 to $20,000—to each of the 34 sentinel laboratories in the state.

“Most states have too many clinical labs to do this,” said Harris. “Most of our labs are in rural communities and these grants have significant impact. It’s helped with our community relations and coordination with the laboratories. We have a very good training coordinator—Gale Stevens—and she has been very dynamic in building our network.”

The WPHL also produces a laboratory newsletter (sent to the 34 clinical laboratories as well as infection control practitioners), sends unidentified isolates to hospital laboratories twice a year for proficiency testing, provides clinical laboratory training to hospital laboratory technicians and trains HAZMAT teams on the collection and transport of environmental samples.

The WPHL itself sits in Cheyenne—in the southeast corner of the state, more in the prairie than the mountains. The laboratory occupies 12,000 square feet on the top floor of a five-story building, above the state health agency. From his office window, Harris looks out upon the state supreme court and capitol buildings.

The WPHL’s 35-year-old building was never intended to house a laboratory and has required a number of modifications through the years, especially with the introduction of state-of-the-art molecular test methods. Harris said, “Clearly it does not resemble the new, modern public health laboratories being built. At all.”

The addition of a cell culture laboratory and a BSL-3 suite for tuberculosis and bioterrorism testing has helped, but Harris considers these upgrades stop-gap measures. “A new laboratory is at the top of my priority list,” he said, “but these are very complicated processes and I’m still at the beginning stages.”

A second challenge is staffing. Although the WPHL currently has just two vacancies, it has experienced fairly high turnover in the past few years. And recruiting microbiologists and chemists can be a challenge in a state of small towns. Said Harris, “We’re not very competitive for salaries and we don’t have a large recruiting population to draw from. We have one four-year university in the state and do not have a med tech program.”

Cross-training is a challenge as well. Harris noted that “it’s hard to do a lot of cross-training when you’re only one deep in each section on the microbiology side.” He said, “Workforce challenges are pretty consistent and won’t go away right away.”

Nevertheless, the laboratory has been lucky with the staff already onboard. “The quality of your staff is critical to getting the lab work done,” said Harris. “As the lab director, all I try to do is to help my supervisors with difficult issues and go out and represent the lab. The staff does all the hard work.” Aggressive screening and a heavy focus on “getting the right mix of people” has yielded a motivated staff and an exceptional work environment.

Wanda Manley, the laboratory’s pulse field microbiologist, recently received a CDC/APHL PulseNet award. Angela Van Houten received the Wyoming Public Health Association (WPHA) leadership award for her role as the lab’s bioterrorism coordinator. And Harris himself was the recipient of a WPHA award in honor of Carl Blank, a former WPHL director and an icon in the field of public health laboratory practice for his work at CDC and APHL.

Looking ahead, Harris said, “This is an outstanding time to be in public health. It’s going through dynamic changes: emerging diseases, all-hazards response issues. The role of the public health laboratory has really changed. It’s very challenging and very exciting in the laboratory from a disease standpoint.”

Harris segued into public health laboratory practice in 1999, following a 21-year career as a clinical microbiologist with the US Army. He claims no “point of origin,” having grown up in a military family. But one thing’s for sure: he loves Wyoming. “I really like the front range, so I enjoy the West. Wide open spaces. Being out around the mountains. Cheyenne is a small town, but I’m very comfortable here.”

Future goals include the new laboratory facility, enhanced quality assurance, retaining the laboratory’s top-notch staff, implementing a laboratory information management system and simply keeping up with the latest technological developments. Said Harris, “We have a lot to do.”
New APHL Institutional Members

APHL offers institutional memberships to state and local public health laboratories, as well as state environmental and agricultural laboratories. Please join us in welcoming our newest APHL institutional members.

Public Health Institutional-Local Members
El Dorado County (CA) Public Health Laboratory, Mike Deatherage
City of Pasadena (CA), Public Health Laboratory, Caroline Bautista
Tarrant County (TX) Public Health Laboratory, Guy Dixon, MS, PhD

Member Notes

David L. Smalley, PhD, MSS, BCLD, MT (ASCP), has been named the State Director of Laboratory Services for Tennessee. He served the last five years as the Director of Laboratories at the Memphis Pathology Laboratory and as the Director of the Memphis and Shelby County Health Department Laboratory. He holds a Ph.D. in Microbiology/Immunology from Memphis State University (now the University of Memphis).

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Contributors
Nancy Maddox, Writer

The APHL Minute Staff
Emily Mumford, Editor
Karen Rogers, Assistant Editor
Jody DeVoll, Advisor

The Association of Public Health Laboratories (APHL) is a national, non-profit dedicated to working with its members to strengthen public health laboratories. By promoting effective programs and public policy, APHL strives to provide public health laboratories with the resources and infrastructure needed to protect the health of US residents and to prevent and control disease globally.

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To submit an article for consideration, contact Karen Rogers via email, karen.rogers@aphl.org.