In This Issue

The National Molecular Subtyping Network for Foodborne Disease Surveillance

PulseNet™ News

State & Local Public Health Laboratories in the United States and PulseNet Canada

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10th ANNUAL PULSENET UPDATE MEETING, APRIL, 2006, MIAMI, FL

Paul Fiorella, Florida Department of Health, Jacksonville, FL and Desmond Jennings, Centers for Disease Control and Prevention, Atlanta, GA

Welcome to beautiful Miami, Florida, the site of PulseNet's 10th Annual Update Meeting. It is hard to believe that ten years have passed since our very first meeting in Atlanta, Georgia. This year's meeting will be held concurrently with the 2nd Annual National Foodborne Epidemiologists Meeting. Both meetings will take place at the Radisson Hotel, which is minutes away from many great Miami attractions such as the Vizcaya Museum and Gardens, the Bayside Marketplace, the Art Deco District and the world famous South Beach, just to name a few.

For those of you arriving from the great white north, Miami may prove to be a warm change of pace, as our April temperatures are expected to be about 80 degrees during the day and about 70 degrees at night. We also hope that you packed swimming gear since the ocean temperature is usually around 80 degrees in early April, making swimming a definite option. If the heat on the beach becomes too overwhelming, you may opt to watch the Heat in the Arena, the Miami Heat basketball team that is, which is featured in Miami's American Airlines Arena.

Miami is also home to the Port of Miami, the busiest cruise ship port in the world. For those of you who have plans to extend your stay beyond the meeting, April is a great month to see the islands from the deck of one of our great cruise lines. For those who are interested in a little history, nearby Fort Lauderdale is hosting the King Tut exhibit "Tutankhamun and the Golden Age of the Pharaohs" at the Museum of Art (www.moafl.org) until April 23, 2006. Key West, a 190-mile drive south on US 1 from Miami, is also sure to capture your imagination with attractions such as the Jimmy Buffett's Margaritaville Café (www.margaritaville.com), the Harry S. Truman Little White House and Museum (www.trumanlittlewhitehouse.com) and Mel Fishers' Maritime Heritage Museum (www.melfisher.org). Of course, you could always just kick back, take in the sunshine and enjoy the weather!

Have a great time here in Florida and remember that once you get sand in your shoes you may not want to leave. CDC

Fall 2005 Proficiency Testing Results

Jennifer Kincaid and Deb Sheehan, PulseNet QA/QC Program, Centers for Disease Control and Prevention, Atlanta, GA

Thank you to all the laboratories who participated in the Fall 2005 round of PulseNet proficiency testing. Results have been mailed to participants. A tabulated summary of the PT results for the *E. coli* O157:H7, *Salmonella*, and *Shigella* strains used are shown below, along with the number of laboratories that passed proficiency testing:

- ***E. coli*** O157:H7: 58/59 laboratories
- ***Salmonella***: 67/69 laboratories
- ***Shigella***: 32/34 laboratories

Fall 2005 PT summary, enzyme and equipment summary, and tips for improvement documents are posted on the WebBoard under "Proficiency Testing/Certification" conference. If you have any questions, please contact the PulseNet Database Administration Team by sending an email to PFGE@cdc.gov with the words "Proficiency Testing" in the subject line. For more background information on PT, please see Christine Steward's article entitled "Certification and Proficiency Testing Update" in the 2005 Volume 5 Issue 1 edition of the PulseNet News, which can be found at http://www.cdc.gov/pulsenet/pulsenet_news.htm.

Struggles in New Orleans Still Continue

Susan Van Duyne, Centers for Disease Control and Prevention, Atlanta, GA

Hurricane Katrina hit the Gulf Coast on August 29, 2005 with devastating force. For many weeks, both Katrina and the closely following Hurricane Rita were front page, prime time news. Several months later, this natural disaster, one of the worst to hit the United States, has drifted from sight. However, the states are far from being back to normal, and many of our friends and colleagues are still facing daily challenges to their lives and careers.

A clear example of the damage and destruction such an event causes can be seen with the Louisiana State Laboratory. Five months after Katrina, the state laboratory is still far from normal operations. On the weekend before Katrina struck, several of the supervisors went into the Central Laboratory to shut down sensitive equipment and to protect them as much as possible. Since the laboratories are located on the 7th and 8th floors of the State Office Building in downtown New Orleans, this basically meant unplugging equipment to protect from power surges and covering things with plastic sheeting to protect from water damage if windows broke or the roof leaked. Then everyone left the building and New Orleans.

When Katrina came ashore, it looked as though New Orleans had escaped another bad one, as the storm had weakened and moved to the east. Then the levees around Lake Pontchartrain broke and the city was flooded. The magnitude of the destruction was hard to comprehend. Amazingly, the State Office Building was largely undamaged. Unfortunately, all of the utilities (gas, electric, boilers, and elevator controls) were housed in the basement of the building and were rendered inoperable. With the exception of one chemistry lab, the state labs themselves suffered little damage. Initially, the plan was to get the utilities restored, repair the damage to the basement equipment, replace the chemistry equipment that was damaged, and the state lab would be back in business to handle the many public health related issues that were emerging. However, following disasters, things never run as smoothly as one would expect.

One problem in getting the laboratories back up and running was related to personnel. Most of the state laboratorians left town expecting to be gone a few days. For many, it was several months before they were even allowed back into the city. Some are still unable to return. Damage to personal property was extremely uneven. Some folks lost everything except the few things they had taken with them when they left the city, a suitcase or two in many cases. Homes no longer existed or were so badly damaged they were uninhabitable. Temporary housing was almost nonexistent. Other laboratorians came back to find minor damage, a window broken, a few shingles missing from the roof. They had their homes, but were not able to return to work.

Bigger issues have also prevented the state laboratory from returning to normal. The State Office Building, which was built in 1956, has been permanently closed. For several years, a major renovation of the building was discussed, and recently plans had been drawn up for a new facility to be built next to the LSU (Louisiana State University) Medical Center. Given the enormity of the damage to many structures in New Orleans, and the increased demand (and thereby cost) of construction, this plan has also been postponed.

New Orleans in February 2006

New Orleans in February 2006

As soon as the laboratory supervisors could get back into the building, they removed and destroyed all the select agents housed as part of the Louisiana LRN program. (Currently, Louisiana does not have an LRN certified laboratory although efforts are underway to certify one of the state's regional labs).

The State Office of Risk Management has hired an industrial hygienist to survey and decontaminate both the laboratory facility and equipment, and until the hygienist declares the laboratory free of human pathogens, laboratory personnel are being denied access to the facility, five months after the storm. Meanwhile, most of the laboratory equipment, which was undamaged and useable, is still locked on the 7th and 8th floors with no way to move it to another location for use. There is still no electricity or working elevators, so all supplies and equipment that have been retrieved have been carried down 7 or 8 flights of stairs in the dark. There are no plans to salvage this vital equipment and there are no funds in the state budget to replace any of it. The current budget has a zero line item for all reagents, supplies and equipment.

In this difficult situation, the Louisiana State laboratorians are trying to meet their responsibilities to the citi-

(Continued on page 3)

Struggles in New Orleans

(Continued from page 2)

zens of Louisiana. Half of the laboratorians have been placed on furlough, pending the acquisition of temporary laboratory space. Many of those who are still working are not using their laboratory skills, but are working as phone operators or data entry technicians. Some laboratory personnel have been reassigned to the regional labs in Shreveport, Lake Charles, and Amite. Temporary space is being sought in the New Orleans area to relocate some of the state laboratory functions.

Much of the work the Louisiana State lab previously performed has been contracted out to private companies or to neighboring state laboratories. The outsource tests include Neonatal testing (to Iowa State Lab), TB testing (to Texas State Lab), and environmental testing (mostly contracted out). Other programs, such as PulseNet, are completely shut down until the equipment can be retrieved from the State Office Building, space found to set it up, and money for supplies allocated. Currently, any isolates needing PFGE are being sent to the CDC. This has really been a loss to the PulseNet program since Louisiana typically sends patterns of over a thousand isolates a year to the National Databases.

In the meantime, our colleagues are trying to maintain their relations with Louisiana's hospital and private health care providers. They are attempting to communicate with their neighboring states, despite a damaged communications infrastructure. These dedicated people are determined to "weather this storm" and bring the Louisiana State Laboratory to a successful recovery, restore the confidence of their clients, and to once again be the strong public health partners they have been at the national level. We wish them all the best! CDC

THE NEW ADDITION TO PULSENET DATABASE: *VIBRIO CHOLERAE*

Kara Cooper, Centers for Disease Control and Prevention, Atlanta, GA

The highly anticipated *Vibrio cholerae* protocol is complete and the scripts for the database are available in the latest version of the master scripts. We would like to take this opportunity to thank the PulseNet Asia Pacific labs (Public Health Laboratory Centre, Hong Kong; National Institute of Infectious Diseases, Tokyo, Japan; and International Center for Diarrheal Diseases Research, Dhaka, Bangladesh) for their assistance in the validation of the protocol.

Once the protocol is officially released, it will be available on the WebBoard and on the PulseNet website at http://www.cdc.gov/pulsenet. Some important characteristics of the *V. cholerae* protocol as compared to other PulseNet protocols include:

- Lower cell suspension concentration
- No SDS added to the plug agarose
- Plug lysis for 1-2 hours
- Primary enzyme: *SfiI*
- Secondary enzyme: *NotI*
- Use of concentrated stock solution (40U/ul) of *SfiI*
- Two block electrophoresis conditions:
  - Block I: 2s-10s for 13 hours
  - Block II: 20s-25s for 6 hours

The BioNumerics scripts include individual drop down menus in the entry properties screen for Serogroup, O1 Serotype, Biotype, and Toxin (Cholera toxin positive or negative). In addition, Furazolidine has been added to the Antibiotic entry screen. Following a review of the QA/QC program (to occur during the 2006 PulseNet Update Meeting), certification sets will be established that meet the recommended guidelines. Dr. Kara Cooper will be the database manager for the *V. cholerae* database. Please direct any inquiries about the protocol or data analysis to Kara Cooper at KCooper@cdc.gov. As always, please continue sending ALL *V. cholerae* isolates immediately upon receipt to Cheryl Bopp and USE a DASH FORM for ALL isolates (one isolate per DASH form). CDC

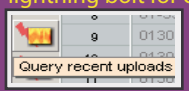
ANNOUNCEMENT:

MASTERSCRIPTS V3.0 DISTRIBUTED IN MARCH 2006

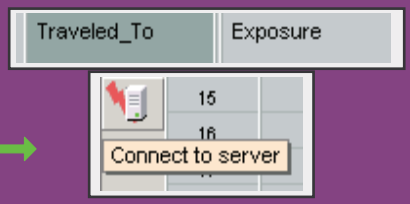
Kelley Hise, Centers for Disease Control and Prevention, Atlanta, GA

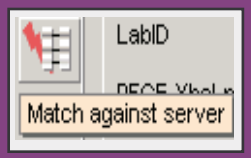
MasterScripts v3.0 was distributed in March 2006 to all participating PulseNet laboratories. Some of the important changes in the scripts included the following:

- New Vibrio cholerae Database
- New Yersinia pestis Database
- A new "Hot List" lightning bolt for client



- A new script that will fill your gel information (TIFF name and lane) for you
- New fields: "Traveled_To" and "Exposure"
- Updates to "Type Details" and the *Salmonella* serotype pull down menu
- New and easier way to connect to the online databases
- A new "Match against server" that allows you to "match" any local pattern to any pattern in the online database





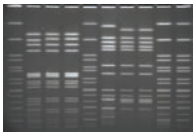
A Web Conference was held on February 24 to discuss these and other BioNumerics-related issues. If there any questions, comments or suggestions, please do not hesitate to contact the PulseNet Database Team at: pfge@cdc.gov.

PulseNet has come a long way since 1996. It was born in the mind of one man, Dr. Swaminathan, and from there evolved into both national and international networks of men and women throughout the world. Together with the aid of advance laboratory techniques such as PFGE and advanced analysis, these overlapping networks work to decrease the burden foodborne illness.

PulseNet has received accolades such as the Innovation in American Government Award in 1999. PulseNet has also been featured in its own exhibit in the CDC's Global Health Odyssey.

TEN YEARS TEAM

PFGE gel with the old standard, 1996



PFGE gel with the new H9812 standard, 2006

PulseNet Spotlight

Over the years PulseNet and its staff have caught the eye of many distinguished guests from a former Speaker of the House, Newt Gingrich, to former Surgeon General, David Satcher, and noted physicist Stephen Hawking just to name a few.

OF

WORK

PulseNet USA
The National Molecular Subtyping Network for Foodborne Disease Surveillance
CDC

PulseNet International
The International Molecular Subtyping Network for Foodborne Disease Surveillance
USA, Canada, Europe, Asia Pacific, Latin America
CDC

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INSIDE PulseNet Visit http://www.cdc.gov/pulsenet for the latest...

Welcomes:

- **Amy Marie Camba** recently joined the PulseNet Central Team at CDC. She received her Bachelor of Science from the University of Georgia in May 2004. Amy is dedicating her time to the National *Salmonella* Database and the PulseNet News.
- **Eric Hollembeak** recently joined the PulseNet Methods Development and Validation Laboratory at CDC. He received his Bachelor of Science from the Georgia Institute of Technology in December 2004. Erik is assisting Dr. Kara Cooper with the development of the non-O157 STEC and *Yersinia enterecolitica* standardized PFGE protocols.
- CA Department of Health Services' Microbial Diseases Laboratory had two new staff members join their PFGE section of the Enterics Unit. **Samar Fontanoz** is a microbiologist who graduated from San Francisco State University in May 2005 with a major in Biology. She started in our lab in July 2005. **Jessica Atwell** joined us as a microbiologist in November 2005. She graduated from the University of California at Santa Barbara in June 2005 with a double major in Molecular Biology and English.
- KY Department of Public Health would like to welcome two new members of their PFGE laboratory. **Jason Porter** began PFGE testing in early September 2005 after attending PFGE laboratory and BioNumerics training at CDC in August. Jason is also working on validating our PCR protocol for influenza testing. We are happy to have Jason on board. **Peggy Clatos** is the newest addition to our PFGE team and we are so excited to have her! Peggy brings 19 years of laboratory experience, primarily in our clinical chemistry section, and she is eager to join our PulseNet Team. Peggy will receive her training from Steve Dietrich in Michigan.
- MA lab would like to welcome two of their new employees: **Matt Gianferante** and **Kara Watarida.** Matt will dedicate 100% of his time to PFGE and will be testing the PulseNet certification sets soon. Kara will be splitting her time between PFGE and BT and will be learning some of the new BT PFGE protocols as they roll out. She will also be testing the PulseNet certification sets soon.
- **Marcella Valenzuela**, Public Health Scientist II, is a new member of the Arizona Public Health Laboratory. Marcella will be spending her time doing PFGE.
- **Valarie Cook** is a new member of Vermont Department of Health Laboratory. She is a Public Health Microbiologist in the PFGE/Enteric Laboratory. She splits her time between Enteric/Reference Bacteriology and PFGE.

Farewells:

- Centers for Disease Control and Prevention would like to congratulate **Merritt Adams** and say farewell, as she embarks on a new journey in med-school in Sydney, Australia. Merritt was an invaluable asset to the PulseNet Database Team, managing *Campylobacter* and *Listeria* databases, as well as to the *Campylobacter* lab. We wish her the best of luck in med school!
- **Rachel Nieda** has left CA Department of Health Services. Everyone will miss her and wishes her well with all her future endeavors.

HOW WOULD YOU LIKE TO RECEIVE THE PULSENET NEWSLETTER?

Currently, subscribers to the PulseNet quarterly newsletter receive a hard copy in the mail. The newsletter is also available electronically on the WebBoard and on the PulseNet website (www.cdc.gov/pulsenet/news.htm). If you would like to stop receiving the hard-copy version and either receive the electronic version via e-mail or access it via the website or WebBoard, please send your request to the PFGE inbox at pfge@cdc.gov with the subject line: PulseNet Newsletter.