



Improved Diagnosis of Viral and Bacterial Diarrheal Diseases Using Molecular Diagnostics

By Paul A. Granato, Ph.D., Director of Microbiology

Background

Acute diarrhea caused by bacterial and viral infection represents a significant worldwide healthcare burden. The World Health Organization estimates that diarrhea causes or is a major contributor to approximately one-quarter of all post-neonatal childhood deaths. The Centers for Disease Control and Prevention (CDC) estimates that each person in the U.S. experiences 1.4 episodes of diarrhea per year. Though most cases of diarrhea caused by bacteria and viruses are self-resolving and not life-threatening, some produce serious complications and death.

Because clinical treatment decisions are often made based on the identity of the infecting pathogen, and in some cases the presence of an accompanying virulence gene, it is important to identify these organisms quickly. Over 40 microbial agents involving bacteria, viruses, protozoa, and helminths (intestinal worms) are known to cause diarrheal disease or gastroenteritis, but the great majority of these infections are caused by viruses and bacteria.

Conventional laboratory methods for the diagnosis of these infections are dependent upon the cultural isolation and identification of the organism and/or the detection of bacterial toxins using an enzyme immunoassay (EIA) test. These methods are labor-intensive and time-consuming, often requiring two to four days before final test results are available to the healthcare provider. In addition, routine conventional methods only screen for the presence of a few bacteria and none of the viruses that cause diarrheal disease. As such, many diarrheal infections may go undiagnosed.

Multiplex molecular assays are now available for the diagnosis of a wide variety of viral and bacterial diarrheal infections with the final results available within one day or less. Laboratory Alliance's Microbiology Department has been using a microarray assay for the diagnosis of bacterial and viral diarrheal infections for more than one year. The purpose of this article is threefold: 1. to present a brief overview of the major causes of viral and bacterial diarrhea;

2. to discuss conventional methods for diagnosis; and, 3. to indicate the use of the microarray test for the improved detection of a wider number of agents that cause enteric disease.

Common Viral Agents of Diarrheal Disease

Norovirus: Noroviruses are the most common cause of diarrheal infection in the U.S. The disease is highly contagious and causes, on average, 19 to 21 million cases of acute gastroenteritis each year. Norovirus illnesses cost two billion dollars annually in the U.S. Norovirus infections constitute a major disease burden, which leads to high rates of hospitalization and mortality in children and the elderly. Disease outbreaks in hospitals, nursing homes, day-care centers, cruise ships, and the community are not uncommon.

Rotavirus: Globally, rotavirus is the leading cause of severe diarrhea in infants and young children. Vaccination efforts have greatly reduced the incidence of rotavirus infection and the number of hospitalizations in the U.S. since 2006, when an estimated 60,000 children were hospitalized each year.

Common Bacterial Agents of Diarrheal Disease

Campylobacter spp: *Campylobacter* infection is the most common cause of bacterial gastroenteritis. Antibiotics are generally not prescribed unless symptoms are severe. Delaying treatment for several days while awaiting laboratory test results to confirm the presence of *Campylobacter* can reduce the effectiveness of therapy. The CDC reports that 14 cases of *Campylobacter* are diagnosed per 100,000 people in the U.S. annually, with many more cases going undiagnosed. *Campylobacter* infections are usually self-resolving and do not require antimicrobials for treatment.

Salmonella spp: Infection with non-typhoidal *Salmonella* spp. causes diarrhea and fever. Approximately one million cases are known to occur annually in the U.S. Most cases of *Salmonella* infection, or salmonellosis, are typically self-resolving. However, certain patients (children, elderly and immunocompromised) may be at increased risk and require antimicrobial therapy to resolve symptoms. Antimicrobial therapy can prolong the duration of non-typhoidal *Salmonella* and is only recommended for patients with the severe symptoms.

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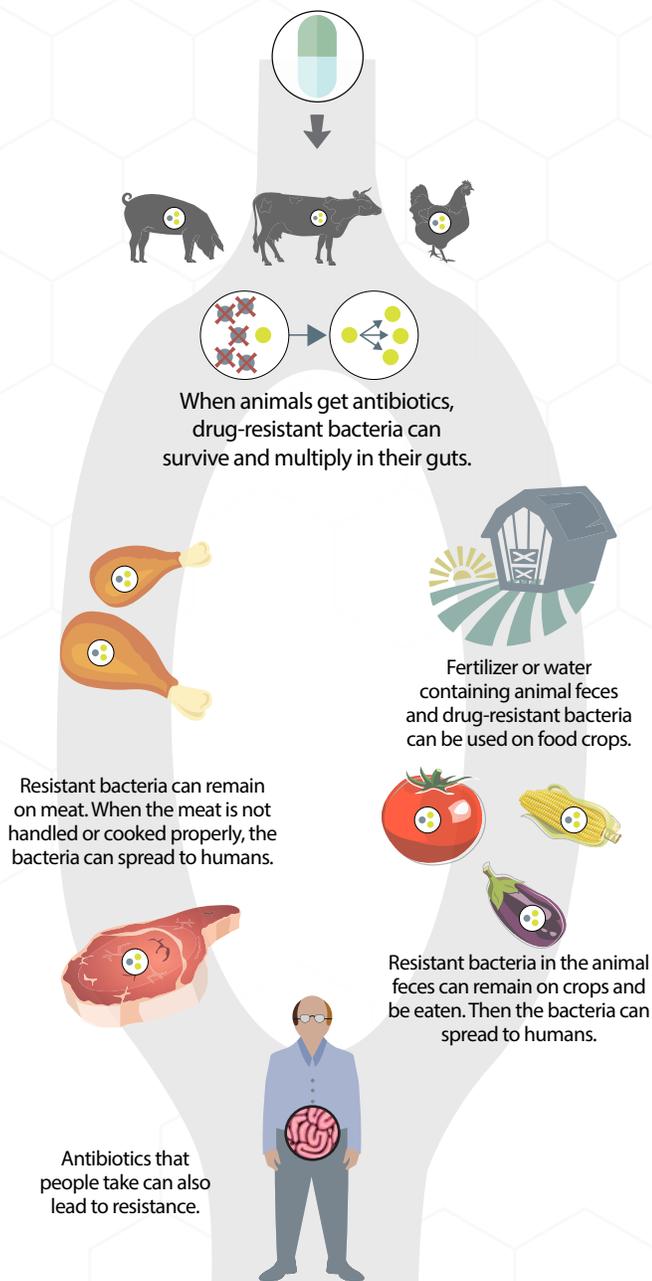
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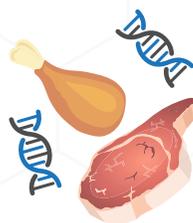
Antibiotic Resistance (AR) Solutions Initiative

Resistance to important antibiotics for human health is increasing. In the U.S., an estimated 400,000 people are sickened with resistant *Campylobacter* or *Salmonella* every year.

Some resistant infections can come from the food we eat.



How will CDC's Solutions Initiative fight foodborne infections?



Detect and describe resistant bacteria rapidly.

Increase state laboratory capacity to rapidly uncover foodborne drug-resistant bacteria, including *Campylobacter* and *Salmonella*, using whole genome sequencing (WGS).



Find outbreaks faster by increasing lab testing.

Test every *Salmonella* isolate for drug resistance.



Improve health outcomes.

With increased lab capacity, track and investigate life-threatening *Salmonella* infections to prevent outbreaks and provide rapid response.



Promote responsible antibiotic use in food-producing animals.

Ensure practicing veterinarians have the tools, information, and training to prevent drug resistance by promoting responsible use of antibiotics.

Using antibiotics—in people or in animals—can create drug resistance. Antibiotics should be used responsibly. www.cdc.gov/drugresistance



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

Introducing our Transcriptionists, Anatomic Pathology Processors and Pathology Department Secretaries

Laboratory Alliance employs Anatomic Pathology processors at our Crouse Hospital and St. Joseph's Hospital Health Center rapid response laboratories (RRLs). They work with our RRL managers, the pathologists and the pathologists' assistants in preparing surgical pathology specimens. Proficient in office and administrative skills, they are also involved in patient registration, specimen accessioning, preparing specimens for special studies and stocking the surgical pathology laboratory.

Our Pathology Department secretaries also excel in administrative duties including typing and transcription, patient registration and inquiries and communications. They maintain close working relationships with the pathologists and office staff, utilize the Sunquest and CoPath systems and track materials for consults and outside testing.

Pictured right are our administrative staff from our RRL at St. Joseph's Hospital, including in the front row, from left, Administrative Assistant Susan Gallagher, and Administrative Secretary Shelley Murphy, Administrative Secretary. Back, from left, are Administrative Secretary Noreen Rix and Administrative Assistant Kathleen Woodford.

Pictured far right are Crouse Hospital RRL Anatomic Pathology Processor Christina Dee, Medical Lab Technicians Don Massey and Sara Waldron. They perform technical work in the Cutting Room.

In the photo below, from left, are Crouse Hospital RRL Administrative Secretaries Erin Girard and Vanessa Coates, and Senior Administrative Secretary Joni Ducey. They perform transcriptionist and secretarial duties for the Pathology Department.



Consider a career in laboratory medicine. Laboratory tests play an important role in the detection, diagnosis, treatment and monitoring of many diseases. Consider a degree in clinical laboratory science — it's a smart choice for students who enjoy science and want a career with a strong job market and solid growth potential.

The Laboratory Workforce Shortage Continues

The U.S. Department of Labor's Bureau of Labor Statistics reports that between 2012 and 2022 the demand for clinical laboratory technologists and technicians will grow by 22 percent.

While the demand is growing, the number of new students graduating from clinical laboratory programs is still declining, partly as the result of program closures. The nation's labs need to fill more than 7,000 jobs annually, but U.S. clinical laboratory education programs are producing only about 6,000 qualified laboratory professionals each year, according to the

National Accrediting Agency for Clinical Laboratory Sciences.

Earn a medical technology degree in New York state or online. For a current list of colleges that are registered by the New York State Office of the Professions for license eligibility of clinical laboratory technologists, visit nysed.gov/heds/IRPSL1.html and select "Search for programs leading to a Professional License" and choose CLIN LAB TECHN (2-year associates degree) or CLIN LAB TECHNOL (4-year bachelor's degree).

Learn more at
laboratoryalliance.com/careers

Improved Diagnosis of Viral and Bacterial Diarrheal Diseases – continued

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Shiga toxins 1 and 2: Shiga toxin-producing *Escherichia coli* (STEC), also referred to as enterohemorrhagic *E. coli* (EHEC) or verocytotoxic *E. coli* (VTEC), cause approximately 265,000 illnesses annually in the U.S., resulting in 3,600 hospitalizations and 30 deaths. The most famous STEC is *E. coli* O157:H7 that was responsible for the first documented outbreak of disease caused by eating undercooked hamburgers at a fast food restaurant. Patients with STEC infection are at risk of developing hemolytic uremic syndrome (HUS), a severe complication that can be fatal and is characterized by renal failure, hemolytic anemia, and thrombocytopenia. Approximately 8% of the persons diagnosed with STEC infection develops HUS. Antimicrobial therapy is contraindicated for STEC infections.

***Shigella* spp:** Infections with *Shigella* are known as shigellosis, with 14,000 cases reported in the U.S. each year. Patients infected with *Shigella* often develop fever, stomach cramps, and bloody diarrhea. Although patients with mild *Shigella* infections usually recover without antibiotic treatment, antibiotics may be used to treat severe cases of shigellosis. Antidiarrheal agents can worsen illness and should therefore be avoided.

Yersinia enterocolitica: The disease yersiniosis is caused by *Y. enterocolitica* which is an infection that can resemble Crohn's disease or appendicitis, with symptoms including diarrhea and fever. There is an estimated one culture-confirmed case of *Y. enterocolitica* infection per 100,000 persons in the U.S. each year. Yersiniosis is self-limiting and does not generally require antibiotics.

***Vibrio* spp:** *Vibrio parahaemolyticus* is responsible for approximately 4,500 cases of illness in the U.S. annually. *Vibrio parahaemolyticus* typically causes watery diarrhea along with nausea, vomiting, and abdominal cramps. Treatment is not usually required in the majority of cases. *V. cholerae* causes cholera, an infection in the small intestine resulting in profuse, watery diarrhea, and vomiting. *V. cholerae* is relatively uncommon in developed countries, causing less than

100 cases annually in the U.S. Antibiotics can be used to shorten the symptoms of cholera but fluid and electrolyte replacement are essential for proper therapy.

Conventional Methods

Conventional methods for the laboratory diagnosis of diarrheal disease involve the cultural isolation of bacterial pathogens from a stool specimen and/or the use of an EIA test. Importantly, these methods only screen for the presence of certain bacteria, namely *Campylobacter*, *Salmonella*, *Shigella*, and STEC. Norovirus, the most common cause of diarrheal disease, cannot be detected by conventional tests. Equally important, a healthcare provider must make a special laboratory request to optimize the cultural recovery of *Y. enterocolitica* and the various *Vibrio* species from a stool specimen. These limitations along with the many days required to generate a final test report represent major disadvantages in the use of these conventional methods.

Molecular Microarray Assay

The recent availability of molecular microarray assays represent a significant advance in the rapid and reliable diagnosis of diarrheal disease. Not only do these assays screen for a larger number of diarrheal pathogens but scientific studies have shown that the microarray tests are considerably more sensitive than conventional methods.

Laboratory Alliance has been routinely using one such microarray test for over one year. The test screens for seven viral and bacterial pathogens including norovirus, rotavirus, *Campylobacter*, *Salmonella*, *Shigella*, *Vibrio* (both *V. cholerae* and *V. parahaemolyticus*), and *Y. enterocolitica*. In addition, the microarray assay also detects the presence of the Shiga toxin 1 gene and the Shiga toxin 2 gene virulence markers that are responsible for the pathogenicity (ability to produce disease) of STEC.

Since the use of this assay, Laboratory Alliance has experienced significant increases in the number of pathogens routinely detected by culture over a comparable one-year period. As an example, compared to culture, the microarray test showed a 450% increase in the number *Shigella* detected, 230% increase for STEC, and a 43% increase for rotavirus. The routine performance of this test has also resulted in the unexpected detection of 11 cases of *Y. enterocolitica* and 3 of *Vibrio* species that were not specifically requested by the physician. In addition, the microarray assay detected 193 cases of norovirus infection that would not be diagnosed using conventional tests. Importantly, several outbreaks of norovirus infection were documented in institutional settings that would have gone unrecognized using conventional methods. Needless to say, the use of the microarray assay has had considerable beneficial impact on patient care and management by providing a highly sensitive and rapid method for the diagnosis of diarrheal diseases.

Summary

Molecular diagnostics using microarray assays are also available for the diagnosis of other infectious disease syndromes such as respiratory and central nervous system infections. The use of traditional, culture-based methods are gradually being abandoned in favor of microarray tests. Such change can only provide for a more rapid and reliable diagnosis resulting in improved patient care.

Brenda R. Alkins, molecular specialist in Laboratory Alliance's Microbiology Department, is pictured here with gene amplification-microarray technology and instrumentation for detecting gastrointestinal pathogens.



Welcome New Clients

PopHealthCare of Pittsford, N.Y.

Hill Ob-Gyn Associates of Syracuse, N.Y.

Nada Salman, MD of Cortland, N.Y.

Preparing Your Patients for a Labwork Visit

By Carrie Nappa, Phlebotomy Manager

Working together with our healthcare providers, we can improve a patient's experience when they visit a Laboratory Alliance's patient service center.

The following may be helpful to our healthcare providers:

Are you using a Laboratory Alliance requisition form or prescription form?

You must fill out all of the information requested on the form, including patient's name, date of birth and test(s) being ordered.

Did you include the ICD 10 code?

All requisition forms and laboratory prescriptions must include ICD 10 codes. If the ICD 10 code is not on the form, the patient will have to wait while our phlebotomist places a call back to the ordering physician.

It's easy to obtain ICD codes online at laboratoryalliance.com. Click on the Healthcare Provider tab and it is listed as "NCD/LCD Book and ICD-10." Or simply type "ICD code" in the search box on the home page in the top right corner.

Does your patient require special instructions to prepare for a lab test?

Write these on the prescription or requisition form. Patients often contact our phlebotomists or Customer Service representatives prior to their visit asking about fasting. We tell them it is not necessary to fast *unless their doctor has given specific instructions*.

We offer a trained team of phlebotomists.

Our phlebotomists know that patients can be apprehensive and anxious about a blood draw and are skilled at putting people at ease so that it can be a positive experience. They are trained to work with children, the elderly and people with special needs.

Important information to share with your patients:

What should I bring when I come for my lab work?

- A written order from your doctor requesting lab tests
- Current insurance cards

Which types of insurance providers do you accept?

Laboratory Alliance accepts all major insurance providers including Medicare. View a complete list of insurers on laboratoryalliance.com. Click on the Patient Services tab and select "Insurers."

Do I need an appointment?

Laboratory Alliance is a walk-in patient service center — no appointments necessary. The single exception are those patients having glucose tolerance testing. All glucose tolerance testing must be scheduled.

Will I have a long wait?

All of our patients are served on a first-come, first-served basis.

Mid-day visits have shorter wait times. Longer wait times occur first thing in the morning and at the end of the day. Some of our patient service centers have no wait times.

Patients can find the hours and maps to the location they plan to visit at laboratoryalliance.com.

The should make sure the center they want to visit does not close for lunch. While the best time to avoid a wait is between 10 a.m. and 2 p.m., a few of our locations are not staffed to cover a lunch break so we are required to close from 12:15-1 p.m.



Who will draw my blood?

Laboratory Alliance is staffed by phlebotomists who are trained to draw blood for clinical testing. All of our phlebotomists are skilled, efficient, patient and courteous. Our centers are clean and the service is prompt and professional.

How will I receive my lab results?

Your results will be sent directly to your ordering physician upon completion of testing. Patients can obtain their lab results by contacting their healthcare provider. Laboratory Alliance does not provide results directly to patients.

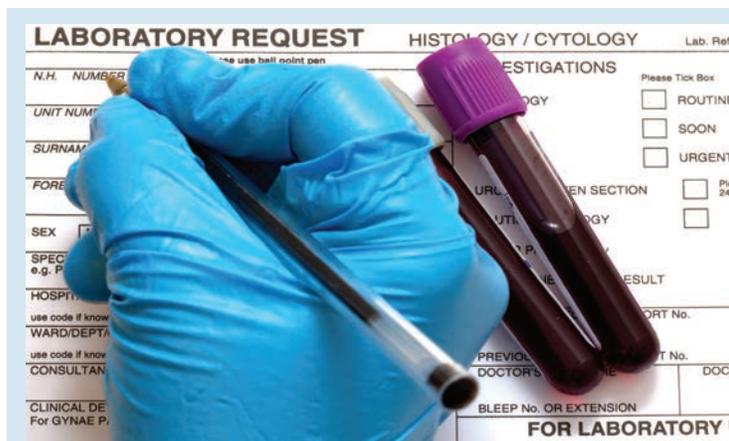
Are my results confidential?

Yes, Laboratory Alliance follows the highest level of confidentiality guidelines with regard to patient information and test results.

Where can I find general information about the lab tests I am having performed?

General information about the laboratory tests being performed can be found on the website labtestsonline.org.

For more information, email me at carrienappa@lacny.com or call our Customer Service Department at 315-461-3008.



Thank you for referring Laboratory Alliance to your patients

We have 12 patient service centers located in three counties. Patients can visit laboratoryalliance.com and find a convenient location using the finder on the home page. Addresses, maps and hours are posted for every site.



No Appointment Necessary

GO

Show All Locations >

12 Patient Service Centers in Central New York.

Announcing

Dr. Huchzermeier Named a Fellow of NACB



Director of Assay Development **Roy Huchzermeier**, Ph.D., FACB, was accepted as a Fellow of the National Academy of Clinical Biochemistry (NACB). Affiliated with American Association for Clinical Chemistry (AACC), the NACB is a professional association of doctoral-level scientists who are active in the field of clinical biochemistry. The academy is dedicated to advancing the science and practice of laboratory medicine by:

- Developing, maintaining, and publishing Laboratory Medicine Practice Guidelines (LMPGs).
- Developing and supporting educational programs for laboratory professionals, clinicians, other healthcare professionals, and the public.
- Promoting scientific research in laboratory medicine.
- Serving as the scientific advisory group to AACC.

Fellowship in NACB is open to AACC members who are doctoral level clinical scientists, hold the appropriate board certification and are active in research, education, or service in clinical biochemistry, or to those doctoral level members that have at least 10 years of postdoctoral experience in clinical biochemistry plus distinguished achievements. The Membership and Governance Committee approves applicants for Fellowship.

Romano Earns Master's in Strategic Leadership



Operations Center Director **Rita Romano** earned a Master of Arts in Strategic Leadership degree from St. Bonaventure University, graduating summa cum laude with a 4.0 GPA. The master's program in Strategic Leadership is an accelerated, one-year, fully online program with online courses taken in eight-week sessions over the course of the year.

Lippke Receives Graduate Certification in IS

Central Receiving Supervisor **Jodi Lippke**, BS, MT(ASCP) received a Graduate Certificate in Information Systems from Walden University. The four-course online program is designed to sharpen information technology (IT) skills and offers foundational networking, programming, data modeling and database design expertise.

Microbiologists Author Scientific Article

Director of Microbiology **Paul A. Granato, Ph.D.**, Microbiology Technical Supervisor **Marcia A. DeGilio** and Medical Technologist **Elsie M. Wilson** were co-authors on a scientific article titled "The Unexpected Detection of Varicella-Zoster Virus in Genital Specimens Using the Lyra™ Direct HSV 1+2/VZV Assay," which was published in October 2016 in *Journal of Clinical Virology*.

Dautrich Appointed Manager Of Rapid Response Lab

Michelle Dautrich of Baldwinsville, N.Y., currently serves as manager of Laboratory Alliance's Rapid Response Laboratory (RRL) at Upstate University Hospital Community Campus.

Michelle was promoted to manager in September 2015. It was an oversight that this was not announced in an earlier issue.

She joined Laboratory Alliance in 2012 and served as technical supervisor of chemistry at the hospital laboratory until her promotion to manager. Michelle has more than 21 years of experience in the field of laboratory medicine, including 14 years in supervisory roles.

After working for 17 years in different facets of healthcare and pharmaceutical laboratories, she took on her first supervisory role in 2002 at A.L. Lee Memorial Hospital in Fulton, N.Y., and then went on to manage the physician's office laboratory for Associated Medical Professionals of New York.

She earned her degree from the University of Buffalo and is licensed by New York State in Clinical Laboratory Technology.



Stankivitz Named Technical Supervisor of Chemistry at UUHCC Rapid Response Lab

Sara Stankivitz has been promoted to technical supervisor of chemistry at our Rapid Response Laboratory at Upstate University Hospital Community Campus. Sara brings 16 years of experience in the field of laboratory medicine to her new role. She joined Laboratory Alliance in 2004 and has worked at the UUHCC site for seven years. She has extensive experience in all departments and provides oversight to the expanding Point-of-Care Testing Department.

When your doctor orders labwork,



visit us in Camillus at the Township 5 Medical Buildings

260 Township Blvd., Suite 40
Monday - Friday 8 a.m. - 4:30 p.m.
Closed for lunch from 12:15 - 1 p.m.

First-come, first-served
no appointment needed.



LA Newsmakers

Employee Anniversaries

October, 5 Years

Christine Augustine
Jodi Lippke
Tom Sniffen

October, 10 Years

Garland Blanch
Kathy Calarese
Jeremy Fuller
Brenda Henry
Sara Waldron

October, 15 Years

Janet Kerfien

November, 5 Years

Ashley Barzee

November, 10 Years

Christina Remillard

November, 15 Years

Jennifer Fiacchi
Kimberly Hayes

December, 5 Years

Van Le

December, 10 Years

Teri Gillett

What You Should Know About the Flu

The flu is not just a really bad cold. The flu is a contagious illness that affects the nose, throat, lungs and other parts of the body. It can spread quickly from one person to another. It can cause mild to severe illness, and at times can lead to death.

The best way to prevent the flu is by getting a flu shot.

Every year in the U.S., on average:

- 5% to 20% of the population gets the flu,
- More than 200,000 people are hospitalized from flu complications, and;
- The flu causes about 3,000 to 49,000 deaths each year. About 90% of these deaths occur in people 65 years or older.

People at high risk of flu complications

Some people, such as older people, young children, and people with certain health conditions, are at high risk for serious complications from the flu. This includes women who are pregnant. Those who live or work with people who are at high risk should get vaccinated against the flu.

You can't get the flu from getting the flu vaccine

The flu vaccine does not give you the flu. It stimulates your body to produce antibodies. These antibodies protect you from flu viruses.

Once you get the flu vaccine, it takes about two weeks for it to be fully effective. Until then, you are still at risk for getting the flu.

How the virus is spread

The flu usually spreads person to person when someone with the flu coughs or sneezes. Sometimes people get the flu because they touch an object or surface with flu virus on it — and then touch their mouth or nose.

Where can I get my flu shot?

The Central New York community has numerous pharmacies and clinics offering vaccines.

Onondaga County Health Department offers a weekly flu clinic for the public every Wednesday, from 9 a.m.-noon in the Civic Center, Room 30 (basement level). The clinic provides flu vaccine for Onondaga County residents 6 months of age and older once vaccine is available. Call 315-435-2000 for availability. This is a walk-in clinic, no appointments are necessary.

From the New York State Department of Health - online at health.ny.gov and search "flu"



Don't let the flu sneak up on you. Get a flu shot today.

New Employees

Please welcome our new employees

At our Operations Center

John Capoto, Jr. – Transportation Dispatcher
Megan Connors – Laboratory Office Assistant
James Culeton – Courier
Shola James – Laboratory Office Assistant
Nicholas Mulpagano – Courier
Lucia Reyes-Diaz – Histotechnician
Jaunese Robinson – Courier
Lorraine Sanderson – Cytotechnologist
Heather Scott – Laboratory Office Assistant
Angela Smith – Medical Technologist
Breton Smith – Medical Laboratory Technician
Catherine Swift – Phlebotomist

At our Rapid Response Laboratory at Crouse Hospital

Christina Dee – Anatomic Pathology Processor
Dorinda Fiore – Medical Laboratory Technician
Benjamin Yager – Autopsy Assistant

At our Rapid Response Laboratory at St. Joseph's Hospital

Javier Garcia – Laboratory Office Assistant
Kaylene Ilacqua – Laboratory Office Assistant



Laboratory Alliance sponsored a team to play in the St. Joseph's Hospital Health Center 23rd Annual Golf Classic held Sept. 9 at Turning Stone Resort. This year's tournament netted over \$170,000 – which will benefit St. Joseph's Health's program of excellence for Breast Care and Surgery. Our golfers included, from left, Material Handler Supervisor **Mark Adkins**, Sales Representative **Gary Stelter**, Vice President of Information Systems **George Popp** and Facilities Manager **Jeff Peterson**.

Community Connections

Calendar of Events

Thursday, Nov. 10 - Friday, Nov. 11

Clinical Laboratory Management Association and American Association for Clinical Chemistry Annual Conference and Exhibition, Turning Stone Resort, Oneida. *Laboratory Alliance was a sponsor and exhibitor.*

Friday, Nov. 18

Upstate Foundation Gala at the Hotel Syracuse (Marriot Syracuse Downtown.) *Laboratory Alliance was a corporate sponsor.*

Friday, Dec. 16

Donation deadline for U.S. Marine Corps Toys for Tots and Salvation Army Food Drive for the holiday season. Drop boxes located at several Laboratory Alliance locations and throughout the community.

Laboratory Alliance supported Francis House's fall fundraiser, "There's No Place Like Home." Francis House provides a home and an extended family to people with terminal illnesses so they can die with dignity and experience the unconditional love of God. In the weeks leading up to the event, Human Resources Assistant **Marsha Herbst** collected \$1,130 selling raffle tickets — \$255 more than last year! And several employees volunteered at and attended the event on Oct. 12 at the Fairgrounds, including, below left,

Chemistry Manager **Cheryl Haskins**, who is about to learn if her key will open the door and win a prize at the orange house giveaway.

Below are Chemistry Technical Supervisor **Lori Martin**, left, and Hematology Technical Supervisor **Liz Madonian**.



American Red Cross

Thanks to all of our employees who participated in the Red Cross Blood Drive at Laboratory Alliance's Corporate Offices on Aug. 11 — we were able to keep the Red Cross staff busy throughout the day. Those who donated blood are now eligible to give again and we remind everyone that **there's an emergency need for blood. Schedule your appointment to donate blood today. Find a blood drive at www.redcrossblood.org**

Laboratory Alliance participated in the United Way's National Dictionary Day celebration by sponsoring the distribution of dictionaries and thesauruses to 3rd graders in the Syracuse City elementary school Seymour Dual Language Academy. Celebrated on Oct. 16, the contribution covered the costs to provide the children with English dictionaries and thesauruses and Spanish dictionaries where needed. The goal of the city-wide program is to encourage students to become good writers, active readers and creative thinkers.

Join Laboratory Alliance and participate in the United Way's Step Up Challenge. Employees who take the challenge by increasing their United Way gifts by \$1 per week are eligible for great daily prizes and 4 grand prizes, each worth \$3000.



For complete details and sweepstakes rules visit unitedway-cny.org.

On a typically hot day in August, **United Way's Young Leaders united for their first fundraising event, Pump It Forward Friday.** Teams pumped gas at four Byrne Dairy locations from 6:30 a.m. to 6:30 p.m., raising more than \$7,000 that will go toward helping people in need through the community campaign. Laboratory Alliance was a corporate sponsor and received signage at the Liverpool Byrne Dairy. We join United Way in encouraging the young, and young at heart, to volunteer with this dynamic community group.



Laboratory Alliance will support both the U.S. Marine Corps Toys for Tots campaign and the Salvation Army Food Drive during the holiday season.

Employees and visitors to several of our locations can put unwrapped new toys and non-perishable food items into collection boxes that our couriers will deliver before the **Friday, Dec. 16 deadline**, to make the holidays special for our community's less fortunate families.

LABlines

Comments, suggestions or inquiries should be directed to **Joan Rusin, Senior Executive Assistant,** 315-461-3038, or by email to joanrusin@lacny.com