Spring 2017

Lab Focus

New respiratory and meningitis/encephalitis molecular panels provide results within 24 hours
By Darina Boleman

In February, the Peripheral Lab added two more test panels to its ever-expanding molecular test menu. The respiratory and meningitis/encephalitis panels are performed on the BioFire FilmArray 2.0.

The BioFire FilmArray 2.0 is a random access, multiplex PCR system. It requires only a few minutes of hands on time. A panel specific reagent pouch is placed in the loading block. Hydration fluid and a mixture of the sample and sample buffer are injected into the reagent pouch. The pouch is then loaded onto the analyzer and the run begins. It takes about an hour to complete. The instrument interacts with the reagent pouch to extract nucleic acids from the sample and uses PCR to amplify pathogen specific DNA targeted by the assay. Polymerase chain reaction (PCR) is the process of making millions of copies of DNA from a single copy. Any target virus RNA is converted to DNA by reverse transcription prior to PCR. The FilmArray automatically processes the data and creates a report with a positive or negative result for each target organism on the panel.

The FilmArray Respiratory Panel is a comprehensive test for 17 viruses and three bacteria which can cause upper respiratory tract infections with an overall sensitivity of 95 percent and specificity of 99 percent. A nasopharyngeal swab in viral transport media is the required specimen; it is not FDA approved for bronchial washings, brushings or lavages. The collection supplies are available from the laboratory for outpatient collection.

The FilmArray Meningitis/Encephalitis Panel is capable of simultaneously detecting 14 bacteria, viruses, and yeast most commonly known to cause potentially life threatening infections of the central nervous system. It provides an overall sensitivity of 94.2 percent and a specificity of 99.8 percent. Testing requires 200 microliters of cerebrospinal fluid (CSF).

**Meningitis/Encephalitis Panel**
- Cytomegalovirus
- Enterovirus
- Herpes simplex 1 & 2
- Human herpes virus 6
- Human parechovirus
- Varicella zoster virus
- E coli K1
- Haemophilus influenzae
- Listeria monocytogenes
- Neisseria meningitides
- Streptococcus agalactiae
- Streptococcus pneumoniae
- Cryptococcus neoformans

**Respiratory Panel**
- Adenovirus
- Coronavirus 229E
- Coronavirus HKU1
- Coronavirus NL63
- Coronavirus OC43
- Human Metapneumovirus
- Influenza A
- Influenza A subtype H1
- Influenza A subtype H3
- Influenza A subtype H1-2009
- Influenza B
- Parainfluenza Virus 1 - 4
- Human Rhinovirus/Enterovirus
- Respiratory Syncytial Virus
- Bordetella pertussis
- Chlamydophilia pneumoniae
- Mycoplasma pneumoniae

The BioFire FilmArray 2.0 allows us to provide our healthcare providers with fast, accurate, comprehensive testing. This in turn leads to quicker, more precise patient treatment and therefore better patient outcomes. Testing is performed daily and results are available within 24 hours.
The laboratories at AnMed Health Medical Center and AnMed Health Women's and Children's Hospital have been awarded accreditation by the Accreditation Committee of the College of American Pathologists (CAP).

The laboratories’ director, Russell E. Dodds, MD, was informed about this national recognition and congratulated for the excellence of the services being provided by both laboratories.

The accreditations were based on the results of onsite inspections conducted in December 2016. AnMed Health's laboratories are two of more than 7,700 CAP-accredited laboratories worldwide. CAP's laboratory accreditation program began in the early 1960s and is recognized as being equal to or more stringent than the government's inspection program.

During the accreditation process, inspectors examine laboratory records and the quality control of procedures for the preceding two years. CAP inspectors also examine staff qualifications, the overall management and the lab's equipment, facilities, safety program and record. This stringent inspection is designed to ensure the highest standard of care for all laboratory patients.

As the leading organization with more than 18,000 board-certified pathologists, the College of American Pathologists serves patients, pathologists, and the public by fostering and advocating excellence in the practice of pathology and laboratory medicine worldwide.

Local tech wins ASCP’s Night Out in the “City Where it Happens” sweepstakes

By Darina Boleman

David Draisen, a medical laboratory technologist at AnMed Health Pediatric Associates, has learned he is the lucky winner of the ASCP’s Night Out in the “City Where it Happens” sweepstakes.

All ASCP members with a 2017 membership were automatically entered in the contest to receive prizes associated with the ASCP annual meeting which will be held Sept. 6-8 in Chicago, Illinois. David's name was randomly chosen. In addition to winning one registration to the annual meeting, he will also receive a $150 American Express gift card, a pair of tickets to see "Hamilton: An American Musical" in Chicago on Sept. 5, and one night's stay at the Hyatt Regency Chicago.

In 1996, at the age of 46, David decided he wanted a career change after running a successful music retail organization for 22 years. His wife of 31 years, pediatrician Dr. Andrea Draisen, greatly influenced this decision. When she would talk about her day, he did not understand much of the science she was describing, but it piqued his interest.

After completing the prerequisite courses from Anderson University and Clemson University, he attended AnMed Health’s clinical MT program. David cites a few influential people who supported him during his career change, including teacher Brenda Sanders, who took time when he needed extra help learning parasitology, and Ette Ruppert, the manager of the MT program at Clemson.

Then there was Beatrice Wallace and Susan Cann at Elbert Memorial Hospital in Elberton, Georgia. Bea hired him right out of MT school and Susan helped him learn to run the lab as the sole tech on third shift. Now, in addition to his position at AnMed Health Pediatric Associates, David also works as needed at AnMed Health Family Medicine Residency Program and at Elbert Memorial Hospital in Elberton, Georgia.

The American College of Clinical Pathology is the largest professional organization for pathologist and laboratory professionals. David takes full advantage of ASCP’s continuing education opportunities. He receives ASCP’s journals and takes courses offered by ASCP to receive CMLE credits, even though it is not required. The annual meeting is designed to provide educational opportunities to improve skills, present information about new innovations and trends, and provide the opportunity to meet and interact with fellow professionals. David is very excited about winning the sweepstakes. He plans to take full advantage of this educational opportunity and put the knowledge he gains into practice to improve patient care.

Laboratory dedicated to cancer care patients opens

By Darina Boleman

AnMed Health Laboratory Services now operates a lab dedicated to AnMed
Health’s cancer patients. The lab is located on the third floor of the AnMed Health Cancer Center along with the offices of AnMed Health Oncology and Hematology Specialists and the outpatient chemotherapy infusion center.

The lab is operated Monday through Friday from 8 a.m. until 4 p.m. by one lab tech and one phlebotomy tech. The lab is equipped with a Sysmex XS-1000 hematology analyzer and a Cobas c 311 chemistry analyzer. At this time, the lab menu includes CBC, Comprehensive Metabolic Panel, Basic Metabolic Panel, and LDH. The specimens for all other tests are transported via pneumatic tube system to the Women’s and Children’s lab for testing.

A lab dedicated to cancer patients not only allows for patients to have labs drawn at the same site as their infusion or doctor's appointment, but also allows for the rapid resulting of lab tests the healthcare provider needs most to make treatment decisions.

**Additional Notes**

The **Enteric Bacterial Panel**, a molecular based test for Salmonella, Shigella, enteroinvasive E. coli, Campylobacter, and Shiga toxins, should now be ordered instead of the traditional stool culture. **A swab is not recommend for culture** and cannot be used for the Enteric Bacterial Panel. A traditional stool culture, which takes at least three days to result, must be performed when a swab is received for testing.

All glucose tolerance testing at the AnMed Health North Campus is now performed at the phlebotomy station in Service Area 3 at entrance B.

**Human Resources**

We would like to welcome new employee **Laticia Watson**. Laticia is an MLT who will be working in the AnMed Health Clemson Lab.

We would like to introduce **Matt Chao** as the cytology technical coordinator. Matt has been with AnMed Health Laboratory Services and a practicing cyto-technologist for seven years. He received his Bachelor of Science in Biology from Furman University and Master's in Cytology and Biosciences from MUSC. In 2014, he earned an MBA from Anderson University. We would also like to congratulate Matt and his wife Morgan on the recent birth of their first child, Peter, on Feb. 22.

In February, **Shirley Adams** retired after almost 20 years with AnMed Health Laboratory Services as the technical supervisor of the Peripheral Lab. Shirley was instrumental in the implementation of the latest innovations in rapid diagnostic microbiology testing. Of upmost concern to Shirley was providing the best possible patient care. She was always willing to serve as an educational speaker in order to provide information about the most current microbiology testing available and recommendations of standards of care. In her retirement, Shirley plans to continue to stay abreast of the continually evolving technology and possibly do some teaching and consulting work. Her knowledge, passion and enthusiasm will be greatly missed.