Forum Health undergoes a competitive conversion from BacT/Alert to the VersaTREK® Automated Microbial Detection System

By Syed Wahab, Manager, Clinical Microbiology, Forum Health

Forum Health is the largest hospital system in the Youngstown area, with approximately 5,000 staff members. It includes two general hospitals, one children’s hospital, three ambulatory treatment facilities, and a number of outpatient physical, occupational and mental treatment facilities. Forum Health’s outreach services encompass Northeast Ohio into at least three counties.

Our Laboratory performs over a million tests in a year and prides itself in providing many services not commonly available in a community hospital setting such as Electron Microscopy, Cytogenetics, and Virology. In microbiology alone we do over 100,000 tests per year. Annually we run about 18,000 blood cultures with a positivity rate of 10-12%.

We have made many improvements in our Microbiology Department since 1993, but none as important as our decision to update our blood culture system. Our biggest improvement was moving from a manual to an automated blood culture system.

We acquired our first automated system in 1993, the Bactec 9240 (Becton Dickinson), which we had for about five years. We used the aerobic resin bottle, a non-resin anaerobic bottle, and a pediatric resin bottle with this system. In 1999 we changed over to the BacT/Alert (bioMerieux). Finally in 2003, we converted to the TREK Diagnostic System.

The decision to move from the Bactec 9240 to the BacT/Alert was driven purely by economics. By switching from Bactec to BacT/Alert our lab was able to save a considerable amount of money on media. I was aware of the ‘inconveniences’ my technologists would be facing with the BacT/Alert, such as difficulty with gram stain reading and the easy breakage of the BacT/Alert bottles; however I have a wonderful team of technologists and knew they would work through those challenges. I tried to utilize the BacT/Alert standard media, but during our internal correlation and validation study I noticed I was not recovering as many organisms as I thought I should have with the bioMerieux’s standard media. I felt I was forced to work over from bioMerieux’s standard to their premium (higher cost) FAN media in order to feel comfortable that the media would sustain the recovery of wider variety organisms we normally encounter in our laboratory.

Switching from BacT/Alert to the VersaTREK system was an easy decision that was based on several factors. First and foremost I always believed in the technology of the ESP® Culture System II and VersaTREK Automated Microbial Detection System. With its comprehensive detection technology (CDT), fastidious organisms that may not necessarily signal on the other systems, due to low CO2 production, will signal on the VersaTREK system. I thought that we may have been missing some fastidious organisms with the other systems due to low CO2 production. The VersaTREK system detects pressure changes within the headspace of the bottle regardless of what type of gas is produced or consumed (O2, CO2, N2, or H2). Secondly, I am confident in TREK’s media. Having been in use for several years in the ESP format, I believe it has proven itself to be of excellent quality when it comes to overall recovery. At Forum we currently utilize the 40 ml EZ Draw® Direct Draw blood culture bottles. Because there is no charcoal or resin in the bottles, gram stains are much easier to interpret.

Prior to the evolution of the VersaTREK system, I had looked at the ESP® Culture System II. As mentioned above, I had always believed in TREK’s comprehensive detection technology and thought that detecting the production and consumption of all microbial gases was superior than detecting just CO2. However, I did have several reservations regarding the ESP instrument. Those reservations included the connector that must be placed onto each blood culture bottle prior to placement into the instrument, the DOS computer seemed complicated, and placement of the bottle into the instrument appeared to be cumbersome. I told TREK Diagnostic Systems about my concerns. I was very impressed at the 2002 ASM when I first saw the VersaTREK instrument and realized that my hardware concerns were all addressed within this instrument. The connector only takes a second to place onto the bottle (my technologists don’t see this as a negative when you consider the superior organism recovery abilities of the system), the instrument and new Windows-based software are intuitive and user-friendly, and the new bottle placement guides located in the instrument help tremendously with bottle insertion. I must say that TREK does listen to what the marketplace has to say about their products!

During the transition from manual to automated, and from one instrument to another, we have always followed very rigorous correlation and validation procedures to ensure the instrument was performing to our standards. During the VersaTREK correlation study, we ran over 100 patients and included fastidious organisms such as Staphylococcus aureus, Group B, Streptococcus, and Enterococcus sp.

<table>
<thead>
<tr>
<th>Organism</th>
<th>VersaTREK Time-to-Detection (hours)</th>
<th>BacT/Alert Time-to-Detection (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staphylococcus aureus</td>
<td>7.6</td>
<td>7.8</td>
</tr>
<tr>
<td>Group B, Streptococcus</td>
<td>6.6</td>
<td>7.4</td>
</tr>
<tr>
<td>Enterococcus sp.</td>
<td>6.8</td>
<td>7.7</td>
</tr>
</tbody>
</table>

(continued on page 2)
SENSITITRE® MAKES A GLOBAL IMPACT AT SPRING SHOWS
By Roger Grist, Director of Microbiology R&D, TREP Diagnostic Systems

SENSITITRE® was well represented at this year’s American Society of Microbiology (ASM) and European Congress of Clinical Microbiology and Infectious Diseases (ECCMID) meetings. Fifty-five presentations used Sensititre dried or frozen susceptibility testing panels and covered susceptibility testing of non-fastidious, fastidious, anaerobe, and mycobacteria.”

Sensititre was well represented at this year’s American Society of Microbiology (ASM) and European Congress of Clinical Microbiology and Infectious Diseases (ECCMID) meetings. Fifty-five presentations used Sensititre dried or frozen susceptibility testing panels and covered susceptibility testing of nonfastidious, fastidious, anaerobe, fungal and mycobacteria. Data came from the U.S., Taiwan, Greece, Spain, U.K., Germany, Japan and Brazil. TREP prides itself on working closely with drug companies developing new anti-infectives and several posters reported work on new compounds including TAK-599, NVP PDF-713 (PDF7), LB M415, a new peptide deformylase inhibitor, Dalbavancin and Tigecycline. A novel application was use of TREP frozen panels to investigate activity of antimicrobial agents found in garlic. Many international surveillance programs routinely use Sensititre panels and reported results including LIBRA, PROTEKT, SENTRY, NARMS, and TRUST 4-7 programs.

Highlights from ECCMID
Poster P1621 evaluated the use of Cefepime/clavulanic acid for detection of new ESBL strains. Poster P508 compared AFST-EUCAST and NCCLS reference fungal susceptibility methods to the Sensititre YeastOne® colorimetric method. No major or very major errors were observed. An oral presentation (O400) showed excellent correlation for Voriconazole in Sensititre YeastOne panels compared to NCCLS M27 reference procedure with 97% essential agreement. Poster P1896 and Abstract R1939 presented data including new QC ranges for Sensititre dried panels for susceptibility testing of fast and slow growing mycobacteria including M. tuberculosis.

Highlights from ASM
Poster C112 describes the implementation of Sensititre YeastOne YO-4 panel at Mayo Clinic. Intra and inter-run reproducibility was 100%. Overall agreement with all drugs was 98.7%. Poster C140 from Cleveland Clinic compared susceptibility performance of Sensititre panels to Vitek Legacy for non-fermenters. Vitek Legacy had four very major errors and 1 major error with 28 isolates of P. aeruginosa and five major errors with SXT among 7 P. putida isolates. Arbitration by frozen panels favored Sensititre in all cases. There were a large number (11) of major errors seen with Imipenem and B. cepacia on Vitek but the clinical significance of this is presently unclear. Poster A135 evaluated Sensititre dried panels against NCCLS (M7) reference broth method with Dalbavancin and Linezolid. Reproducibility for both drugs was 100% whilst essential agreement ranged from 96%-100%.

Details and summaries on all the posters and presentations can be found on the TREP website at www.treks.com

CONTINUED FROM COVER … FORUM HEALTH UNDERGOES A COMPETITIVE CONVERSION

Haemophilus influenzae, Neisseria gonorrhoeae, Bacteroides fragilis, and Bacteroides thetaiotaomicron. In addition, protocol organism groups with and without antibiotics were simultaneously run on both instruments. FAN aerobic bottles were used on the BacT/Alert and REDOX 1® media was used with the VersaTREK instrument. This small but very precise protocol began by inoculating 0.1 ml of organism suspension into each blood culture bottle. Then 0.01 ml of an antibiotic concoction was added to the bottles. This was similar to the protocol we had followed during our transition from Bactec 9240 to the BacT/Alert when we acquired them years ago. As you can see from the table on the cover page, the VersaTREK instrument was able to recover the organisms listed faster than BacT/Alert even though the VersaTREK system does not require the costly specialty media! I must confess that the VersaTREK system performed better than I had anticipated and we are very happy with the instrument!

Not only was I impressed with the VersaTREK instrument, but also with the comprehensive level of training we received when the system was installed. This installation process ran very smoothly, and the structured training program was great. To this day some of my technologists still comment on how great TREK Diagnostic Systems was in the training process. They had tremendous patience and had the answers to just about every question we came up with. In addition, TREK Diagnostic Systems is very good in responding to questions or concerns we may have with the instrument. Their quick response time is greatly appreciated in our busy laboratory setting.

Since the introduction of the VersaTREK system into our lab, we have noticed an increase in the number of fastidious organisms and a faster time-to-detection for those organisms compared to our previous systems. In addition, we are recovering more Streptomyces and AFB organisms than ever before.

I can confidently say that I am pleased with my decision to move to the VersaTREK Automated Microbial Detection System. My staff is a wonderful group of people, and if they are happy with the instrumentation they are using, then I am happy too!
Mt. Clemens General Hospital Wins TREK’s National Medical Laboratory Week Contest

In honor of NMLW this past April 18-24, TREK posted an online form on www.trekds.com. Visitors to the website were encouraged to fill in their contact information and respond to a brief series of questions that then qualified each respondent to enter into the TREK drawing. At the end of NMLW, one entry was randomly selected to win a special commendation for their laboratory.

Of the multitude of surveys that were completed, Mt. Clemens General Hospital was randomly selected as the 2004 TREK NMLW winner! Victoria Coleman, QC/QA Supervisor at Mt. Clemens General Hospital participated in the online survey and won fifteen $10 gift certificates to Target for her laboratory.

“The gifts were a great surprise for the techs,” said Victoria Coleman, QC/QA Supervisor, Mt. Clemens General Hospital. “Mt. Clemens General Hospital is a 288 acute care facility located in Mt Clemens, Michigan. Our laboratory offers a full range of services including Hematology, Chemistry, Blood Banking, Cytology, Anatomical Pathology, Immunopathology and Microbiology. We offer 24/hr a day - 365 days a year support to our customers. The average years of service for our staff is more than 15 years. Our laboratorians have played a hands-on active role in the structuring of the hospital’s future, with laboratory automation and new diagnostic testing.”

“As a former practicing medical technologist, I understand the tremendous value (that often goes unrecognized or unappreciated by the health-care industry) in what the medical technologist contributes in overall betterment of patient care. This gift recognizes TREK’s commitment and appreciation for all that the medical technologist contributes to bettering patient care. My only regret is that we could not offer the same award to all of you who responded and for the tireless excellent work you perform each and everyday of the year that significantly contributes to overall better patient care. On behalf of TREK, my thanks to each and everyone of you,” commented Les Stutzman, Global Director of Marketing for TREK Diagnostic Systems.

THE SWINTM EXPERT SYSTEM
By Allin Winter, Technical Services Manager, TREK Diagnostic Systems

An Expert System utilized in a clinical microbiology laboratory for susceptibility results should have several roles. First, the system should ensure that all results are reported correctly and accurately in accordance with standard recommendations. Second, the system should highlight unusual results and resistance patterns for further investigation which should ultimately increase laboratory productivity by reducing the number of reports that require technologist intervention.

TREK has introduced the new Sensititre SWINTM software, which meets these requirements.

In designing the expert platform, customers had two main questions relating to the expert system: “How can we trust the system to catch the results we want to review?” and “Expert systems always seem complicated. How can we customize the expert system so that it works for us, rather than the laboratory working for the expert system?”

We used this feedback to introduce a powerful yet flexible and “easy to use” expert system. Customization is truly at the heart of SWIN’s expert system; we gathered information from NCCLS and numerous global microbiology experts to incorporate over 450 default expert rules. Unlike other commercially available systems, the expert system is easy to use and simple to customize.

The customization of the system allows easy entry of new expert rules via the Expert Rule Manager which is divided into two discrete areas.

The first area is the CAUSE, which is the action that will initiate the effect. The cause defines the exact specimen or result information the system will review. The second area is the EFFECT, which defines the action to be taken. The effect can be as basic as displaying a simple message or a warning to automatically modify or suppress susceptibility results.

The expert system is an integral part of the SWIN software package and will be updated as resistance mechanisms and NCCLS recommendations change. Continued feedback from customers and experts using the system will ensure its future success in clinical microbiology laboratories. It is our goal to provide laboratories with a comprehensive, complete software package that effectively minimizes technologist time and provides immediate educational information.
USER EXPERIENCE WITH SENSITITRE® ARIS® 2X IN DETECTING MRSA
By Dr. Vincent LaBombardi, St. Vincent’s Hospital and Medical Center, New York City

Methicillin-resistant S. aureus (MRSA) has been isolated in the hospitalized patient since 1961. In many metropolitan centers, MRSA is isolated more frequently than is methicillin-susceptible S. aureus. MRSA has largely been a nosocomial problem. In the late 1980’s we saw a few outpatients, all of whom were IV drug users, from whom we isolated MRSA. Recently reports have appeared of patients, who had not been recently hospitalized, who presented with infections caused by MRSA. These community-acquired MRSA (CA-MRSA) have been reported in children in day care, adolescents and young adults playing contact sports including football and wrestling, among military recruits and in a prison population (1-4). The majority of these infections have been in skin and soft tissue. This organism has also been described as a cause of necrotizing pneumonia (5). This organism is apparently transmitted person to person by close contact. We first noticed these infections in our HIV+ population who presented with rather aggressive cutaneous infections.

These organisms have been reported worldwide and have some common features that separate them from nosocomially acquired MRSA. These organisms carry the mecA gene on a type IV staphylococcal chromosomal cassette (SCCmec type IV) (6). These organisms, in the large majority of cases, also contain bi-component genes that produce Panton-Valentine leukocidin (PVL) (5,6). This is a virulence factor that is responsible for the death of leukocytes by causing the formation of pores in the cell membrane. This factor is responsible for the rather aggressive infections caused by these organisms. These CA-MRSA appear to be more susceptible, than are nosocomial MRSA, to non-beta lactam antibiotics. These organisms can be susceptible to the quinolones, erythromycin, clindamycin, trimethoprim/sulfamethoxazole and the tetracyclines. Since these are so virulent it is imperative that infections caused by these organisms be treated quickly and appropriately. We therefore need to perform susceptibility tests and report the results on antibiotics that we would normally not test or report for nosocomial MRSA. Therefore, any specimen from a patient seen in any of our clinics or the emergency room will be set up utilizing our ARIS system with Sensititre gram-positive panels. Since the origin of an infection may not be obvious to the laboratory, we will also utilize this test panel for any skin and soft tissue specimen that grows S. aureus. Currently we test and report oxacillin, penicillin, vancomycin, erythromycin, clarithromycin, clindamycin, ciprofloxacin, tetracycline, SXT, and linezolid. Daptomycin will be tested and reported as soon as it is made available on this panel.

Of major concern is the possibility that these CA-MRSA will start to combine with nosocomial strains and become multi-drug resistant. It is imperative that these isolates be rapidly identified and appropriate susceptibility tests performed and reported.

References:
It has been a busy year for us!! In addition to the launching of a new instrument and software platform for automated susceptibility and identification testing, we introduced four new Standard MIC formats and two new JustOne® formats. We continue to offer new standard and custom MIC plates faster than other diagnostic manufacturers and with the most up-to-date antimicrobic selection available! Use Sensititre® plates as your primary susceptibility test method or as a backup method when your current AST system cannot reliably test organisms.

Implement one of our new MIC plates in your diagnostic laboratory today and recognize immediate benefits:

◊ Complete antimicrobial selection in a true MIC format
◊ Up to 22 antimicrobics on a single format
◊ Excellent quality and consistent results
◊ Extended shelf life – 18 to 24 months
◊ Room temperature storage

**Streptococcus pneumoniae**
(Part No: STP3F)
- Azithromycin
- Amoxicillin/clavulanic acid
- Cefepime
- Cefotaxime
- Ceftriaxone
- Chloramphenicol
- Cefuroxime

- Erythromycin
- Gatifloxacin
- Gemifloxacin
- Levofloxacin
- Linezolid
- Meropenem
- Moxifloxacin
- Penicillin
- Tetracycline
- Trimethoprim/sulfamethoxazole
- Vancomycin
- Oxacillin
- Penicillin
- Quinupristin/dalfopristin
- Rifampin
- Streptomycin
- Tetracycline
- Trimethoprim/sulfamethoxazole
- Vancomycin

**ESBL Confirmatory Plate**
(Part No. ESB1F)
- Cefazolin
- Cefepime
- Cefoxitin
- Moxifloxacin
- Cefpodoxime
- Ceftriaxone
- Ciprofloxacin
- Gentamicin
- Amoxicillin
- Imipenem
- Piperacillin/tazobactam
- Ceftazidime
- Ceftazidime/clavulanic acid
- Cefotaxime
- Cefotaxime/clavulanic acid

**Gram-Negative MIC Plate**
(Part No. GN1F)
- Amikacin
- Ampicillin
- Ampicillin/sulbactam
- Aztreonam
- Cefazolin
- Cefepime
- Cefotaxime
- Ceftazidime
- Ceftriaxone
- Cefotetan
- Cefpodoxime
- Ciprofloxacin
- Gentamicin
- Imipenem
- Meropenem
- Meropenem
- Nitrofurantoin
- Piperacillin
- Piperacillin/tazobactam
- Ticarcillin/clavulanic acid
- Tobramycin
- Trimethoprim/sulfamethoxazole
- Daptomycin

**Daptomycin JustOne**
(Part No. JO-DAP)
Dilution range: 0.03 – 32 ug/mL

**Telithromycin JustOne**
(Part No. JO-TEL)
Dilution range: 0.002 – 2 ug/mL

Call us at 800-871-8909 to place your order today!
TREK INTRODUCES 5 NEW RESEARCH USE ONLY SUSCEPTIBILITY FORMATS FOR MYCOBACTERIA, CAMPYLOBACTER, ANAEROBIC AND FUNGAL ORGANISMS

By Jenny Lorbach, Global Sensititre Product Manager

With the availability of new NCCLS recommendations for microbroth dilution testing of fastidious organisms, we are introducing new research use only standard plate formats for Slow and Rapid Growing Mycobacteria, Campylobacter, anaerobic organisms, and yeast isolates.

Sensititre® MIC plates continue to provide laboratories with the best susceptibility alternatives for difficult or unusual organisms. All plates contain only antimicrobics, therefore technologists can add the “broth of their choice” during set up procedures.

In addition to plate formats, specialty broth selections that accompany these plates can also be purchased from TREK Diagnostic Systems.

The most recent YeastOne® format now contains Caspofungin!!*

All plate formats will provide these benefits:

◊ Extended shelf life
◊ Room temperature storage
◊ Individually packaged; no waste
◊ Contain only antimicrobial; add choice of broth
◊ True MIC results
◊ In accordance with NCCLS recommendations
◊ Easy to read endpoints
◊ Fast results

*Current configurations will have a “For Research Use Only. Not For Use in Diagnostic Procedures.” label associated with them.

MAI and other slow growing Mycobacteria (Part No. MAI*)
utilize MHB with OADC (Part No. T8005*):

- Gatifloxacin
- Moxifloxacin
- Amikacin
- Clarithromycin
- Sulmethoxazole
- Minocycline
- Ciprofloxacin
- Linezolid
- Rifampin
- Ethambutol
- Streptomycin
- Rifabutin

Anaerobe species (Part No. AN02B*)
utilize Supplemented Brucella Broth (Part No. T3450*):

- Ampicillin/sulbactam
- Amoxicillin/clavulanic acid
- Cefotetan
- Penicillin
- Imipenem
- Meropenem
- Clindamycin
- Cefoxitin
- Metronidazole
- Chloramphenicol
- Ampicillin
- Piperacillin
- Tetracycline

Rapidly Growing Mycobacteria, Nocardia and other Aerobic Actinomycetes (Part No. RAPIDMYCO*)
utilize MHB (Part No. T3462 or T3462-10):

- Linezolid
- Clarithromycin
- Amikacin
- Cefoxitin
- Ceftazidime
- Imipenem
- Minocycline
- Tobramycin
- Ciprofloxacin
- Gatifloxacin

Yeast isolates (Part No. Y0-5*)
utilize YeastOne Broth (Part No. Y3462):

- Caspofungin
- Voriconazole
- Amphotericin B
- 5-Flucytosine
- Itraconazole
- Ketoconazole
- Fluconazole

Call us at 800-871-8909 to place your order today!

Campylobacter species (Part No. CAMPY*)
utilize MHB with LHB (Part No. CP112-10):

- Azithromycin
- Ciprofloxacin
- Erythromycin
- Gentamicin
- Tetracycline
- Florfenicol
- Nalidixic acid
- Telithromycin
- Clindamycin
- Mezlocillin
- Piperacillin/tazobactam

ARIS® 2X for more accurate MRSA detection.
THE VERSATREK® SYSTEM GOES AROUND THE WORLD
By Paul Daga, Vice President International Markets, TREK Diagnostic Systems

The ESP® instrument was really designed for the U.S. market. Not easy to change the voltage, very large and very heavy. This limited its sale outside the U.S. to a very few countries, the notable exception being Spain where our distributor had done a great job placing a significant numbers of ESP units.

The VersaTREK Automated Microbial Detection System was designed to take into account international needs as well. We decided at the end of last year to launch VersaTREK to our international distributors. Not as simple as it sounds as this requires lots of different paperwork for registration in some countries, translations of software and manuals, and service and technical support training. Of course at the same time we were rolling out our new SWIN™ software to our existing Sensititre® customers!

Our distributor in Thailand organized a VersaTREK launch meeting in Bangkok on the 30th June 2004. They invited over 140 customers from all over the country with 120 actually attending.

Thailand was the first country outside the U.S. to place VersaTREK analysers in a hospital. Bumrungrad Hospital in Bangkok is the leading private hospital in Thailand. Ms. Sukon Chalachiva is the Division Director in the laboratory and was the person who made this important decision. She is extremely happy with the performance and has consequently ordered another VersaTREK 240 unit which will be used for both blood and Myco detection.

The seminar actually took up most of the day with presentations from Mr. Pisit from PCN, Ms. Chalachiva, Mr. Rahule and myself. Mr. Rahule gave a presentation on the recovery of different organisms by VersaTREK.

At the same time we also introduced our Sensititre SWIN software to the same audience.

It was an excellent and well organized meeting with lots of questions and discussion.

Currently we are working with potential distributors from as far afield as Brazil, New Zealand, Bangladesh, India, South Africa and Israel. One way to rack up the frequent flyer miles!

“VersaTREK was designed to take international needs into account.”

ON THE ROAD AGAIN WITH DISCOVERY WORKSHOPS
By DeAna Dziak, Associate Product Manager, TREK Diagnostic Systems

What is the best way to promote TREK’s newest products? The answer is easy; host a road show, also known as TREK’s Discovery Workshop. TREK has facilitated two Discovery Workshops so far this year. The first was held in Atlanta, Georgia and the second in Los Angeles, California.

The Discovery Workshop encompasses a full day of instrument and software demonstration, a technical presentation, and one to two testimonial speakers. At the conclusion of the workshop, attendees are encouraged to have some “hands-on” time with the instrument and software. Participants are always impressed with how easy the instrument is to use and VersaTREK’s software capabilities.

Dr. Nadine Sullivan, Chief Science Officer for TREK Diagnostic Systems, delivers the technical presentation. We have had the opportunity to invite Verna Morton from Cox Health Center to speak as the testimonial speaker at both road shows. Verna’s presence is very valuable at the shows. She does an amazing job and is very receptive to answering all questions posed by the audience. We were also pleased to have Maria Ali-Khan from St. Luke’s Hospital speak at the second road show.

Although the Discovery Workshops to-date have covered VersaTREK instrumentation and software, we plan to include Sensititre and new SWIN software at upcoming Discovery Workshops.

Those who participate in the day-long Discovery Workshop are eligible to receive four P.A.C.E. credits. In addition, a continental breakfast and a full lunch is provided. The workshop runs from 8:00 am to 3:00 pm.

For information on an upcoming Discovery Workshop in your area, please contact us at info@trekds.com or visit our website www.trekds.com.

On the road with VersaTREK®
Continually expanding our drug portfolio.

**Recently Cleared Drugs**

By Cindy Knapp, Director of TREK Lab Services

Working closely with the majority of pharmaceutical companies during the early stages of their compound development allows TREK to bring these new compounds to our customers in a timelier manner.

The following antimicrobials have been recently cleared for use on Sensititre® standard plates, JustOne®, and custom MIC panels:

- **Teilithromycin**, for *Staphylococcus* species, *Streptococcus pneumoniae*, and *Haemophilus influenzae*.
- **Daptomycin**, for Gram-Positive Organisms
- **Clindamycin**, for *Streptococcus pneumoniae*
- **Erta penem**, for *Streptococcus pneumoniae* and *Haemophilus influenzae*

With these recently cleared antimicrobials, several new JustOne strip’s have been developed.

- **JODAP**, for Daptomycin
- **JOTEL**, for Teilithromycin

Several more new standard formats are being created and will be available shortly for our clinical customers.

For more information concerning our new standard panels, custom panels or JustOne strip’s and how these can fit the needs of your laboratory and formulary, please contact your Area Account Representative or TREK Customer Service at 800-871-8909.

Continually expanding our drug portfolio.