SEPTEMBER 2004
Vol. 1 No. 3

bioMérieux connection

In this issue:

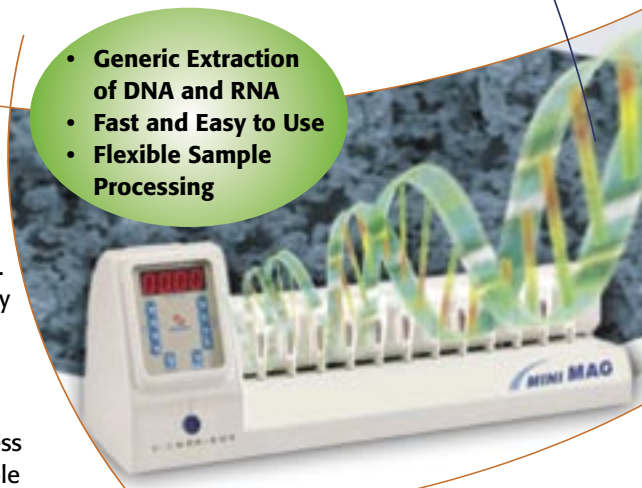
FDA

Inspection update: page 9

Introducing the first of a new generation of nucleic acid extraction instruments: the NucliSens® miniMAG™

The NucliSens® miniMAG™ takes advantage of bioMérieux's proprietary Boom chemistry in combination with magnetic silica particles. The miniMAG simplifies the purification of nucleic acid from one to 12 samples with a user-friendly platform via efficient washing and collection of magnetic silica. The result is what every molecular biology laboratory treasures: superior recovery of pure, high-quality DNA and RNA!

- **Generic Extraction of DNA and RNA**
- **Fast and Easy to Use**
- **Flexible Sample Processing**



Only the miniMAG delivers maximum flexibility with the ability to parallel-process multiple sample types. In addition, variable input volume can be accommodated with certain specimen types. For example, 10 µl up to 1000 µl of plasma/serum can be handled with ease. To enhance concentration, the DNA and RNA from a sample can be recovered in an eluate size down to 25 µl or lower.

MINI MAG

miniMAG continued on page 11

A note from Eric Bouvier

As the newly appointed president and CEO of bioMérieux's North American division, I would like to send you warm greetings and introduce myself. I have been with bioMérieux since 1993, starting out as a VIDAS® sales representative. I have since had senior roles in bioMérieux's sales organization, in corporate marketing and in bioMérieux's Advanced Technology Unit. This group plays the critical role of transitioning research projects into the design and development phase.

I have a Ph.D. in pharmacology and an MBA from the Lyon School of Business in France. My wife and I have two beautiful daughters, age 20 and 22. I love sports, especially hiking, skiing and running. In my earlier years, I captained the French volleyball team at the 1988 and 1992 Olympics – that was a while ago!

My new role came to fruition because my predecessor, Philippe Sans, was awarded additional responsibilities for Asia Pacific and North America, and I report directly to him.

Eric Bouvier continued on page 11

BIOMÉRIEUX

from diagnosis,
the seeds of better health

VITEK® 2 Colorimetric ID cards: added color, added value!

bioMérieux is committed to providing innovative solutions in microbiology. Our new Advanced Colorimetric Identification cards for the VITEK® 2 automated bacterial identification and susceptibility system help you improve patient care with rapid, accurate results.

The new GN, GP and YST identification cards:

- Provide the most extensive automated rapid ID database
- Reduce the need for backup and supplemental testing
- Increase single-choice identification calls
- Provide even better result definition in 2-10 hours for GN cards, 2-8 hours for GP cards and 18 hours for YST cards

Performance Characteristics

In a recent multi-site clinical study, the performance of the VITEK 2 GN card was evaluated using 562 clinical and stock isolates of both commonly and rarely observed species of Gram-negative bacilli, including 153 non-fermentive strains. The reference identification was determined with API® 20E and API® 20NE identification kits. Overall, the VITEK 2 GN card correctly identified 96.8% of the isolates, including 6.4% low discrimination with the correct species listed. Misidentifications occurred at 3.0%, and no identifications occurred at 0.2%.

Performance of the VITEK 2 GP card was evaluated using 457 clinical and stock isolates of both commonly and rarely observed species of Gram-positive cocci. The reference identification was determined with API® STAPH and API® 20 STREP identification kits. Overall, the VITEK 2 GP card correctly identified 96.5% of the isolates, including 2.2% low discrimination with the correct species listed. Misidentifications occurred at 3.3% and no identifications occurred at 0.2%.

The performance of the VITEK 2 YST card was evaluated using 623 clinical and stock isolates of both commonly and rarely observed species of yeast and yeast-like organisms. The reference identification was determined with API® 20C AUX identification kits. Overall, the VITEK 2 YST card correctly identified 99.0% of the isolates, including 11.5% low discrimination with the correct species listed. Misidentifications occurred at 1.0% and no identifications occurred at 0.5%.

Additional information about the new VITEK 2 Advanced Colorimetric Identification cards may be found in the *bioMérieux Connections* May 2004 issue. Or you may call your local bioMérieux representative for copies of posters presented at the 104th General Meeting of the American Society for Microbiology (ASM) and the 14th European Congress of Clinical Microbiology and Infectious Diseases (ECCMID) in 2004.

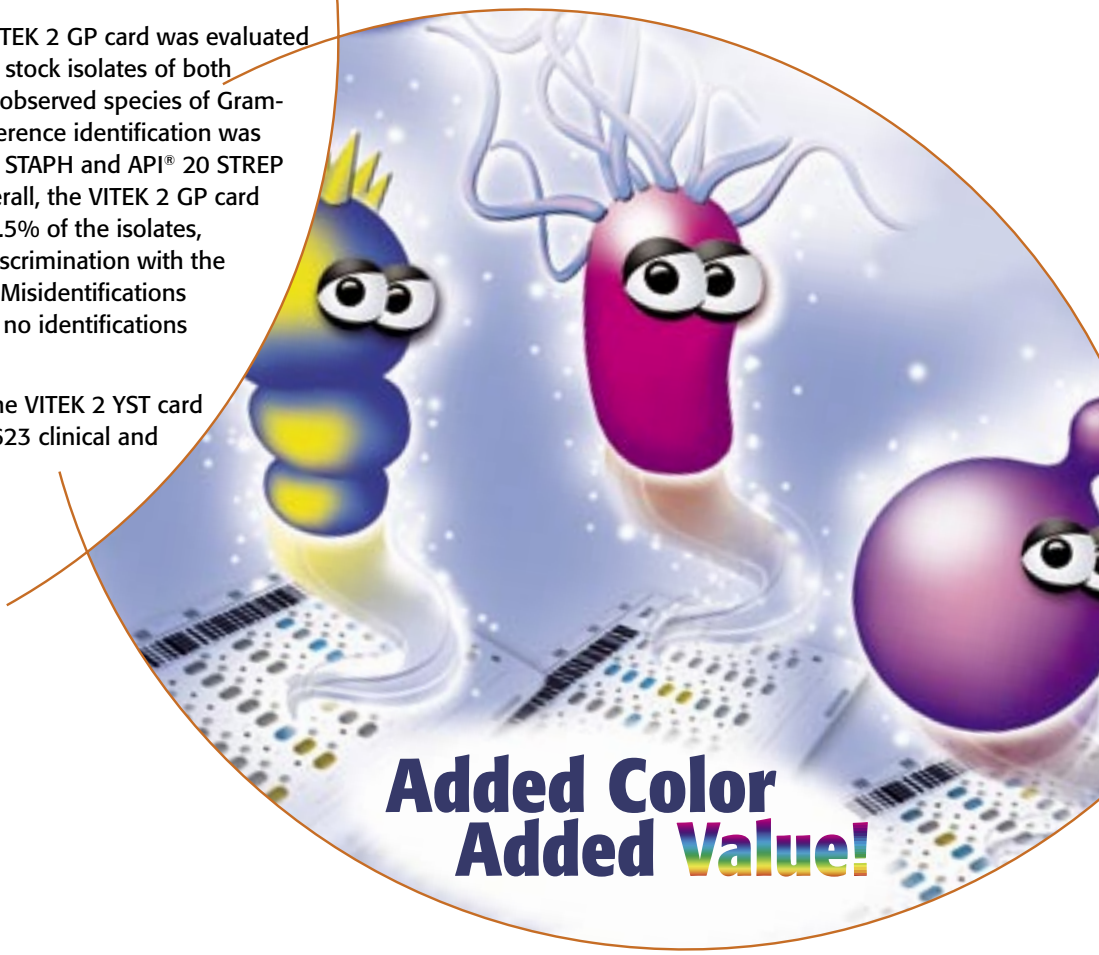
ASM 2004, New Orleans, C-176: Evaluation of the New VITEK 2 GN Card for Identification of Clinically Relevant Gram-Negative Rods

ASM 2004, New Orleans, C-178: Performance of the New VITEK 2 GP Card for Identification of Medically Relevant Gram-Positive Cocci

ASM 2004, New Orleans, C-179: Fresh Isolate Identification Study Comparing New GN and GP Colorimetric Cards to Current ID-GNB and ID-GPC Fluorometric Cards on the VITEK 2 System

ASM 2004, New Orleans, C-180: A New Gram-Negative Identification for More Accurate Identification of Gram-Negative Bacilli with the VITEK 2 System

ECCMID 2004, Prague, P-483, Identification of Yeasts and Yeast-like Microorganisms with a Colorimetric Card Newly Developed for the VITEK 2 System



SXT testing with Staphylococci on the VITEK® 2 moves into the development process

The feasibility studies for SXT (Trimethoprim/Sulfamethoxazole) for Staphylococci on the VITEK® 2 system are complete, and bioMérieux has moved into the development process. Based on feasibility study data, multiple formulations of investigational (IUO) cards have been manufactured. These IUO cards are being tested against various reference methods. This multi-pronged approach reduces the risk involved in the development process, and we believe it will shorten the antibiotic development timeline.

The development team includes bioMérieux research and development staff and outside consultants. The consultants are an integral part of the development team and include well-known clinical microbiologists, molecular biologists, biological media specialists and professionals with expertise in resistance mechanisms.

The testing of IUO cards will continue over the next few months. It would be premature of us to provide an exact delivery date for VITEK 2 SXT/Staphylococci testing, as it depends on the success of each phase of the project. Assuming that the development, clinical trials and FDA submission proceed according to plan, we could meet delivery the fourth quarter of 2005. This is our target.

bioMérieux is committed to delivering testing for this important antibiotic to our customers. We understand the issues and needs you are facing daily. The development team is working diligently to deliver a solution. We will provide you with regular updates on the project in future issues of the *bioMérieux Connection* newsletter.

Third VRSA isolate confirmed in U.S.

A third vancomycin-resistant *Staphylococcus aureus* (VRSA) was isolated this spring from a patient in the United States. The isolate was from a patient in New York state and was confirmed by the U.S. Centers for Disease Control and Prevention (CDC) as a VRSA.

Studies performed by the CDC indicate that not all susceptibility testing methods are capable of detecting VISA and VRSA isolates. These studies show that disk diffusion is unable to detect vancomycin-intermediate *Staphylococcus aureus* (VISA) isolates, and automated systems are unable to detect VRSA isolates.

The CDC suggests that laboratories performing automated susceptibility testing on *S. aureus*, especially methicillin-resistant *Staphylococcus aureus* (MRSA), should confirm vancomycin results using a vancomycin agar screening plate containing 6 µg/mL of vancomycin. The vancomycin agar screening plate should be examined for growth after a full 24 hours of incubation. According to the latest NCCLS standards, laboratories should confirm the identification and susceptibility result for all VISA and VRSA isolates.

bioMérieux is concerned about these isolates, and our research and development group is working with the CDC to perform additional studies to provide us with more information. Additional information on this VRSA isolate and VISA/VRSA testing is available on the CDC website, www.cdc.gov.

Listed below are some websites you may find particularly helpful for learning more about VISA/VRSA.

MMWR, April 23, 2004 / 53(15), 322-323 April 23, 2004 / 53(15);322-32
http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5315a6.htm

CDC Fact Sheet: VISA/VRSA – Vancomycin-intermediate/resistant *Staphylococcus aureus*
http://www.cdc.gov/ncidod/hip/aresist/visa.htm

CDC Laboratory Detection Fact Sheet VISA/VRSA - Vancomycin-Intermediate/Resistant *Stapylococcus aureus*
http://www.cdc.gov/ncidod/hip/Lab/FactSheet/vrsa.htm

CDC Laboratory Testing Algorithm VISA/VRSA - Vancomycin-Intermediate/Resistant *Stapylococcus aureus*
http://www.cdc.gov/ncidod/hip/Lab/FactSheet/visa_vrsa_algo.htm

Confused about ESBLs? Earn P.A.C.E. credit while you learn about them!

Learn about these important, complex enzymes from outstanding authors, including Dr. Gary Doern, Dr. James Jorgensen, Dr. David Nicolau, Dr. David Paterson, Dr. Michael Pfaller, Dr. David Sahm, Dr. Fred Tenover, and Dr. Kenneth Thomson. These experts will guide you through the pharmacodynamics of cephalosporin antibiotics, the clinical relevance of ESBLs, the evolution and prevalence of these enzymes and the methods for detecting and reporting ESBLs.

You can receive two free Professional Acknowledgement for Continuing Education (P.A.C.E.®) credits for the knowledge you gain. Log on to www.bethefirsttoknow.com.

Blood culture collection wall chart available at no charge!

Diagnosis of septicemia is one of the most important functions of the microbiology laboratory. Left undetected and untreated, septicemia can be fatal. Samples collected with aseptic technique lead to accurate laboratory results and excellent patient care. The procedures detailed on the BacT/ALERT® Blood Culture Collection wall chart are provided to help your institution maintain good blood culture collection technique.

BacT/ALERT Blood Culture Collection wall charts are printed on 11" x 17" card stock and are designed to be posted where blood culture supplies are kept or cultures are drawn. They are available from your local account manager or client consultant at no charge.

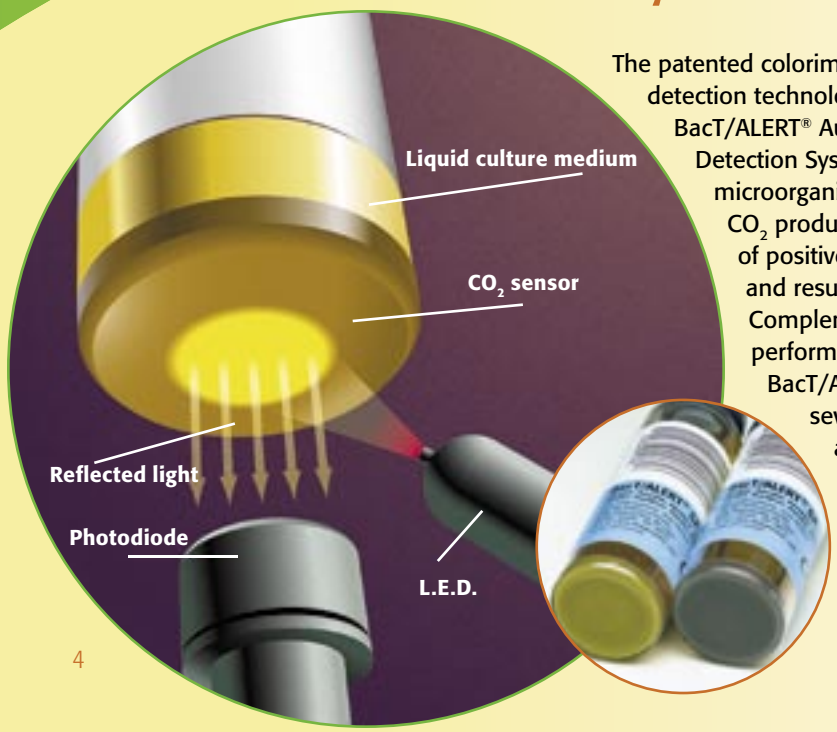
Request several copies for your institution today!

Consorta awards blood culture contract to bioMérieux for another three years

bioMérieux Inc. has recently been awarded a sole-source agreement for the BacT/ALERT® 3D blood culture and mycobacteria system. This new three-year agreement started on July 1, 2004, and runs through June 30, 2007.

"The Consorta members have extended this sole award because they were able to identify the value bioMerieux delivers," said Lois Brisben, director, laboratory services, for Consorta. "The members realized that bioMérieux offers quality results and are excited about the advances bioMérieux has made, especially as they relate to plastic media bottles, which provide increased safety and lower supply-chain costs."

Microbes can run, but they can't hide!



The patented colorimetric sensor-and-detection technology of the BacT/ALERT® Automated Microbial Detection System finds microorganisms by tracking CO_2 production. Notification of positives is immediate and results are dependable. Complementing the performance of the BacT/ALERT instrument, several media choices are available to provide optimal recovery of organisms.

As microorganisms multiply in the BacT/ALERT media, they generate CO_2.

As CO_2 increases, the sensor in the bottle becomes yellow.

Measuring reflected light, the BacT/ALERT monitors and detects color changes in the sensor.

Mathematical algorithms analyze the data to determine positivity, and the laboratory is notified immediately with visual and audible alarms.

Changes in the sensor are permanent and visible to the unaided eye, unlike any other method.

Improving patient safety sends hospitals on a quest for technology solutions

In case you missed the discussion of patient safety issues in the last two *bioMérieux Connections*, here are some highlights:

- Hospital-acquired infections (HAI) affect 5.7% of admissions
- Adverse drug events (ADE) affect 2.43-6.5% of admissions
- Medication errors affect 1.4% of admissions
- Quality initiatives to improve patient care are underway in many institutions in conjunction with group purchasing organizations, insurance companies and regulating bodies

The U.S. government also is working to improve quality and reduce expenses. The Center for Medicare Services (CMS) is collaborating with a private group-purchasing company – Premier – to develop quality standards as a pilot program. As part of the pilot, hospitals meeting these standards will be rewarded with fixed-fee reimbursement incentives that are based on quality performance. After a period of defining the standards, the higher the score earned for quality of care, the higher the reimbursement will be.

To meet institutional objectives for patient safety initiatives and accreditation, it only makes sense for hospitals to make good use of technological advancements in information exchange. Technological tools available now are important in meeting the challenges institutions face on the path to becoming safer places for patients. These challenges include:

- Complying with existing institutional quality standards
- Preventing hospital-acquired infections (HAI)
- Communicating diagnostic results to the right clinician at the right time to affect clinical decisions
- Helping personnel stay current with medical information and best-practice guidelines
- Managing a shortage of health-care personnel

To help hospitals with compliance, The LeapFrog® Group and other third-party organizations are providing industry recommendations along with accreditation standards for health-care institutions. These standards will help the institutions investigate and adopt the technological tools they need to meet quality initiative goals.

Patient safety continued on page 7

STELLARA™

Clinical management system for clinicians

New mobility and real-time information

STELLARA™ is a comprehensive suite of real-time, clinical-intervention software systems that bring the microbiology results (ID/AST) from bioMéreiux's leading BacT/ALERT® and VITEK® systems directly to the pharmacist and clinician — in real time — to support quicker actionable results. The new software system can analyze patient-specific parameters in real time and, with the help of the infectious disease clinical support database, offer recommendations for antibiotic therapies. The medical information contained in the database has been formulated by infectious disease professionals from around the United States. These physicians comprise the TheraDoc® Knowledge Board.

STELLARA offers many important features and benefits, including:

- Modularity to grow with the needs of the institution and keep pace with technological advances
- Data integration and interpretation of data received from the hospital system
- Internet interface
- Integration with a clinical-decision database which provides best-practice guidelines and recommendations, with references

STELLARA marks an important advancement in integrated technology for infectious disease intervention. It promises to be a vital tool in health-care institutions' ongoing effort to deliver the highest-quality patient care.

For early evidence of sepsis and DIC, your only clue might be an APTT "biphasic" waveform

Did you know that you can get an **early alert** to conditions associated with a developing or clinically evident coagulopathy, such as is seen in sepsis or disseminated intravascular coagulations (DIC), with just a routine APTT assay? The patented Waveform Analysis Technology™ of bioMérieux's MDA® coagulation analyzer automatically identifies a "biphasic" APTT waveform pattern (optical profile) and alerts the operator to this abnormality via the A2 Flag™ in the presence of normal or abnormal clot times.

This abnormal waveform pattern is called "biphasic" because there are two distinct phases. The first phase is the abnormality – a loss in light transmittance prior to clot formation. The operator is alerted via the A2 Flag, which is a patented option on all MDA analyzers and is available 24 hours a day, seven days a week. The second phase of the waveform pattern is representative of the actual clot formation.

Based on published studies, the following is known about the biphasic waveform:

- It is caused by an acute phase reactant that has been linked with serious coagulopathies, such as those seen in developing or clinically evident DIC.[1, 2]
- Patients with clinical conditions that predispose them to developing DIC, including sepsis, trauma and malignancy, can exhibit a biphasic waveform.[3]
- A biphasic waveform can be an early indicator of such conditions — with one study noting its appearance an average of 18 hours (range 2 - 47 hours) before the diagnosis of DIC was made by standard diagnostic and clinical criteria.[4]
- The biphasic waveform pattern can return to normal if the patient is recovering in response to therapy (e.g., antibiotic therapy for sepsis).[2]
- Patients who exhibit a biphasic waveform have been shown to have a higher incidence of mortality (43%).[4, 5, 6]

The FDA has cleared the following intended use statement for the A2 Flag on the MDA system:

"The MDA A2 Flag, in conjunction with a patient's APTT test, is an indicator that an abnormal waveform pattern has been identified, which may be associated with a developing or clinically evident coagulopathy, such as is seen in sepsis or DIC. Additional diagnostic investigation is suggested."

For more information on how the MDA biphasic waveform and the A2 Flag can aid in the diagnosis and treatment of sepsis and DIC, contact your local bioMérieux sales representative.

[1]Downey C, Kazmi R, Toh CH. Novel and diagnostically applicable information from optical waveform analysis of blood coagulation in disseminated intravascular coagulation. Br J Haematol 98: 68-73; 1997.

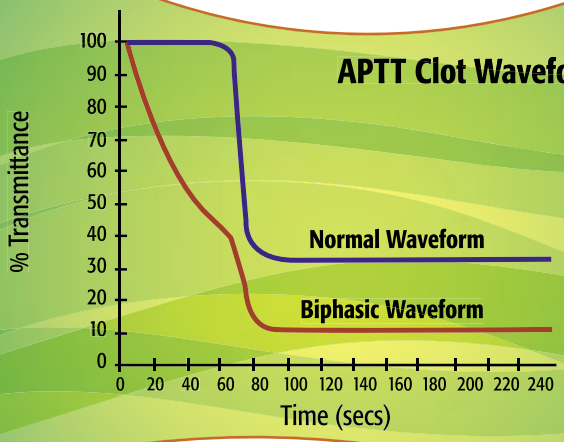
[2]Downey C, Kazmi R, Toh CH. Early identification and prognostic implications in disseminated intravascular coagulation through transmittance waveform analysis. Thromb Haemostas 80: 65-69;1998.

[3]Levi M, Ten Cate H. Disseminated intravascular coagulation. N Engl J Med 1999; 341: 586-92.

[4]Toh CH, et al. Biphasic transmittance waveform in the APTT coagulation assay is due to the formation of a Ca++ -dependent complex of C-reactive protein with very-low-density lipoprotein and is a novel marker of impending disseminated intravascular coagulation. Blood 2002;100:2522-2529.

[5]Fernandes B, Yiu R, Stragier R, Giles AR. An abnormal APTT clotting waveform is associated with high mortality and a procoagulant state [Abstract]. Thromb Haemost 2001; 86 (Suppl.):P2580.

[6]Toh HC, et al. Early identification of sepsis and mortality risks through simple, rapid clot-waveform analysis. Implications of lipoprotien-complexed C reactive protien formation. Intensive Care Med (2003) 29:55-61.



A website that de-mystifies hemostasis: www.CLOT-ED.com

Finally, there is a user-friendly, informative resource for the latest information about bleeding and thrombotic disorders, their diagnosis and treatment: CLOT-ED. CLOT (Coagulation Lysis Or Thrombosis)-ED is an educational website for health-care professionals who interact with patients with coagulation lysis or thrombosis and for patients who want to learn more about their conditions.

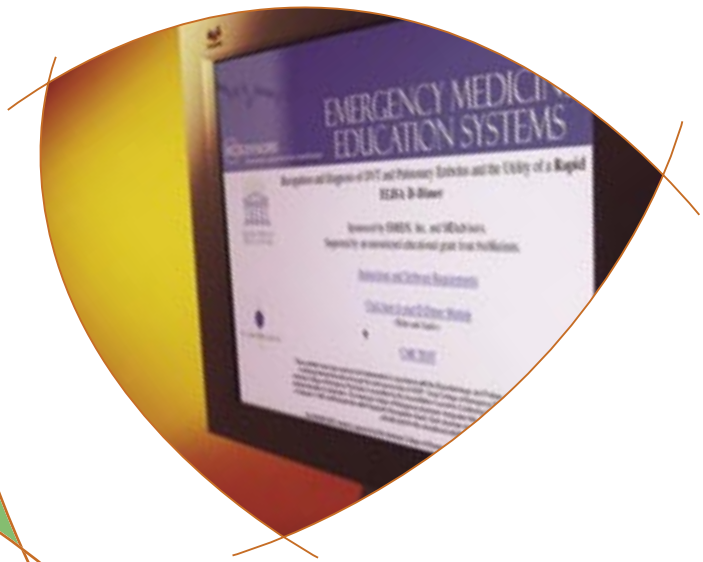
Written and edited by Marlies Ledford-Kraemer, MBA, MT(ASCP)SH, CLOT-ED is the culmination of more than 25 years of clinical laboratory practice and education. The site is well organized, informative, easy to understand and often entertaining. We hope you'll take a moment to introduce yourself to this wonderful educational resource.

Labeling changes for VIDAS® assay calibrator and control values

Effective September of this year, VIDAS® assays will begin shipping with labeling changes in the Calibrator and Control vials. Currently, the titer (value) of calibrators and controls is specified on the vial label and the MLE card. In September this will change:

- Information regarding the calibrator target values and the range of values for the controls will be specified ***only*** on the MLE card. Each kit lot contains a new MLE card.
- A sticker will be included on the kits to inform users of this change.
- There will be a notice in the package insert referencing the MLE card for further information on the expected values for calibrators and controls.

These changes will occur over time as new lots are manufactured.



Patient safety continued from page 5

However, the big challenge remains in getting the right result to the right clinician at the right time to have a positive impact on patient care. Today's laboratory information systems (LIS) can be inflexible and unwieldy. They communicate data with little, if any, filtering to highlight factors that are important in a patient's case.

Hospitals need a clinical monitoring and intervention system that analyzes patient data and presents it to the clinicians in the manner that clinicians were trained to collate and analyze patient data and parameters. This should make the process more efficient. The ideal system could assist the clinician in diagnosing the problem and choosing the appropriate therapy. Additionally, it could monitor patient data 24/7 and alert the clinician to significant information in real time. This system could provide mobility for the clinician via a personal digital assistant (PDA) that could be linked to the patient's electronic medical record (EMR).

Some additional features that could be built into the ideal clinical monitoring and intervention system include:

- Modularity to grow with the needs of the institution and keep pace with advancements in technology
- Ability to integrate data and provide helpful interpretation of data that is received from the hospital system. The clinician would make the decision and the system would assist in the collation and summary of the patient data.
- Ability to interface to the Internet
- Integration with a clinical-decision database that provides best-practices guidelines and recommendations with reference citations
- Ability to function with an existing IT infrastructure with wireless PDA capability

Fortunately, such an ideal clinical monitoring and intervention system already exists! You can learn about it on page 5.

One free hour of CME credit for D-dimer education

To learn more about the use of a rapid ELISA D-dimer for evaluating deep vein thrombosis (DVT) and pulmonary embolism (PE) and to earn one free hour of Continuing Medical Education credit, log on to www.emedsinc.com/ddimer and select "Use of a Rapid ELISA D-Dimer Assay for the Evaluation of DVT and PE."

"Get an edge on tomorrow": an interview with Daniel Burrus

As bioMérieux's keynote speaker during our symposium at ASM, Daniel Burrus, CEO, Burrus Research Associates Inc., gave a lively talk on "The Future of Healthcare." One of the world's leading technology forecasters and strategists and author of six books, including *Technotrends*, Burrus has established a worldwide reputation for predicting the future of technological change and its impact on the business world. A strategic advisor to government and Fortune 500 companies, he helps clients identify new opportunities and develop successful strategies based on creative application of leading-edge technologies. *The New York Times* calls him one of America's top three business gurus.

Mr. Burrus has kindly agreed to an interview for the *bioMérieux Connections* newsletter.

bioMérieux: *Thank you, Mr. Burrus for your participation as bioMérieux's keynote speaker at our symposium at the annual meeting of the American Society for Microbiology (ASM) in New Orleans.*

Burrus: You're welcome. I really enjoyed the opportunity to contirbute to the healthcare community. You had a great audience there at ASM.

bioMérieux: *As a way of bringing your ideas to bioMérieux's customers who were unable to attend the American Society for Microbiology meeting in New Orleans, could you share some more of your insight with us?*

Burrus: Certainly, I would be happy to. For starters, I would like to let your customers in on a little secret. They, too, can project a great deal of what the future holds for them and their organizations. Here's how: spend time in the "visible" future. When they do, they will discover that they can identify tomorrow's predictable problems today and, through the use of technology, identify ways to solve those problems before they happen.

bioMérieux: *What is the visible future?*

Burrus: It's that part of the future one can actually see. For example, this article is being written in the summer. Next will be fall, followed by winter. June is followed by July. These are examples of looking at the visible future by being aware of cycles. There are over 300 known cycles – such as biological cycles, weather cycles, business cycles – and they all give us a window to the future. Take time to look at the visible future through the cycles that affect your business. There is another window to the visible future that is often ignored, and that is permanent change.

bioMérieux: *Permanent change? How does that fit into this scenario?*

Burrus: Since permanent change, as its name states, is not something that repeats itself, it may seem less predictable than cyclical change. Yet there is a way to look at the visible future of permanent change, and that is to look at the technology that is driving permanent change. In fact, most of the technology that will shape the next ten years is in existence today.

I did this back in the "technical dark ages" of 1983 when I identified 20 core technologies and boldly predicted these would be the driving forces of permanent change over the next 20 years. Among them were digital technology, genetics and fiber optics. And here we are, more than 20 years later, with all of these technologies revolutionizing our lives.

Spending time in the visible future by looking through the windows of cyclical change and permanent change requires at least one hour per week of your time. When you unplug from the present during this hour, your visible future doesn't have to be 20 years from now. In fact, the closer to the present you are, the more visible the future is. It could be next year. It could be two years from now. Two permanent changes are the aging population and the freeze in Current Procedural Terminology (CPT) reimbursements.

bioMérieux: *How do we identify the problems we are about to have?*

Burrus: Once you've looked at how technology is driving the changes that are taking place, you may clearly see that you're about to have a big problem. Or it may not be you who is facing the problem. It may be the people you serve or your colleagues, your clinic or your hospital. Or health care in general. Once you've identified the potential problem, you begin to solve it so you don't have it in the first place.

Burrus continued on page 10

FDA

Update for bioMérieux customers

As a supplier to the health-care industry, bioMérieux operates in a regulated environment. At any time we can have inspections by the U.S. Food and Drug Administration (FDA). Over the past several months, FDA inspected two major bioMérieux Inc. U.S. manufacturing sites in St. Louis, Missouri, and Durham, North Carolina. This update is intended to share the findings of these inspections and subsequent corrective actions and to reassure you that manufacturing continues at normal capacity in all sites for all products.

bioMérieux takes these FDA observations seriously and has already implemented a number of changes to ensure complete compliance with the regulations. The company has dedicated all necessary resources to address the issues, the bulk of which were related to processes and procedures rather than specific products.

We see these inspections as an opportunity for improving our organization. The company is committed to working in partnership with the FDA and will be stronger as a result of this process. Notably, bioMérieux immediately implemented the changes in reporting structure recommended by the FDA. In addition, the Quality teams have been significantly expanded and will increase regular audits of complaints and processes to ensure adequate investigation and reporting of potential issues.

To further address complaint-handling observations, our complaint-handling and review processes have been updated. Specifically, our customer service staff has been retrained, and a rigorous certification process has been instituted.

bioMérieux products are often essential in determining the course of patient care. Be assured that manufacturing continues at normal capacity and that the products meet all proper release specifications.

Here are the details about each FDA site visit:

St. Louis
Inspection of the St. Louis site resulted in two observations – both of which were of a documentary nature and have been closed by the FDA. VITEK® 1 and VITEK® 2 reagents and instrumentation, MDA® II and Coag-A-Mate® XM instruments and BacT/ALERT® instrumentation are manufactured in this facility.

Durham
The inspection of the Durham site resulted in a Form 483 and a subsequent Warning Letter. BacT/ALERT reagents, hemostasis reagents and immunoassay reagents are manufactured in the Durham facility. This inspection only covered the BacT/ALERT and hemostasis areas. Observations were related to issues with processes, procedures, organizational structure and product performance.

Internal task forces, under the guidance of external consultants and industry experts, are actively addressing the process, procedures and product observations. To date, the company has completed most of the action items and expects to have the majority of the additional items addressed by the end of the year.

With regard to the issues outlined for BacT/ALERT bottles, the conversion in July 2003 to plastic bottles included several upgrades to the manufacturing facility and processes to reduce bio-burden. More recently, in-process and release specifications have been tightened to more accurately reflect the enhanced manufacturing capabilities. As a result, these changes have further improved the quality and further reduced contamination rates of the BacT/ALERT bottles.

Regarding our coagulation range of products, root-cause analysis of product variability has resulted in changes to incoming raw material specifications and testing for both Fibriquik® and Simplastin® L. With regard to product performance observations, five lots of Fibriquik were recalled in August. A long-term stability program has been completed and expiration dating adjusted. No further recalls are anticipated.

As always, bioMérieux is devoted to continuous upgrading of processes, procedures and systems to ensure the highest standards of patient safety. We recognize you may have additional questions, and we are dedicated to addressing any concerns. If you have any questions, please contact Eric Bouvier, president and CEO, North American division, or Herb Steward, senior vice president of North American Commercial Operations, at 919-620-2000.

Thank you for your time and patience as well as your continued support for bioMérieux products.

Sincerly,

Eric Bouvier
President and CEO
Corporate Vice President for North America

Trade shows and conventions

Look for bioMérieux at these uppcoming events. For more information, contact your local bioMérieux sales representative.

September	Location	Dates	Booth Number
bioMérieux Annual Knowledge Symposium at the Hotel Queen Mary	Long Beach, CA	Sept. 14, 2004	N/A
Southwest Association for Clinical Microbiology (SWACM)	San Antonio, TX	Sept. 15-18, 2004	N/A
Infectious Disease Society of American (IDSA)	Boston, MA	Sept. 30-Oct. 3 2004	632
October		**Dates**	**Booth Number**
Health Industry Distributors Association (HIDA)	Chicago, IL	Oct. 2-9, 2004	519
American College of Emergency Physicians (ACEP)	San Francisco, CA	Oct. 17-20, 2004	640
November		**Dates**	**Booth Number**
Southeastern Association for Clinical Microbiology (SEACM)	Myrtle Beach, SC	Nov. 4-5, 2004	N/A
Southern California American Society Microbiology (SCASM)	San Diego, CA	Nov. 4-6, 2004	N/A
December		**Dates**	**Booth Number**
American Society of Hematology (ASH)	San Diego, CA	Dec. 4-7, 2004	To come
American Society of Health-System Pharmacists (ASHP)	Orlando, FL	Dec. 5-9, 2004	To come

Burrus continued from page 8

Probably the biggest hurdle to overcome in spending time in the visible future is finding the time to actually do it. It's one of those things you must write into your schedule; otherwise, it won't happen. We must take time to do it.

Time, incidentally, is our most precious asset – something worth more than money. If you don't believe me, recall the last time you were on an airplane flight that was overbooked. When passengers are asked to give up their seats in return for a round-trip ticket to anywhere in the U.S., rarely will anyone get off the plane. Why? Time is worth that much.

bioMérieux: *Any suggestions on how we can get more time? How can we create more of this valuable time?*

Burrus: One way is to give time back to people. And that is done through technology. Here's an example. Several years ago, while speaking to a national convention of critical-care nurses, I discovered the nurses were spending, on average, four to five hours of a 13-hour shift on the phone with patients' relatives who would continually call in to find out the condition of their relatives. I suggested that the hospitals give these nurses back some time by giving pagers to the relatives. Then the nurses could use the pagers as a communication tool and "beep" the relatives if there was a change in a patient's condition.

When implemented, the system gave back three to four hours of time per shift to each nurse. They began to spend less than an hour in a 13-hour shift talking to patients' relatives. Before suggesting how to use pagers creatively, these nurses didn't realize there was a way to get time back. They thought it was impossible. Here's the point: You can do "impossible" things with technology. In this case, it was used to give back time.

bioMérieux: *Can you share with us some more ways to solve tomorrow's predictable problems today?*

Burrus: Yes. I'd like to invite all of your customers to go to www.burrus.com and they will have access to more than 30 new strategies and 38 new tools of technology that they can use to shape their futures.

How does bioMérieux handle a product recall?

bioMérieux handles product recalls by keeping records of each lot number for products shipped and each customer to whom the products have been shipped. In the unlikely event that a recall is required, bioMérieux's Regulatory Affairs Department generates a mailing list of those customers who received the affected lot number of the product recalled. Then Regulatory Affairs writes a letter outlining the reason for the recall and providing the product name and number, lot number and expiration date.

Who is notified about a recall?
Only those customers who received the actual lot in question will receive a recall notice. Those who did not receive the particular lot number will not be sent a recall letter, as there is no action required by those not affected. In addition, this communication is also sent to the U.S. Food and Drug Administration (FDA).

What action should a customer who receives a recall letter take?
When bioMérieux's Regulatory Affairs Department sends a recall notice letter, it also sends a Customer Response Form. This form is your way of communicating to us that you received the recall notice and disposed of the recalled product. Also included on the Customer Response Form is a section for you to complete informing bioMérieux how many boxes of product you had to destroy locally and that need to be replaced. This form enables bioMérieux to confirm that its affected customers received the recall notice, and it provides a mechanism for us to send no-charge replacement product.

Is there any other follow-up from bioMérieux?
First and foremost, bioMérieux wants to make sure that all affected customers receive the notice. If we have not received a Customer Response Form, then we will telephone the customer to follow up and, if necessary, forward another copy of the recall information. In addition, replacement product is sent based on the information contained in the response form.

We hope to keep the recall process easy for you to understand and efficient so that there is minimum disruption in your laboratories. As always, the employees of bioMérieux are committed to providing you with the highest-quality product.

Bouvier continued from page 1

My focus for North America is to continue bioMérieux's intense pursuit of innovative solutions that deliver accurate and rapid results for improved patient outcomes. I would like to thank you for your continued business and support for bioMérieux and I look forward to meeting you in the near future.

miniMAG continued from page 1

The nucleic acid isolated is ready for immediate use and can be validated for use with various molecular biology techniques.

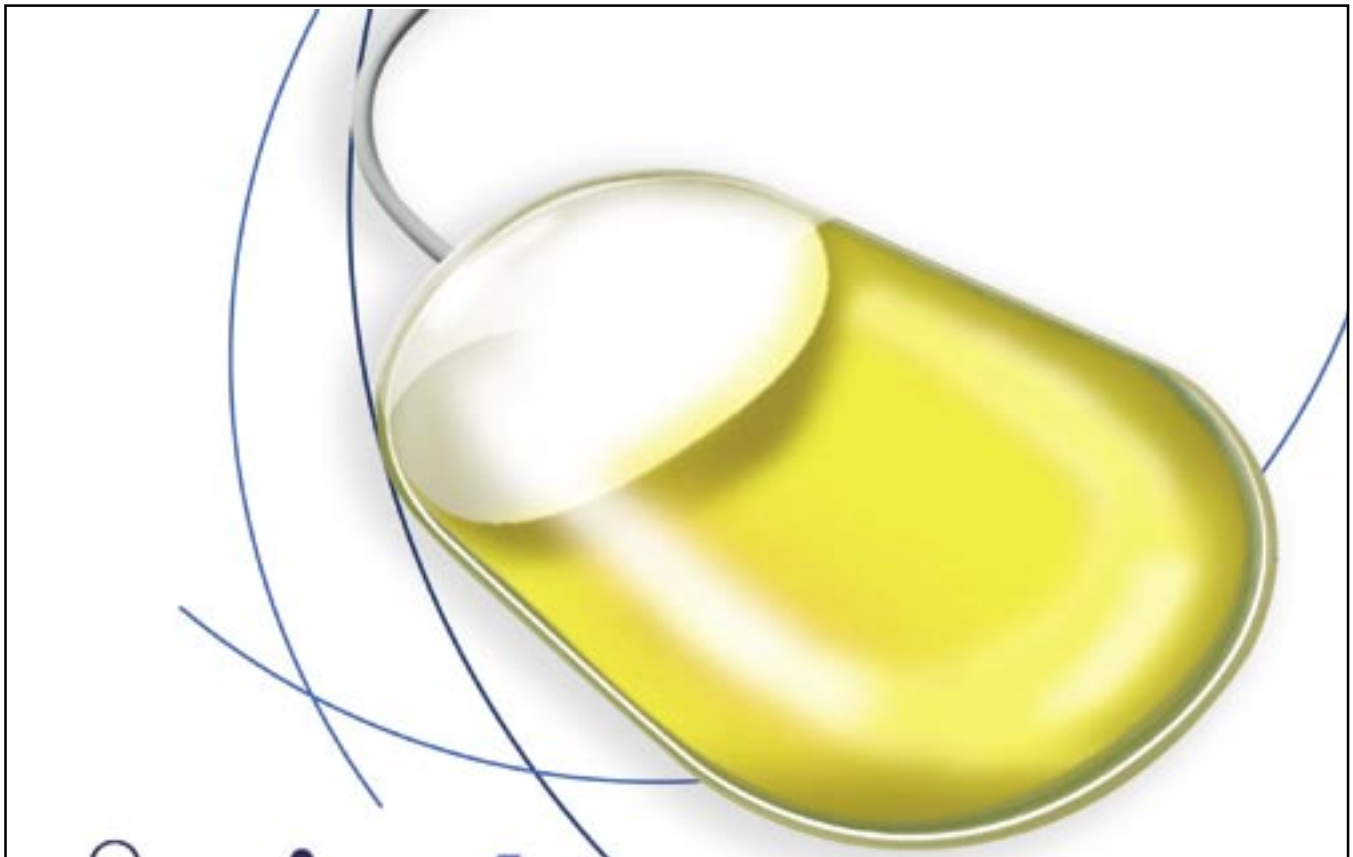
The miniMAG presents laboratories with multiple workflow options. Users can process 12 samples in under an hour or easily combine the operation of two miniMAG instruments to process 24 samples in 90 minutes. The unit is compact and can fit easily on any bench top. If desired, it can be placed in a bio-safety hood for isolating nucleic acids from highly infectious samples. In addition to streamlined batch processing, the instrument is ideal for STAT requests that may call for the careful handling of precious single samples.

Please contact your local bioMerieux sales representative for more information.

The miniMAG is available now!

MSDS's are easy to access at www.biomerieux-usa.com

Laboratories can quickly and easily access Material Safety Data Sheets (MSDS) for bioMérieux products from our website, www.biomerieux-usa.com — click on "Enter Clinical Website" and go to the Technical Library.



apiweb

Announcing APIweb™ Replaces API® Voice Response System

Be sure to order your free APIweb™ now! With APIweb, you can interpret API strip results instantly. APIweb™ gives you an electronic code book that lets you access profile numbers through the Internet or, if you don't have Internet capabilities, by CD-ROM.

APIweb spells the end of searching for profiles in code books or calling the Voice Response System. This new electronic code book has the databases for all your API strips, and updates to databases on the Internet version will be made periodically at no charge.

Best of all, APIweb is absolutely free of charge for our clinical customers. Just let a customer service representative know which version of APIweb – Internet (Product Number 40011) or CD-ROM (Product Number 40012) – you prefer the next time you order API products. We'll do the rest.

bioMérieux, Inc.
100 Rodolphe Street
Durham, NC 27712
U.S.A.
Tel: (800) 682 2666
Fax: (800) 968 9494

bioMérieux Canada, Inc.
7815 Henri-Bourassa Boulevard West
St. Laurent – (Québec) H4S 1P7
Canada
Tel: (1) 514 336 7321
Fax: (1) 514 336 6450

www.biomerieux-usa.com

BIOMÉRIEUX

from diagnosis,
the seeds of better health