

# Antimicrobial stewardship

Significant challenges are posed to global health by the overuse of antibiotics and a corresponding rise in antimicrobial resistance. François Lacoste, executive vice-president of the clinical unit at **bioMérieux**, explains how the in vitro diagnostic company provides benefits to its customers through lab efficiency and medical value.

**A**ntimicrobial resistance is recognised as an increasingly grave concern. The ability of microorganisms to change when exposed to antimicrobial drugs such as antibiotics, rendering them ineffective, threatens the effectiveness of a huge range of treatments for infectious diseases.

What is required is antimicrobial stewardship: increased knowledge and understanding of microorganisms and a corresponding refinement in the prescription of antibiotics to counter their overuse. This is facilitated by bioMérieux's diagnostic solutions in the daily routine of the lab. Microorganism identification is conducted by the VITEK MS mass spectrometry microbial identification system, and susceptibility testing by the VITEK 2, both part of an integrated solution that provides lab managers with precise and relevant information, which is then collated and reported in real time by the lab information solution MYLA.



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brings high medical value compared with existing solutions at the moment."

The new database also allows more exact identification. "With this new database, we are also able to provide meaningful information on the *Acinetobacter* complex, for instance," Lacoste explains. "Different treatments are required for different species of *Acinetobacter*, so it is an instrumental benefit for the patient to be able to identify the microorganism at the species level more than at the genus level is really of added value," adds Lacoste.

The commitment to research at bioMérieux facilitates this constant improvement to the VITEK MS database. "In response to evolving medical needs, innovation is key. 13% of revenue is invested in research and development, and we have close to 1,600 people working in R&D for different applications," informs Lacoste.

## Pushing boundaries

The VITEK MS allows five technologists to prepare samples simultaneously, and bioMérieux goes further still in helping labs to work effectively. "In terms of lab efficiency, we provide a service to organise the workflow within the lab," specifies Lacoste. "We conduct workflow assessment with the lab, for instance, in order to help customers to optimise the way their lab is organised, in terms of equipment, workflow and resources."

In addition, bioMérieux provides round-the-clock customer support. "One of the strengths of the VITEK MS is the support provided by the company. This translates into the ability to assist the customer remotely in case they need troubleshooting, or to perform a software update," points out Lacoste. "All these innovations, whether databases, gains in efficiency, keeping instruments working, for example, have one aim in mind – equipping healthcare teams to fight against antimicrobial resistance and sustain antibiotics for future generations, illustrating that bioMérieux is committed to serving public health." ■

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## The extremely comprehensive VITEK MS database

"We have over 1,300 species and more than 40,000 spectra, which highlights the magnitude of the completeness of the database," says François Lacoste, executive vice-president of the clinical unit at bioMérieux. "To keep pace with evolutions and remain clinically relevant, this database is constantly improved to include new and emerging pathogens." The most recent update, the VITEK MS V3.2.0, is the first CE IVD database to include the bacteria *Brucella* and the fungus *Candida auris*. "*Candida auris* is an emerging pathogen that is responsible for very severe bloodstream infections in patients," reminds Lacoste. "Previously, it could be misidentified, and it requires specific treatment – so being able to precisely identify it

## Further information

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