Deployment of the bioMerieux Blood Culture Identification Platform in the SBUH Microbiology Laboratory

October 13, 2026

It is anticipated that on **October 14, 2026**, the Microbiology Laboratory will launch a rapid PCR-based assay for working up **positive blood cultures**. The bioMérieux **Blood Culture Identification (BCID)** assay is designed to provide rapid identification of common **Gram-positive** and **Gram-negative bacteria**, ***Candida* spp.**, and select **antimicrobial resistance markers**, including:

Gram-Negative Bacteria	Gram-Positive Bacteria	Antimicrobial Resistance	Yeast
Acinetobacter calcoaceticus-baumannii complex	*Enterococcus* spp. *(E. faecalis & E. faecium)*	**Methicillin resistance** *mecA/C* (MRSA)	*Candida albicans*
Bacteroides fragilis	*Listeria monocytogenes*	**Carbapenemases** KPC, NDM, VIM, IMP, OXA-48	*Candida auris*
Enterobacterales *Enterobacter cloacae* complex, *E. coli*, *Klebsiella pneumoniae*, *Klebsiella aerogenes*, *Klebsiella oxytoca*, *Proteus* spp., *Salmonella* spp., *Serratia marcescens*	*Staphylococcus* spp. *Staphylococcus aureus* *Staphylococcus epidermidis* *Staphylococcus lugdunensis*	**Vancomycin resistance** *van A/B* (VRE)	*Candida glabrata* *Candida krusei* *Candida parapsilosis* *Candida tropicalis*
Hemophilus influenzae		**Colistin resistance** *mcr-1*	
Neisseria meningitidis		**Extended spectrum β-lactamase (ESBL)*** CTX-M	
Pseudomonas aeruginosa	*Streptococcus* spp. *Streptococcus pyogenes* (Group A)		
Stenotrophomonas maltophilia	*Streptococcus agalactiae* (Group B) *Streptococcus pneumoniae*		*Cryptococcus neoformans/gattii*

***Please note:** other ESBL enzymes such as AmpC, CMY, DHA or TEM are **not** included. Therefore, although less likely, cephalosporin resistance remains possible when CTX-M is negative. Final susceptibility testing of the organism is still important.

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Testing Approach

To optimize resource utilization, the rapid PCR assay will be performed **only on the first blood culture that flags positive** for a patient. Subsequent positive blood cultures will not routinely undergo repeat BCID testing **unless they demonstrate a different Gram-stain morphology from the previously positive culture**.

Results will be available approximately **3–6 hours after a positive blood culture result is called to the clinical unit**. If antimicrobial resistance genes are detected with the rapid PCR, **Infectious Diseases consultation is recommended** for assistance with selection of antimicrobial therapy.

The rapid PCR result is intended to provide **early organism identification and detection of selected resistance markers** (refer to table above) in order to optimize treatment. Conventional blood culture identification and susceptibility testing will continue to proceed according to standard laboratory procedures.

In order to optimize the potential benefits of the BCID workflow it is important to follow the established **Blood Culture Guidelines for Adult Immunocompetent Patients** (Blood culture Guideline for Adult Immunocompetent Patients.pdf) and **Immunocompromised patients** (Blood_Culture_guideline_for_Adult_Immunocompromised_Patients.pdf); please take a moment to refresh yourself with these recommendations for the collection of initial **and repeat** blood cultures.

Please contact the SBUH Microbiology Laboratory Director, Dr. Sanchita Das with any questions or concerns.

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We hope this BCID workflow will streamline your patient management, reduce length of stay for some patients, and improve our SBUH antimicrobial stewardship efforts [1, 2].

Sincerely,

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Director, SBUH Department of Laboratories

References:

1. Martin T, Wilber E, Advani S, et al. The impact of implementation of rapid blood culture identification panels on antimicrobial optimization: a retrospective cohort study. Antimicrobial Stewardship & Healthcare Epidemiology. 2024;4(1):e44. doi:10.1017/ash.2024.51
2. Muqtadir J, Bhatti S, Batool I, Lesho EP. Impact of Multiplex PCR Blood-Culture Identification Panels on Clinical Outcomes, Antimicrobial Stewardship, and Economic Impact in US Hospitals: A Systematic Review and Meta-Analysis. Open Forum Infect Dis. 2026 Jun 25;13(7):ofag370. doi: 10.1093/ofid/ofag370.