# Microbio

# A commercial innovative diagnostic assay for sepsis diagnosis directly from blood

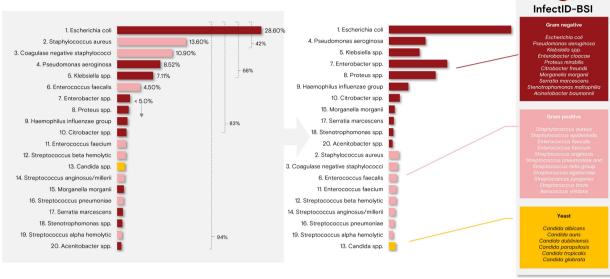
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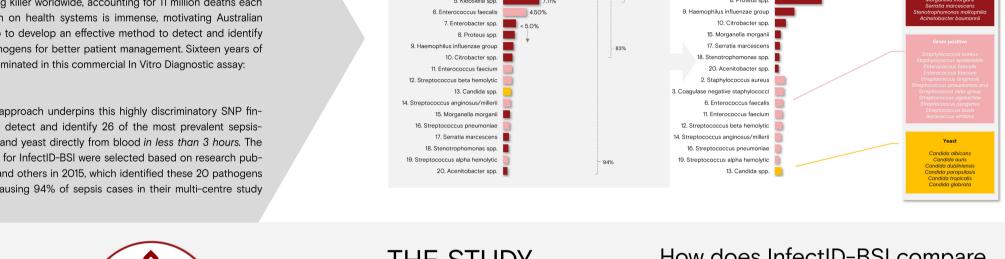
#### InfectID-Bloodstream Infection: designed to improve the treatment of bloodstream infections (BSIs) and sepsis.

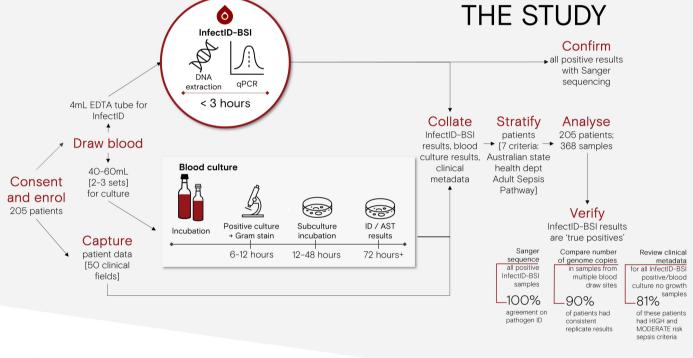
Sepsis is a leading killer worldwide, accounting for 11 million deaths each year<sup>1</sup>. The burden on health systems is immense, motivating Australian start-up Microbio to develop an effective method to detect and identify blood-borne pathogens for better patient management. Sixteen years of research have culminated in this commercial In Vitro Diagnostic assay: InfectID-BSI.

A bioinformatics approach underpins this highly discriminatory SNP fingerprint assay to detect and identify 26 of the most prevalent sepsiscausing bacteria and yeast directly from blood in less than 3 hours. The target pathogens for InfectID-BSI were selected based on research published by Opota and others in 2015, which identified these 20 pathogens responsible for causing 94% of sepsis cases in their multi-centre study cohort2.

## THE COMMERCIAL ASSAY





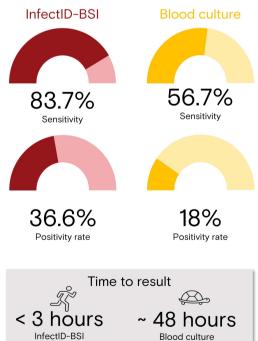


#### How does InfectID-BSI compare to blood culture?

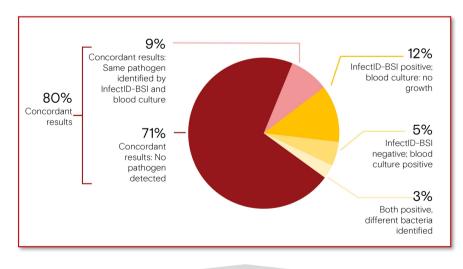
205 consented patients that were admitted to Emergency Departments at two large Australian public hospitals were enrolled. These patients presented with clinical signs and symptoms of a bloodstream infection, sepsis or septic shock.

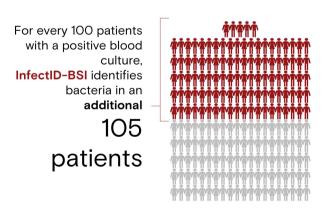
At the time that blood was drawn for routine blood culture, an additional 4mL EDTA tube was taken for InfectID-BSI testing. The blood culture was processed by the public hospital pathology laboratories using standard procedures. The InfectID-BSI samples were sent to Microbio's laboratory where DNA was extracted prior to real time PCR analysis. All InfectID-BSI positive results were independently confirmed by Sanger sequencing.

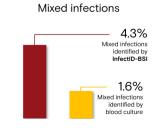
InfectID-BSI results were collated and compared to blood culture and clinical metadata. This data was subjected to statistical analysis to determine the performance of InfectID-BSI compared to blood

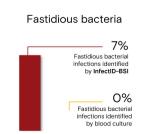


# THE RESULTS









### CONCLUSION

InfectID-BSI outperforms blood culture and informs targeted treatment of sepsis.

2 Opota, O., Croxatta, A., Prod'hom, G., & Greub, G. (2015). Blood culture-based diagnosis of bacteraemia: state of the art. Clnical Microbiology and Infection, 31:-322. doi:10.1016/j.cml.2015.01.003

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