



**ANNUAL SCIENTIFIC MEETING (ASM)
PERHIMPUNAN DOKTER SPESIALIS MIKROBIOLOGI KLINIK INDONESIA (PAMKI)
PERTEMUAN ILMIAH TAHUNAN (PIT) 2016**

**Collaboration Between Clinician and
Clinical Microbiologists for Strengthening
the Control and Preventing the Antimicrobial
Resistance**



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Collaboration Between Clinician and Clinical Microbiologists
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the Antimicrobial Resistance

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**PROFILE TIME-TO-POSITIVITY OF BLOOD CULTURE
BETWEEN GRAM-POSITIVE AND GRAM-NEGATIVE
BACTERIA IN CLINICAL MICROBIOLOGY LABORATORY
SANGLAH GENERAL HOSPITAL**

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The significance of blood culture results as a tool diagnostic for bacteremia depends on number of positive bottle or set and time-to-positivity (TTP) blood culture. TTP is defined as the length of time from the beginning of culture incubation to the detection of bacterial growth by an automated system. The length of TTP correlates with the severity of disease. The aim of this retrospective study is to investigate the length TTP of blood culture between Gram-positive (GP) and Gram-negative (GN) between March and June 2016 in Clinical Microbiology Department Sanglah General Hospital. TTP was gathered by checking each barcode in register manually on BacT/alert®. Patients were excluded if they were only one bottle delivered to the microbiology laboratory, one bottle positive with TTP > 24 hours for Gram Positive, one bottle positive for *Bacillus* sp and polymicrobial blood culture. From 1467 patients who underwent blood culture, there was 1843 bottle drawn and the positivity rate was 24%. The shortest TTP reached by *Klebsiella pneumoniae* sp pneumoniae in 2 hours, 0 minutes and 17 seconds. Among Gram-negative bacteria there were shorter TTP in lactose fermenter bacteria than non-lactose fermenter bacteria, 9,4 hours and 13,7 hours respectively. The most considered contaminated Gram-positive bacteria that met inclusion criteria have TTP less than 24 hours like *S. hominis* (14,4 hours), *S. haemolyticus* (14 hours) and *S. epidermidis* (14.5 hours). TTP can be influenced by microorganism species, but did not differ significantly between GP and GN. We need to confirm with clinical outcome for further investigation.

Keywords : Blood culture, Time-to-Positivity, Gram-positive, Gram-negative