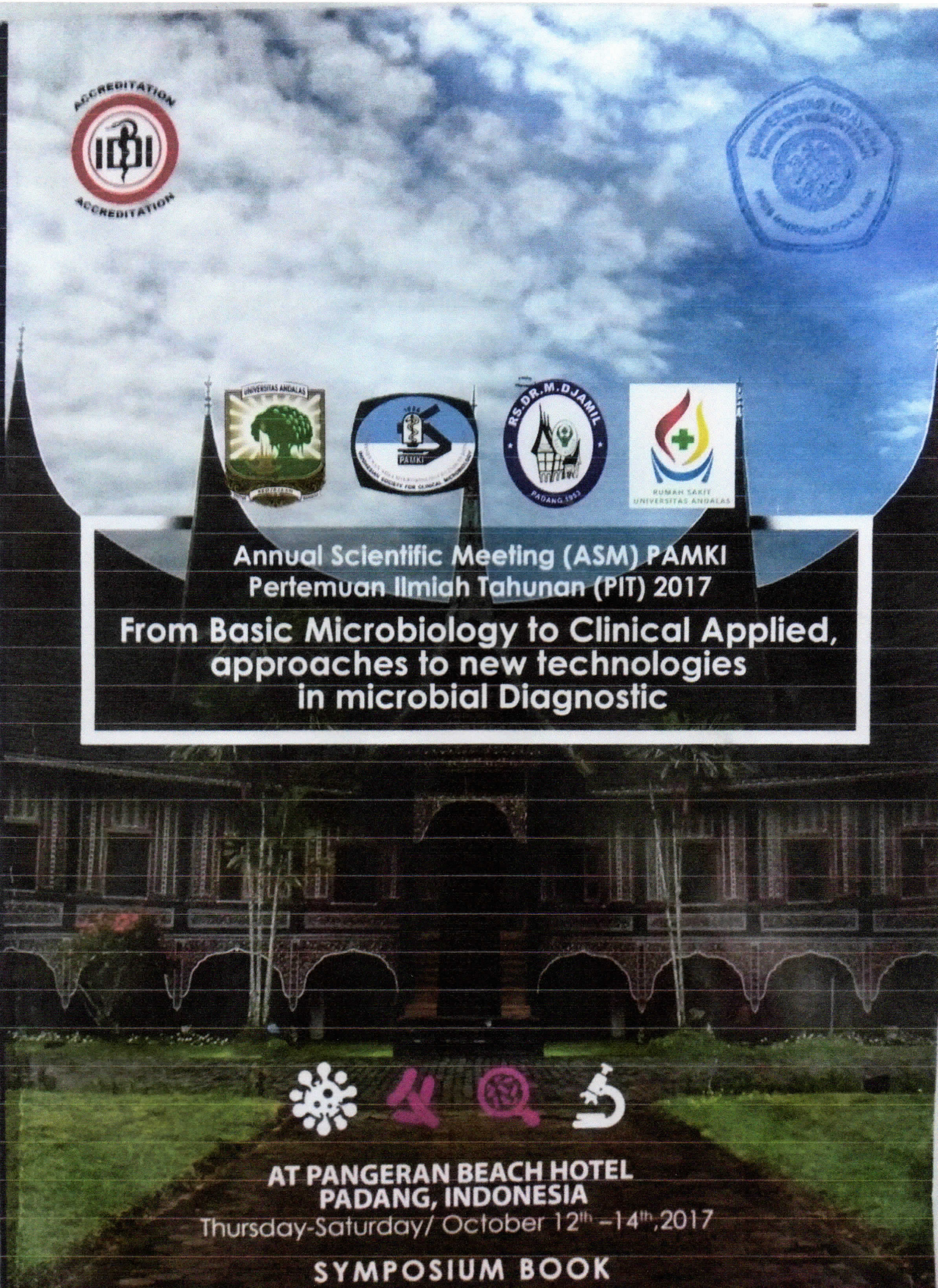

Annual Scientific Meeting (ASM) PAMKI
Pertemuan Ilmiah Tahunan (PIT) 2017

# From Basic Microbiology to Clinical Applied, approaches to new technologies in microbial Diagnostic

AT PANGERAN BEACH HOTEL
PADANG, INDONESIA
Thursday-Saturday/ October 12th –14th,2017

SYMPOSIUM BOOK

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# Drug Resistance Pattern of Mycobacterium tuberculosis Isolated from TB patients in Sanglah Hospital

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The emergence and rise of multidrug-resistant tuberculosis (MDR-TB) is getting complex. Drug susceptibility testing (DST) plays a pivotal role in selection of most effective drugs. The aim of this study was to determine tendency and susceptibility patterns of Mycobacterium tuberculosis isolated from suspected TB patients in Sanglah Hospital to first line anti-TB drugs (Rifampicin, Isoniazid, Ethambutol and Streptomycin). DST was performed using direct proportion method on Lowenstein-Jensen(LJ) medium. This was a retrospective, observational study of DST results that collected during 2012 to 2016. We classified TB susceptibility patterns into three categories: susceptible, resistant, and MDR. Cultures positive were found 438 out of 1743 TB patients (25.1%). The prevalence rate of MDR-TB was increasing from 5.9% in 2012 to 18.9% in 2016. The prevalence rate of any resistance was increasing from 5.3% in 2012 to 48.6% in 2016. On the other hand, the prevalence rate of susceptible isolate was decreasing from 88,8% in 2012 to 32.5% in 2016. Isolates resistant only to Isoniazid and rifampicin were 45,5 % in the present study increasing from 20 % in 2012 to 71,4% in 2016. Additional resistance MDR-TB to streptomycin or ethambutol was 22.7% and 15,9% respectively. Overall, resistant to all first-line drugs were 15.9 %. This study suggested there has been increasing trend in the first line drug resistance. Patient's compliance of taking anti TB medicine regularly and conducting good infection control practices may help in reducing and spreading of TB drug resistance.

**Keywords:** Drug Resistance; Tendency; MDR TB