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Antibiotics properties of peat lands bacteria

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The widespread use of antibiotics to treat infectious diseases causes a global increase of resistant bacteria, whereas a discovery of new antibiotics was very rare due to high expenses. Peat land has an extreme and unique environment therefore an adapted bacterial flora may has special metabolic properties which contain has antimicrobial like substances. The purpose of this study was to identify the characteristics of antibiotic like substances produced by peat soil bacteria. The TSA media incubate at 30oC for two days was used to isolate the bacteria. The isolated colonies were identified and followed by Gram staining and catalase test. Antimicrobial activity test towards *Salmonella Typhi* was done using diffusion wells method, incubate at 37oC for 24 hours and chloramphenicol disk was used as control. Molecular weight was determined by SDS PAGE electrophoresis. The characteristics of bacteria were Gram negative cocci, positive catalase with molecular weight of 43 KDa. Diameter of inhibition zone of peat soil bacteria is 30 mm, whereas chloramphenicol is 27.5 mm. Antibiotic-like substances produced by peat soil bacteria need to be further characterized and may be able to be developed as antibacterial drug.

Biography

Dede Mahdiyah is a PhD candidate from Diponegoro University, Indonesia. She is currently working as a Lecturer and as Head of Research and Community Services of Sari Mulia University, Banjarmasin, South of Kalimantan.

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