CONTROL ID: 2472641

TITLE: Antibacterial of Terpenoid A against Streptococcus mutans from Sarang Semut (Myrmecodia pendens) Plant

AUTHORS (FIRST NAME INITIAL LAST NAME): M. Gartika ¹, D. Kurnia ², M. Satari ³

AUTHORS/INSTITUTIONS: M. Gartika, Faculty of Dentistry, Padjadjaran University, Bandung, West Java, INDONESIA; D. Kurnia, Chemistry, Faculty of Mathematics and Sciences Universitas Padjadjaran, Bandung, West Java, INDONESIA; M. Satari, Microbiology, Faculty of Dentistry, Universitas Padjadjaran, Bandung, West Java, INDONESIA

PREFERRED PRESENTATION TYPE: Oral

CURRENT SCIENTIFIC GROUPS & NETWORKS: Cariology Research-Microbiological Studies/Biofilm

ABSTRACT BODY:

Objectives: This study is to search bioactive compounds from Sarang semut (Myrmecodia pendens) as new antibacterial agents especially against S. mutans.

Methods: Soxhletation method with the solvent of ethyl acetate was used to extract the components of active compounds. The extract was then separated using a combination of column chromatography technique (normal and reversed phase) to yealded active compound 1 that called terpenoid A. The structure active terpenoid A was characterized using UV spectroscopy, infrared, nuclur magnetic resonance and mass spectroscopy.

Results: The antibacterial activity of terpenoid A was evaluated by inhibition zone value of 10,000, 5,000 and 1,000ppm terpenoid A which were measured by Kirby-Bauer method at 0.5 Mc Fahrland turbidity using Shimadzu UV-1800 spectrophotometry with 600 nm wavelength are 13.7, 13.6 and 11.8 respectively. Terpenoid A was tested against S. mutans using micro-dilution method with Elisa reader DAR800 to obtain the value of minimum inhibitory concentration (MIC) and minimum bactericidal concentration (MBC), respectively 39 and 312.5 ppm, which of Chlorhexidine was used as a positive control because it is the gold standard mouthwash.

Conclusions: Sarang semut plant (Myrmecodia pendens) has antibacterial activity against Streptococcus mutans. (no table selected)

TABLE FOOTER: (No Tables)

(KEYWORDS: Streptococcus mutans, Myrmecodia pendens, Terpenoid A.

Support Funding Agency/Grant Number - Abstracts: Academic Leadership Grant Universitas Padjadjaran

Financial Interest Disclosure: NONE

AWARDS:

Group Author Abstracts - Abstract:
Session Chair Volunteers - Abstracts: Oral Session Chair
Special Scheduling Needs - Abstracts: NONE
Student Status - Abstracts: NO
Student Other Designation - Abstracts:
Abstract Submission - Track Selection: Clinician Track