

# SECONDARY METABOLITES HAVING ANTIINFECTION ACTIVITY EXPLORATION FROM MYXOBACTERIA AND ACTINOMYCETES

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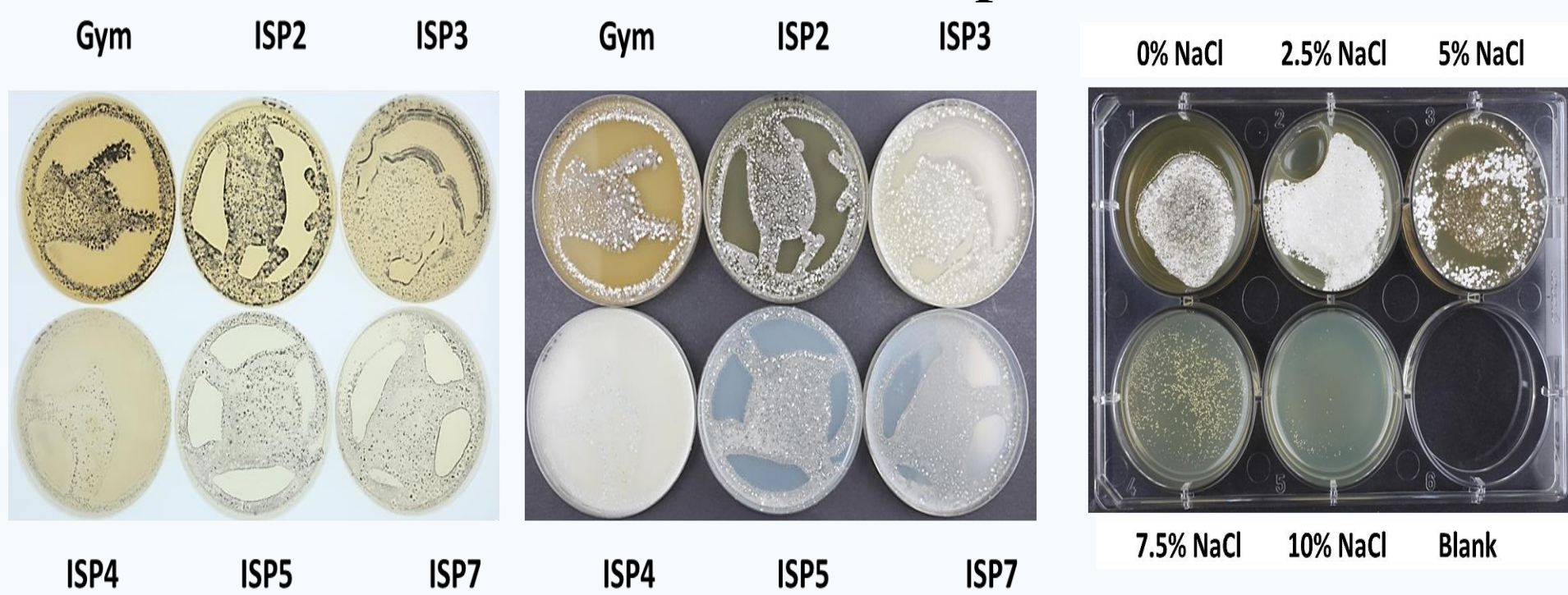
18 September – 17 November 2016

## Introduction

- German-Indonesian anti-infective cooperation (GINAICO) is a collaboration research project between Germany and Indonesia in order to investigate novel anti-infective compounds.
- Streptomyces* is essential for human life because approximately 75% of commercially antibiotics are isolated from this genus.
- Enggano Island is one of the outlying islands of Indonesia and located in the Indian Ocean.
- This study aims to isolate, characterize and screen antimicrobial compounds produced by *Streptomyces* spp. from soil of Enggano Island against some pathogens.

## Results

- Isolate SHP 1-2 has been selected to be potential source of antimicrobial compound(s).

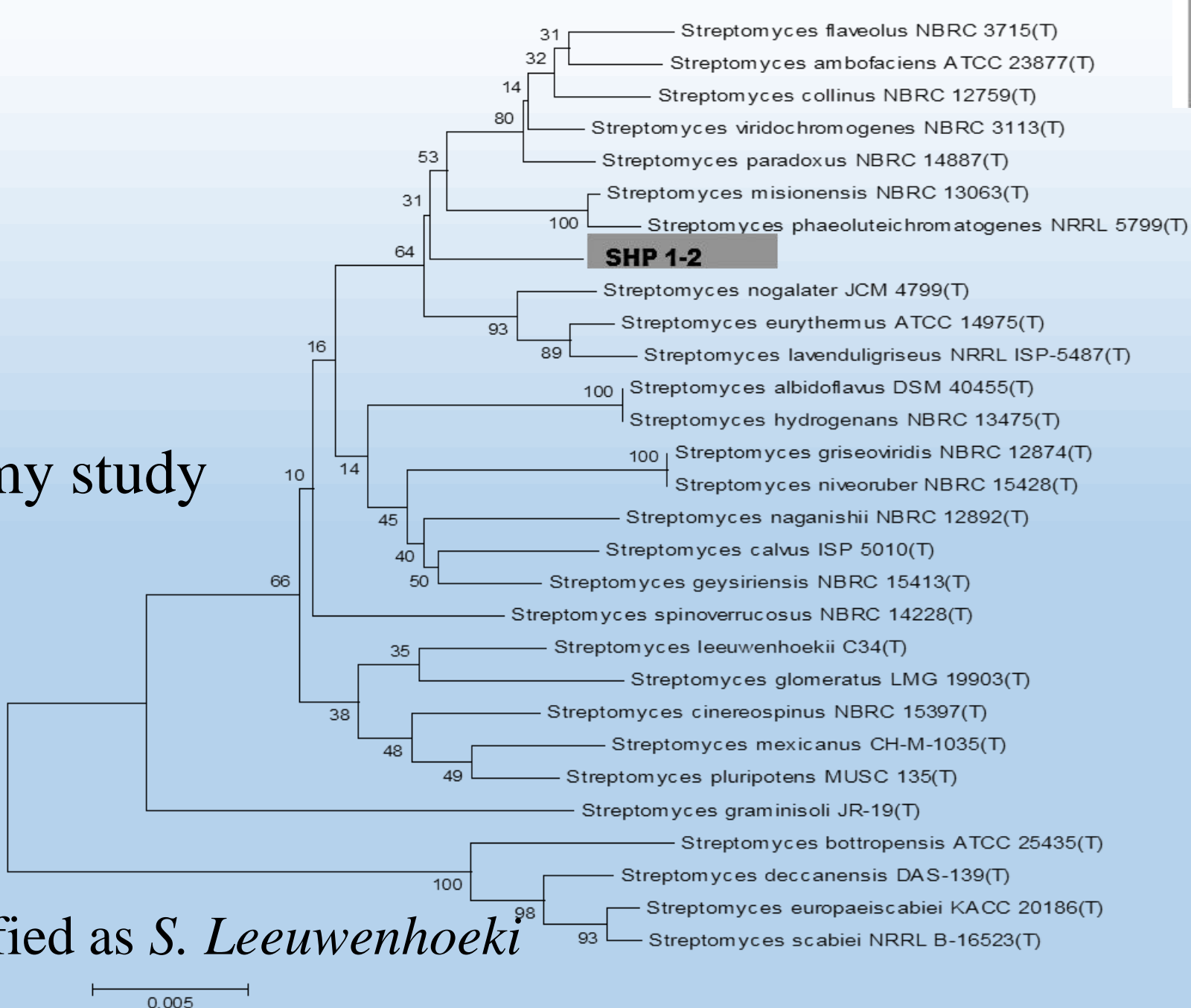


Characterization of SHP 1-2

- Taxonomy study

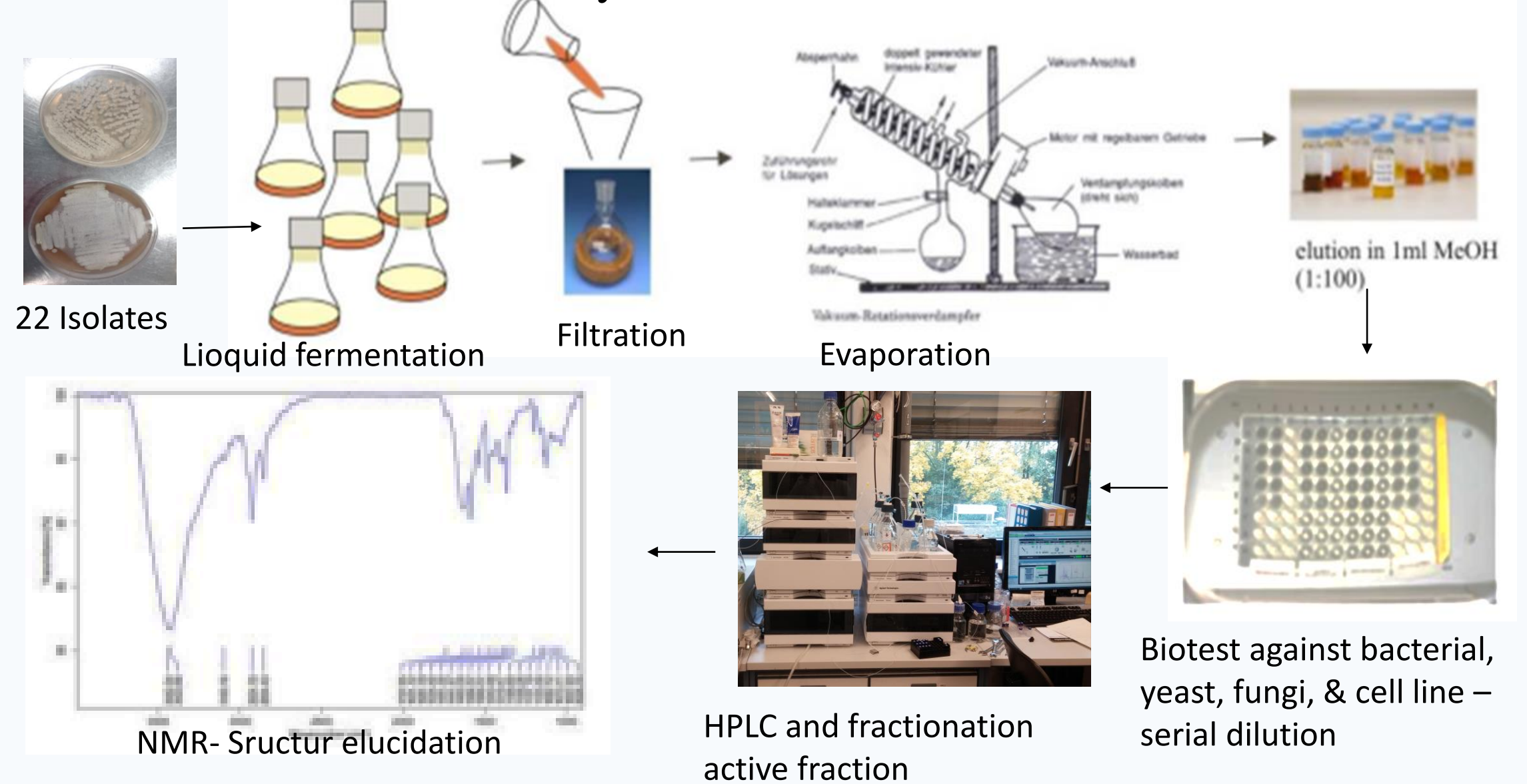


SHP1-2 is identified as *S. Leeuwenhoekii*

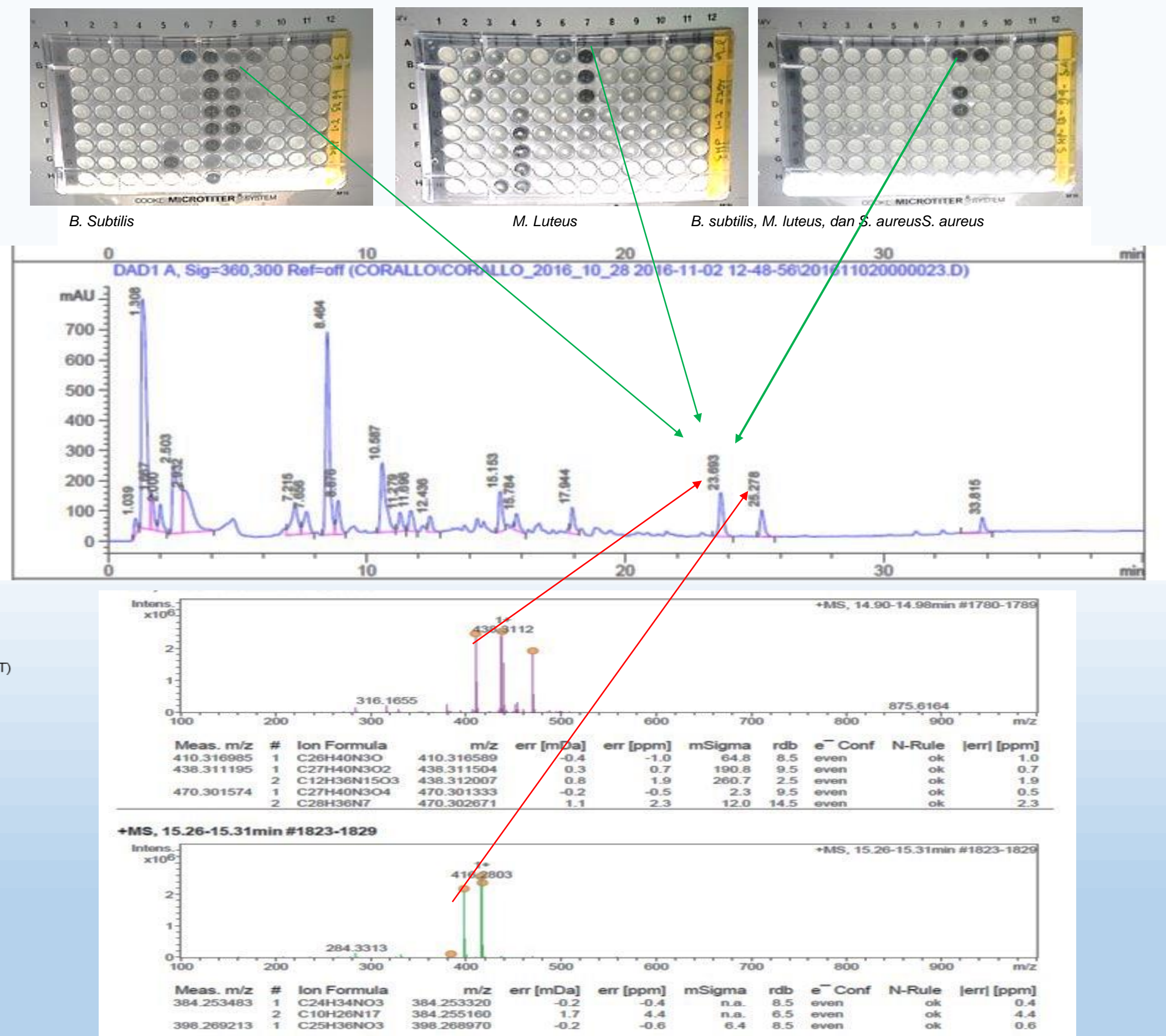


## Method

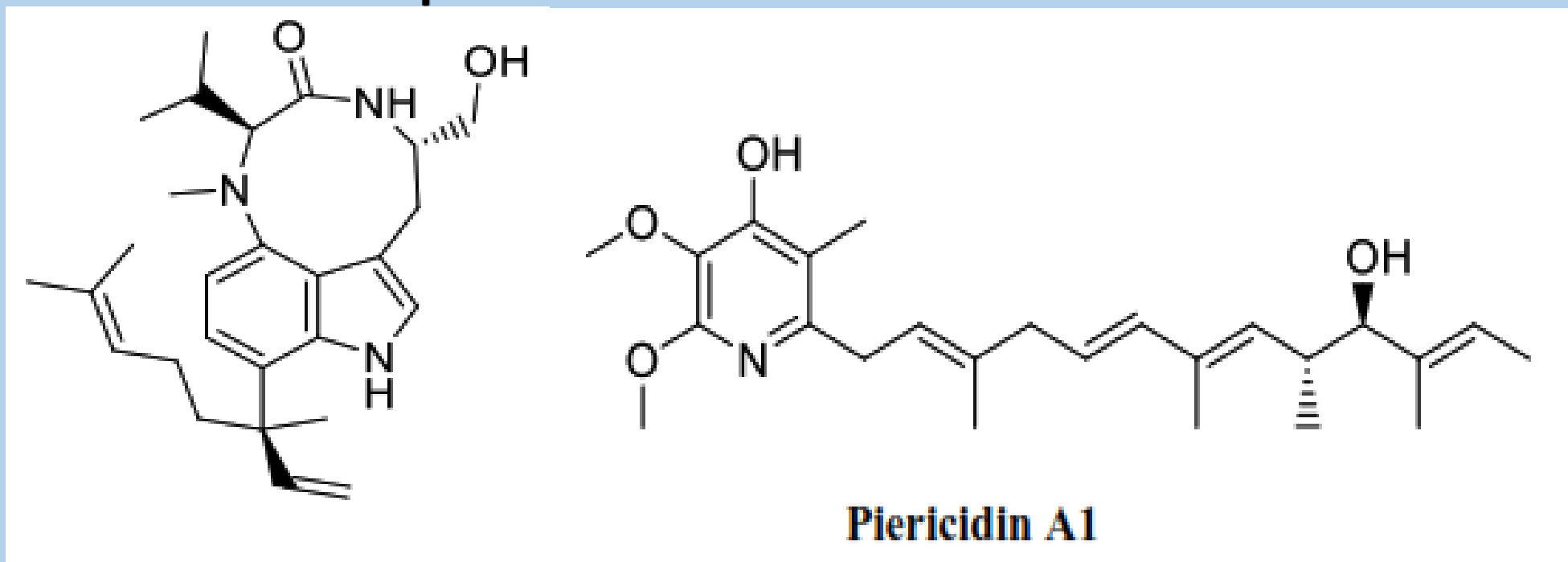
From a soil to new secondary metabolites



- Bioassay guided fractionation and isolation of active compounds



## Compounds isolated from SHP 1-2 extract



## Outputs and Benefits

- ✓ This training improves the skills, knowledge, and techniques regarding the isolation of actinobacteria and their targeted active secondary metabolites.
- ✓ To Increases the mastery of using advanced instruments for isolating secondary metabolites.
- ✓ To Enhance research collaboration with German University/Research Institute, generating another collaborative project.

## Publication

Risdian C, Ratnakomala S, Primahana G, Mozef Tj, Dewi RT, Lisdiyanti P, Wink J. Screening of Antimicrobial Producing Actinobacteria from Enggano Island, Indonesia. AIP Conference Proceedings 2024, 020039 (2018); doi: 10.1063/1.50643252018.