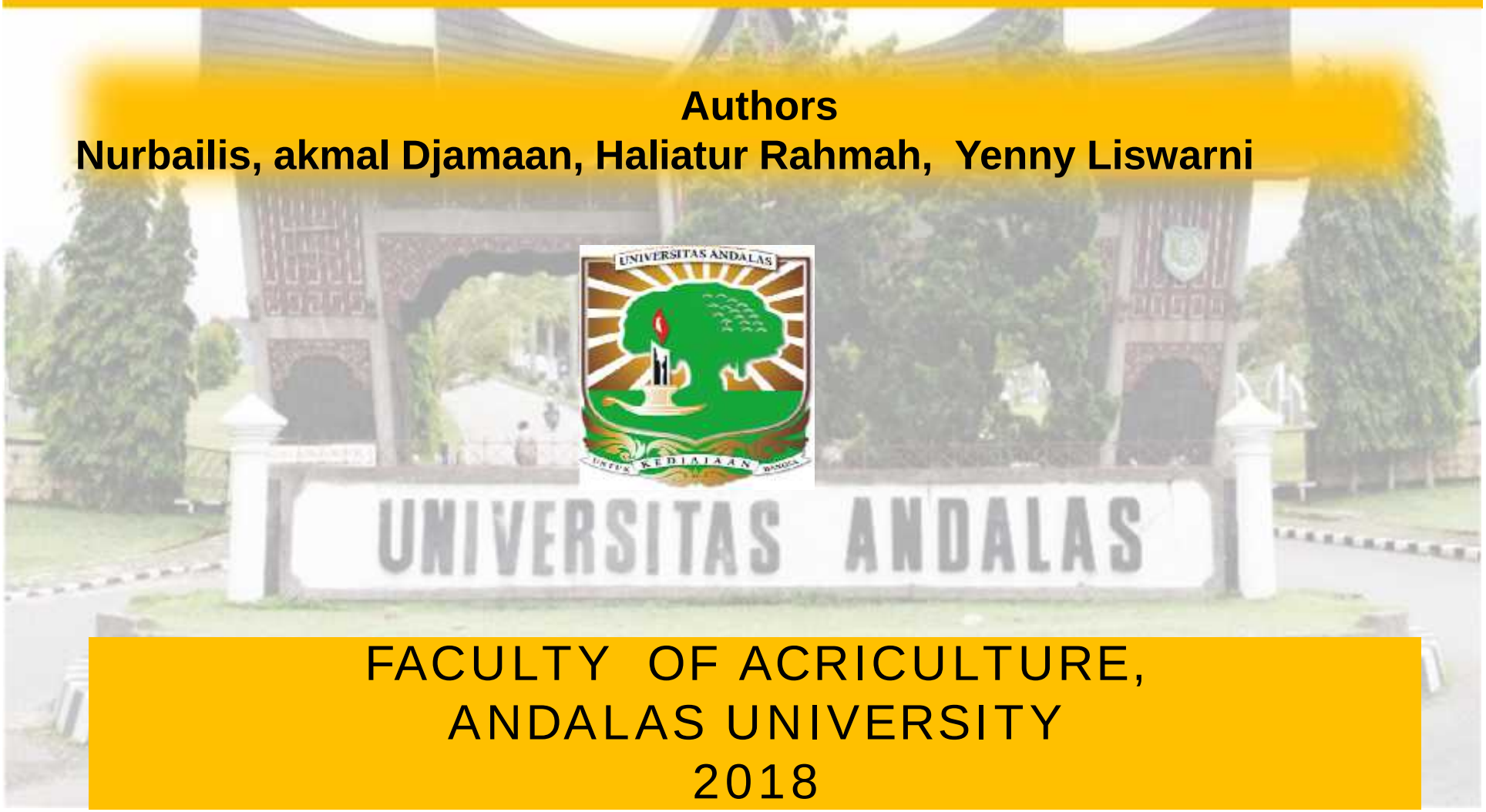
ISOLATION OF SECONDARY METABOLITE FROM TRICHODERMA SPP AND ITS POTENTIAL TO SUPPRESS THE GROWTH OF COLLETOTRICHUM GLOEOSPOROIDES CAUSED ANTRACNOSE DISEASE ON CHILI

Authors

Nurbailis, akmal Djamaan, Haliatur Rahmah, Yenny Liswarni



FACULTY OF ACRICULTURE,
ANDALAS UNIVERSITY

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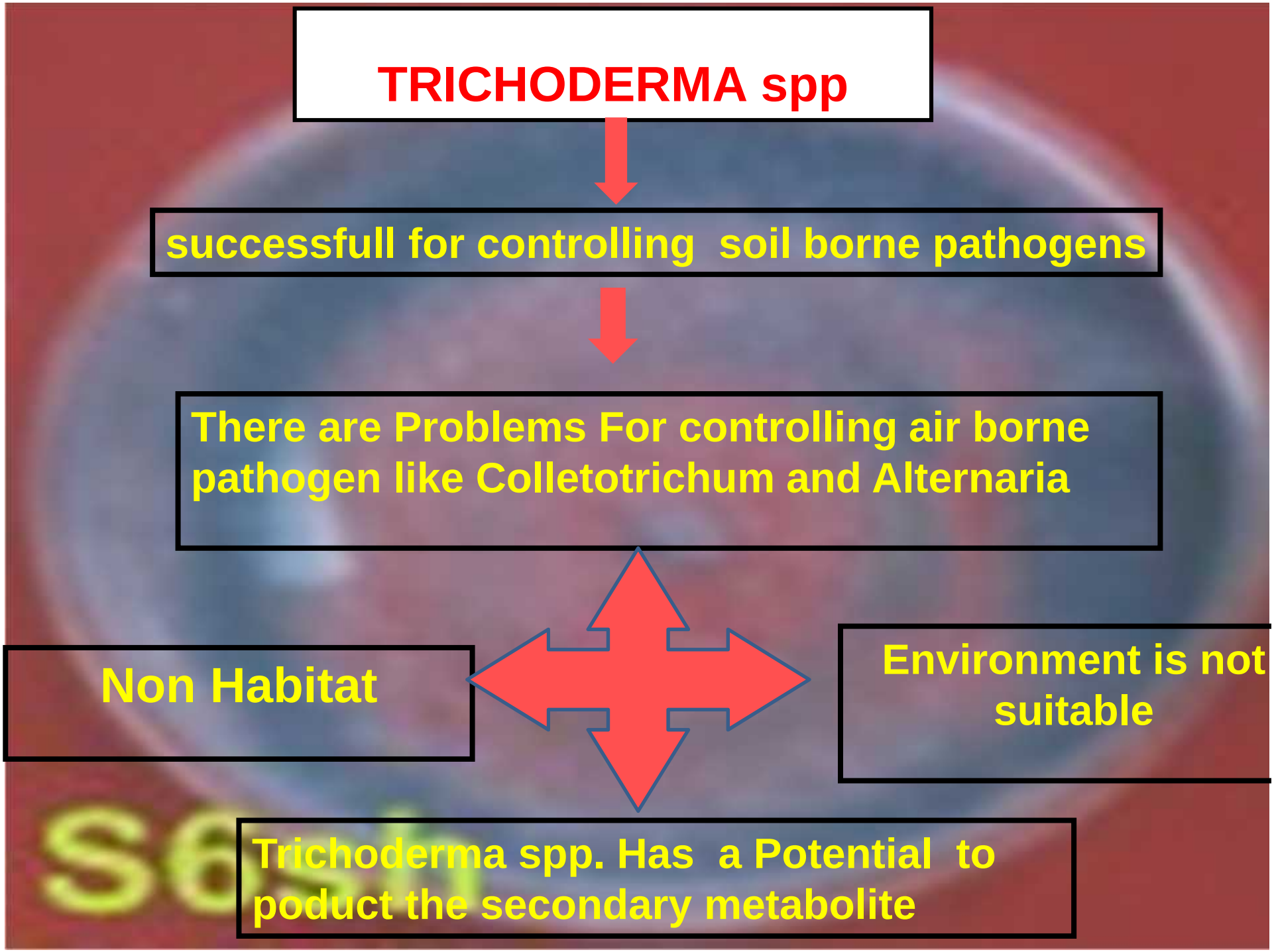
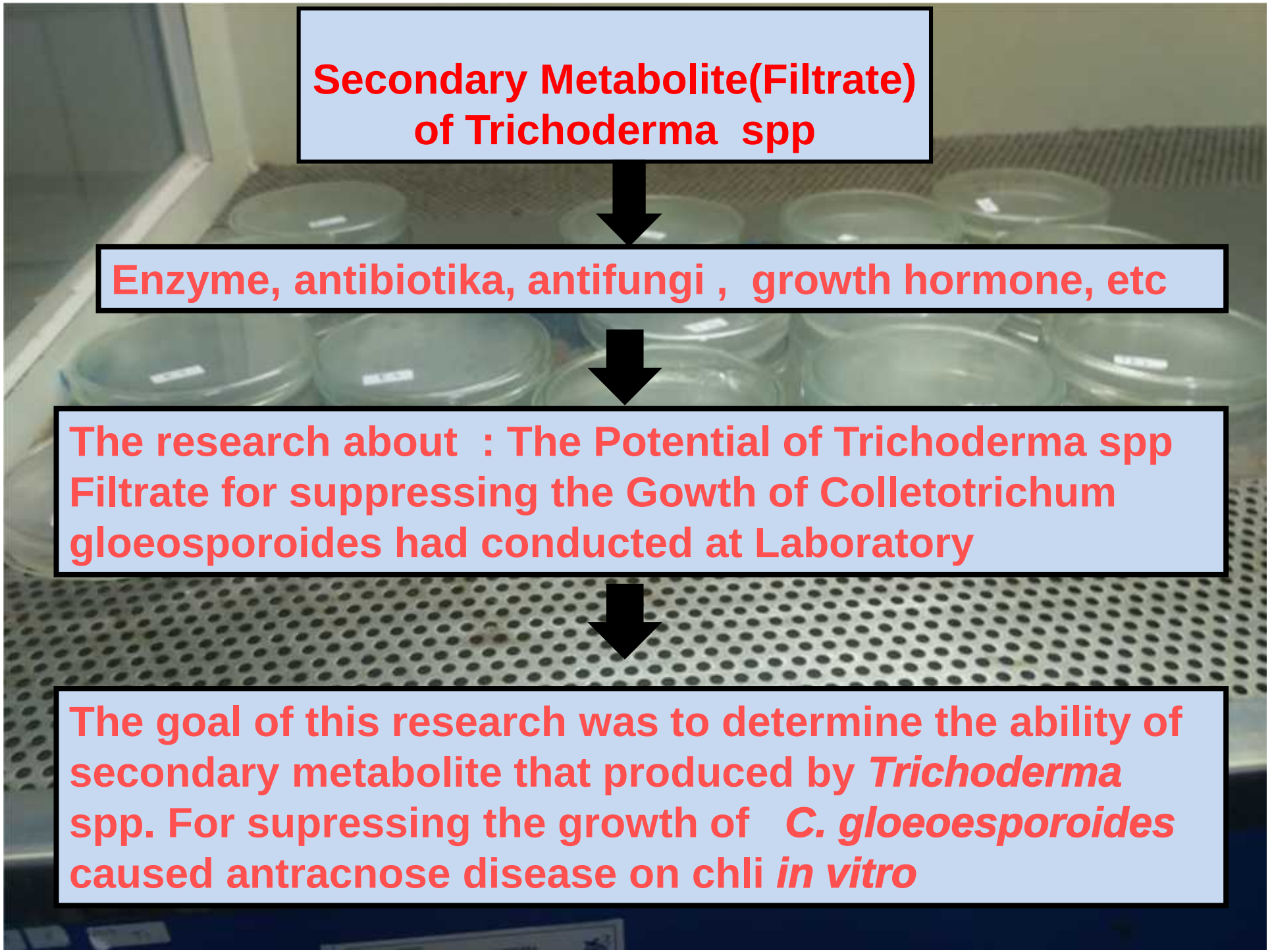

TRICHODERMA spp
successfull for controlling soil borne pathogens
There are Problems For controlling air borne pathogen like Colletotrichum and Alternaria
Non Habitat
Environment is not suitable
Trichoderma spp. Has a Potential to poduct the secondary metabolite


Secondary Metabolite(Filtrate) of Trichoderma spp
Enzyme, antibiotika, antifungi , growth hormone, etc
The research about : The Potential of Trichoderma spp Filtrate for suppressing the Gowth of Colletotrichum gloeosporoides had conducted at Laboratory
The goal of this research was to determine the ability of secondary metabolite that produced by *Trichoderma* spp. For supressing the growth of *C. gloeoesporoides* caused antracnose disease on chli *in vitro*

METHODOLOGI

Randomize Block Design

TRICHODERMA SPP

6 Treatment

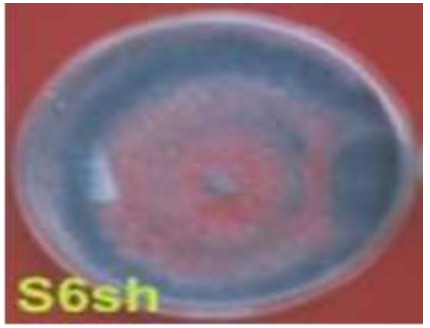
A Trichoderma harzianum
B. Trichoderma viride
C. Trichoderma koningii
D. Trichoderma PP1
E. Trichoderma PP3
F. Without Filtrate (Control)

4 Replication

Statistic analysis DNMRT 5 %

Implementation

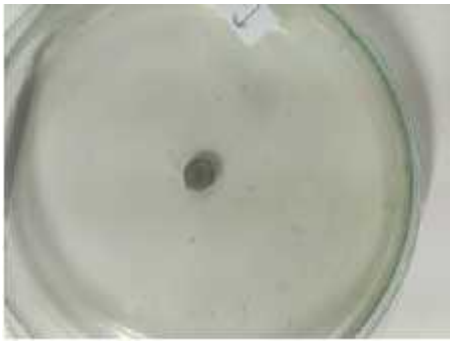
Rejuvenation of *Trichoderma spp.* On PDA



Culturing of Trichoderma on PDB

Obtain The Filtrate from PDB

Test of Trichoderma spp Filtrate for supressing Colletotrichum gloeosporoides in vitro



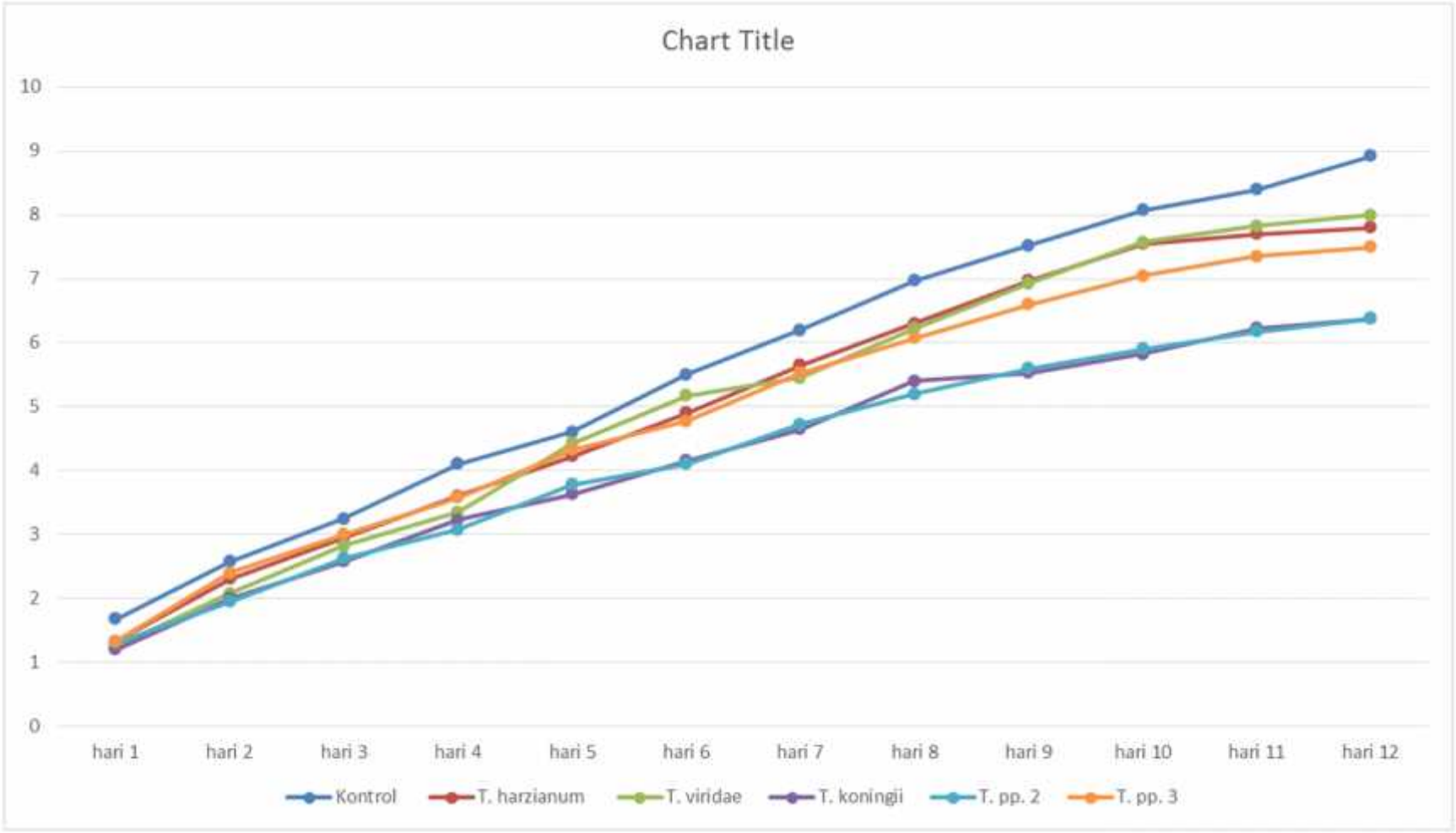
Parameters observed

1. Diameter of colony
2. Germination of conidia
3. Density of conidia

Table 1. Colony Diameter,Conidia Density and Conidia Germination of Colletotrichum gloeosporoides that Treated with Filtrate of Trichoderma spp

TREATMENT Filtrate of Trichoderma spp	PARAMETERS OBSERVED		
	DIAMETER OF COLONY	DENSITY OF CONIDIA (X 10^8)	GERMINATION OF CONIDIA (%)
Control (without Filtrate)	8.92 a	8.17 a	75.50 a
Trichoderma . viridae	8.00 b	3,80 b	39.50 bc
Trichoderma . harzianum	7.80 b	2.45 bc	23.00 e
Trichoderma . pp. 3	7.50 b	2.20 c	30.00 de
Trichoderma . koningi	6.37 c	2.20 c	36.83 cd
Trichoderma . pp. 2	6.37 c	2.00 c	45.25 b
	CV = 5.43	CV = 30.55	CV = 12.79

Grafik 1. The Growth of *Colletotrichum gloeosporoides* that Treated with Trichoderma Filtrate during 3 -12 days after Inoculation




Trichoderma koningii
Kontrol
Trichoderma PP-2

Conclusion

1. The result indicated that all secondary metabolite that produced by *Trichoderma* spp were be able to supress the growth of *C. gloeosporoides*.

2. *T. harzianum* was the best isolate for inhibiting the growth of *C. gloeosporoides* with diameter of colony 7,8 cm, germination of conidia 23% and conidia density 2.45. 10^{8}·conidia/ml

THANK YOU
FOR THE ATTENTION