

ABSTRACT

Mutiara K. Pitaloka. (0810480190.) Identification of *Pseudocercospora* from Bogor Botanical Garden Based on Morphological Character and Phylogenetic Analysis. Under the guidance of Prof. Ir. Liliek Sulistyowati, Ph.D. as the First Supervisor, Luqman Qurata Aini, SP,MSi,Ph.D. as the First Companion Supervisor and Dr. Iman Hidayat as the Second Companion Supervisor.

Bogor Botanical Garden is a large Botanical Garden which lies in Bogor City, with the high plant varieties so it enables to the existence of microorganisms associated with plants is various as well. One of them is *Pseudocercospora* mold which is one of molds from *Cercosporoid* group, that is mold that causes spotting symptoms in leaves, rot fruit, and deciduous young fruit (Phensingtam *et al.* 2011). Identification in *Cercosporoid* mold species can be conducted based on genetics character fused with morphological character. It indicates that the identification of *Cercosporoid* morphology is necessary to conduct and it needs to be supported with phylogenetical analysis in order to separate species in genus level.

The research was conducted in the Laboratory of Mycology, the Division of Microbiology, Biology Research Center, Indonesian Sciences Institute (LIPI), Cibinong, West Java from March 2012 to June 2012.

Data collection and data analysis were obtained by collecting specimen, observation (Morphological Identification) specimen, isolation of spore single, extraction and PCR (ITS Primer), phylogenetical analysis, NJ (Neighbour Joining) phylogenetical analysis using Mega 5.05 program. Philogram is constructed through *distance*. To find out the level of truth in every ramification, it is conducted *bootstrap* 1000 times.

Fungi from *Cercosporoid* group which have been identified are eight from *Pseudocercopora* genus with one new species that is *P.tectonae* Hidayat sp. nov., four species which are *new record* in Indonesia they are *P.nymphaeace*, *P.gmelinae*, *P.pancratii*, *P.lythracearum*., other species found and identified successfully are *P.plumeriae*, *P.muntingiae*., Besides, there is one species of *Pseudocercopora* that is a collection of LIPI-MC that is *P. phyllitidis*.

Besides from *Pseudocercopora* genus, it is also found one species of fungi from *Passalora* genus, that is *Passalora henningsii* and four genus of *Cercospora* from the collection of LIPI-MC as the comparator, they are *C.volkameriae*, *C.canescens*, *C.ipomoeae*, *C.hayi*.