3636861SIMI/M : MAJOR : MICROBIOLOGY; M.Sc. (Microbiology)

KEY WORD : PENICILLIUM MARNEFFEI / PCR FINGERPRINT / DRUG SUSCEPTIBILITY

KHATTIYA THIPSUVAN : PENICILLIUM MARNEFFEI : TYPES AND DRUG SUSCEPTIBILITY. THESIS ADVISOR : PANKORN IMWIDTHAYA, M.D., Dr.med., ANGKANA CHAIPRASERT, Dr.rer.nat., SOMWANG DANCHAI-VIJITR, M.D., F.R.C.P., RUENGPUNG SUTTHENT, M.D., Ph.D., JUREE JEARA-NAISILAVONG, M.Sc. 87 p. ISBN 974-661-087-2

The PCR fingerprinting of 30 *Penicillium marneffei* isolates from Chiang Rai and Bangkok was studied by using the single-nucleotide primer $(GACA)_4$, phage M13 core sequence and thirty-two 10-nucleotide primers. Discrimination of fingerprinting patterns was based on the difference in the number of major bands. *Penicillium marneffei* was distinguished into four types i.e., A, C, D, and E. Type A was found in two isolates from Chiang Rai (6.66%). Types C and D were found in two (6.66%) and one (3.33%) isolates from Bangkok. The predominate type was type E (83.33%) which was found in isolates both from Chiang Rai and Bangkok. The PCR fingerprinting method is found to be useful for epidemiological study of *P. marneffei*, a dimorphic opportunistic fungus, an emerging pathogen in HIV pandemic.

In vitro drug susceptibility test by broth macrodilution to four antifungal agents against yeast form *P. marneffei* was done. The range MIC and its means MIC of amphotericin B, fluconazole, itraconazole, and ketoconazole were 0.125-0.5, 4.0-8.0, <0.032, and <0.125 μg/ml and 0.32, 4.93, <0.032, and <0.125 μg/ml respectively. The drug susceptibility test should provide a guide for clinicians in selection of an appropriate chemotherapeutic regimen.