

VIII. REFERENCES

- Ajello L, Padhye AA, Sukroongreung S, Nilakul CH, Tantimavanic S.** Occurrence of *Penicillium marneffei* infections among wild bamboo rats in Thailand. *Mycopathologia* 1995; 131: 1-8.
- Allendoerfer R, Maresca B, Deepe Jr GS.** Cellular immune response to recombinant heat shock protein 70 from *Histoplasma capsulatum*. *Infect Immun* 1996; 64: 4123-8.
- Andrianopoulos A.** Control of morphogenesis in the human fungal pathogen *Penicillium marneffei*. *Int J Med Microbiol* 2002; 292: 331-47.
- Benoist P, Mas JA, Marco R, Cervera M.** Differential muscle-type expression of the *Drosophila* troponin T gene. A 3-base pair microexon is involved in visceral and adult hypodermic muscle specification. *J Biol Chem* 1998; 273: 7538-46.
- Bonato MC, Silva AM, Gomes SL, Maia JC, Juliani MH.** Differential expression of heat-shock proteins and spontaneous synthesis of HSP70 during the life cycle of *Blastocladiella emersonii*. *Eur J Biochem* 1987; 163: 211-20.
- Boorstein WR, Craig EA.** Structure and regulation of the *SSA4 HSP70* gene of *Saccharomyces cerevisiae*. *J Biol Chem* 1990a; 265: 18912-21.
- Boorstein WR, Craig EA.** Transcriptional regulation of *SSA3*, an *HSP70* gene from *Saccharomyces cerevisiae*. *Mol Cell Biol* 1990b; 10: 3262-7.
- Boorstein WR, Ziegelhoffer T, Craig EA.** Molecular evolution of the *HSP70* multigene family. *J Mol Evol* 1994; 38: 1-17.

Borneman AR, Hynes MJ, Andrianopoulos A. A basic helix-loop-helix protein with similarity to the fungal morphological regulators, Phd1p, Efg1p and StuA, controls conidiation but not dimorphic growth in *Penicillium marneffei*. *Mol Microbiol* 2002; 44: 621-31.

Borneman AR, Hynes MJ, Andrianopoulos A. An *STE12* homolog from the asexual, dimorphic fungus *Penicillium marneffei* complements the defect in sexual development of an *Aspergillus nidulans steA* mutant. *Genetics* 2001; 157: 1003-14.

Borneman AR, Hynes MJ, Andrianopoulos A. The *abaA* homologue of *Penicillium marneffei* in two developmental programmes: conidiation and dimorphic growth. *Mol Microbiol* 2000; 38: 1034-47.

Boyce KJ, Hynes MJ, Andrianopoulos A. Control of morphogenesis and actin localization by the *Penicillium marneffei* *RAC* homolog. *J Cell Sci* 2003; 116: 1249-60.

Boyce KJ, Hynes MJ, Andrianopoulos A. The *CDC42* homolog of the dimorphic fungus *Penicillium marneffei* is required for correct cell polarization during growth but not development. *J Bacteriol* 2001; 83: 3447-57.

Breathnach R, Chambon P. Organization and expression of eukaryotic split genes coding for proteins. *Annu Rev Biochem* 1981; 50: 349-83.

Britton WH, Hellqvist L, Holt P, Basten A. Immunoreactivity of a 70 kDa antigen from *Mycobacterium bovis* purified by monoclonal antibody affinity chromatography. *J Exp Med* 1986; 164: 695-708.

Cao L, Chan CM, Chen D, Vanittanakom N, Lee C, Chan CM, Sirisanthana T, Tsang DN, Yuen KY. Detection of cell wall mannoprotein Mp1p in culture supernatants of *Penicillium marneffe* and in sera of penicilliosis patients. J Clin Microbiol 1999; 37: 981-6.

Cao L, Chan CM, Lee C, Wong SS, Yuen KY. MP1 encodes an abundant and highly specific antigenic cell wall mannoprotein in the pathogenic fungus *Penicillium marneffe*. Infect Immun 1998a; 66: 966-73.

Cao L, Chen D, Lee C, Chan CM, Chan KM, Vanittanakom N, Tsang DN, Yuen KY. Detection of specific antibodies to an antigenic mannoprotein for diagnosis of *Penicillium marneffe* penicilliosis. J Clin Microbiol 1998b; 36: 3028-31.

Capponi M, Sureau P, Segretain G. Penicilliose de *Rhizomys sinensis*. Bull Soc Pathol Exot 1956; 49: 418-21.

Carlo T, Sterner DA, Berget SM. An intron splicing enhancer containing a G-rich repeat facilitates inclusion of a vertebrate micro-exon. RNA 1996; 2: 342-53.

Caruso M, Sacco M, Medoff G, Maresca B. Heat shock 70 gene is differentially expressed in *Histoplasma capsulatum* strains with different levels of thermotolerance and pathogenicity. Mol Microbiol 1987; 1: 151-8.

Cejudo FJ, Murphy G, Chinoy C, Baulcombe DC. A gibberellin-regulated gene from wheat with sequence homology to cathepsin B of mammalian cells. Plant J 1992; 2: 937-48.

Cernila B, Cresnar B, Breskvar K. Induction of *hsp70* in the fungus *Rhizopus nigricans*. Biochem Biophys Res Commun 1999; 265: 494-8.

Cernila B, Cresnar B, Breskvar K. Molecular characterization of genes encoding cytosolic Hsp70s in the zygomycete fungus *Rhizopus nigricans*. *Cell Stress Chaperones* 2003; 8: 317-28.

Chaiyaroj S, Chawengkirttikul R, Sirisinha S, Watkins P and Srinoulprasert Y. Antigen detection assay for identification of *Penicillium marneffei* infection. *J Clin Microbiol* 2003; 1: 432-4.

Chan YF, Chow TC. Ultrastructural observations on *Penicillium marneffei* in natural human infection. *Ultrastruct Pathol* 1990; 14: 439-52.

Chariyalertsak S, Sirisanthana T, Supparatpinyo K, Nelson KE. Seasonal variation of disseminated *Penicillium marneffei* infections in northern Thailand: a clue to the reservoir?. *J Infect Dis* 1996a; 173: 1490-3.

Chariyalertsak S, Supparatpinyo K, Sirisanthana T, Nelson KE. A controlled trial of itraconazole as primary prophylaxis for systemic fungal infections in patients with advanced human immunodeficiency virus infection in Thailand. *Clin Infect Dis* 2002; 34: 277-84.

Chariyalertsak S, Vanittanakom P, Nelson KE, Sirisanthana T, Vanittanakom N. *Rhizomys sumatrensis* and *Cannomys badius*, new natural animal hosts of *Penicillium marneffei*. *J Med Vet Mycol* 1996b; 34: 105-10.

Chiewchanwit S, Mahanupab P, Hirunsri P, Vanittanakom N. Cutaneous manifestations of disseminated *Penicillium marneffei* mycosis in five HIV-infected patients. *Mycoses* 1991; 34: 245-9.

Chongtrakool P, Chaiyaroj SC, Vithayasai V, Trawatcharegon S, Teanpaisan, R, Kalnawakul S, Sirisinha S. Immunoreactivity of a 38-kilodalton *Penicillium marneffei* antigen with human immunodeficiency virus-positive sera. *J Clin Microbiol* 1997; 35: 2220-3.

Cogliati M, Roverselli A, Boelaert JR, Taramelli D, Lombardi L, Viviani MA.

Development of an In vitro macrophage system to assess *Penicillium marneffei* growth and susceptibility to nitric oxide. *Infect Immun* 1997; 65: 279-84.

Cooper CR Jr. From bamboo rats to humans: the odyssey of *Penicillium marneffei*.

ASM News 1998; 64: 390-7.

Cooper CR Jr, Haycocks NG. *Penicillium marneffei*: an insurgent species among the penicillia. *J Eukaryot Microbiol* 2000; 47: 24-8.

Cooper CR Jr, McGinnis MR. Pathology of *Penicillium marneffei*. An emerging acquired immunodeficiency syndrome-related pathogen. *Arch Pathol Lab Med* 1997; 121: 798-804.

Craig EA. The Heat-shock Response of *Saccharomyces cerevisiae*. In *The Molecular Biology of the Yeast Saccharomyces*. Volume 2. Cold Spring Harbor Laboratory Press, USA; 1992. p.501-537.

Craig EA, Gambil BD, Nelson RJ. Heat shock proteins: molecular chaperones of protein biogenesis. *Microbiol Rev* 1993; 57: 402-414.

Craig EA, Jacobsen K. Mutations in cognate genes of *Saccharomyces cerevisiae* *hsp70* result in reduced growth rates at low temperatures. *Mol Cell Biol* 1985; 5: 3517-24.

Craig EA, Kramer J, Shilling J, Werner-Washburne M, Holmes S, Kosic-Smithers J, Nicolet CM. *SSC1*, an essential member of the yeast *HSP70* multigene family, encodes a mitochondrial protein. *Mol Cell Biol* 1989; 9: 3000-8.

Craig EA, Lindquist S. The heat-shock proteins. *Annu Rev Genet* 1988; 22: 631-77.

Cui J, Tanaka R, Taguchi H, Sano A, Ito E, Fukushima K, Takeo K, Yoshida S, Nishimura K, Miyaji, M. Histopathological and electron microscopical studies on experimental *Penicillium marneffei* infection in mice. *J Med Vet Mycol* 1997; 35: 347-53.

da Silva SP, Borges-Walmsley MI, Pereira IS, Soares CM, Walmsley AR, Felipe MS. Differential expression of an *hsp70* gene during transition from the mycelial to the infective yeast form of the human pathogenic fungus *Paracoccidioides brasiliensis*. *Mol Microbiol* 1999; 31: 1039-50.

Deng Z, Ribas JL, Gibson DW, Conner DH. Infections caused by *Penicillium marneffei* in China and Southeast Asia. Review of eighteen published cases and report of four more Chinese cases. *Rev Infect Dis* 1988; 10: 640-52.

Deng ZL, Connor DH. Progressive disseminated penicilliosis caused by *Penicillium marneffei*: report of eight cases and differentiation of the causative organism from *Histoplasma capsulatum*. *Am J Clin Pathol* 1985; 84: 323-7.

Deng ZL, Yun M, Ajello L. Human penicilliosis marneffei and its relation to the bamboo rat (*Rhizomys pruinosus*). *J Med Vet Mycol* 1986; 5: 383-9.

Desakorn V, Simpson AJH, Wuthiekanun V, Sahassananda D, Rajanu Wong A, Pitisuttithum P, Howe PA, Smith MD, White NJ. Development and evaluation of rapid urinary antigen detection tests for diagnosis of penicilliosis marneffei. *J Clin Microbiol* 2002; 40: 3179-83.

- Desakorn V, Smith MD, Walsh AL, Simpson AJH, Sahassananda D, Rajanu Wong A, Wuthiekanun V, Howe P, Angus BJ, Suntharasamai P, White NJ.** Diagnosis of *Penicillium marneffe*i infection by quantitation of urinary antigen by using an enzyme immunoassay. J Clin Microbiol 1999; 37: 117-21.
- Di Lallo G, Gargano S, Maresca B.** The *Histoplasma capsulatum cdc2* gene is transcriptionally regulated during the morphologic transition. Gene 1994; 140: 51-7.
- Dingwall C, Laskey RA.** Nuclear targeting sequences-a consensus? Trends Biochem Sci 1991; 16: 478-81.
- Di Salvo AF, Fickling AM, Ajello L.** Infection caused by *Penicillium marneffe*i: description of first natural infection in man. Am J Clin Pathol 1973; 60: 259.
- Drouhet E.** Penicillosis due to *Penicillium marneffe*i: A new emerging systemic mycosis in AIDS patients traveling or living in Southeast Asia. J Mycol Med 1993; 4: 195-224.
- Duong TA.** Infection due to *Penicillium marneffe*i, an emerging pathogen:review of 155 reported cases. Clin Infect Dis 1996; 23: 125-30.
- Edington BV, Whelan SA, Hightower LE.** Inhibition of heat shock (stress) protein induction by deuterium oxide and glycerol: additional support for the abnormal protein hypothesis of induction. J Cell Physiol 1989; 139: 219-28.
- Ellwood MS, Craig EA.** Differential regulation of the 70K heat shock gene and related genes in *Saccharomyces cerevisiae*. Mol Cell Biol 1984; 4: 1454-9.

Erolase P, Sentandreu M, Elorza MV, Sentandreu R. Cloning of DNA fragment encoding part of a 70-kDa heat shock protein of *Candida albicans*. FEMS Microbiol Lett 1995; 128: 95-100.

Feder ME, Hofmann GE. Heat-shock proteins, molecular chaperones, and the stress response: evolutionary and ecological physiology. Annu Rev Physiol 1999; 61: 243-82.

Feder ME, Krebs RA. Ecological and evolutionary physiology of heat shock proteins and the stress response in *Drosophila*: complementary insights from genetic engineering and natural variation. EXS 1997; 187: 155-73.

Fink AL, Goto Y. Molecular chaperones in the life cycle of proteins: structure, function, and mode of action. Marcel Dekker, Inc. New York; 1998. p.626.

Florez AM, Oviedo A, Cardona A, Herrera M, Garcia E, Restrepo A, McEwen JG. Molecular cloning and characterization of two *hsp 70* homologous genes from the dimorphic fungus *Paracoccidioides brasiliensis*. Biomedica 2003; 23: 424-36.

Frisvad RA, Filtenberg O. Revision of *Penicillium* subgenus *Furatum* based on secondary metabolites and conventional characters. In: Samson RA, Pitt JI, Editors. Modern Concepts in *Penicillium* and *Aspergillus* Classification. Plenum Press. New York, USA; 1990. p.159-172.

Garrison RG, Boyd KS. Dimorphism of *Penicillium marneffei* as observed by electron microscopy. Can J Microbiol 1973; 10: 1305-9.

Gething M-J. Guidebook to molecular chaperones and protein- folding catalysts. Oxford University Press, Oxford; 1997. p.554.

Gomez FJ, Gomez AM, Deepe Jr GS. An 80-kilodalton antigen from *Histoplasma capsulatum* that has homology to heat shock protein 70 induces cell-mediated immune responses and protection in mice. *Infect Immun* 1992; 60: 2565-71.

Gugnani H, Fisher MC, Paliwal-Johsi A, Vanittanakom N, Singh I, Yadav PS. Role of *Cannomys badius* as a natural animal host of *Penicillium marneffe* in India. *J Clin Microbiol* 2004; 42: 5070-5.

Gurr SJ, Unkles SE. In Kinghom JR, editor. Gene structure in Eukaryotic Microbes. IRL press, Oxford; 1987. p.93-139.

Ha J-H, Johnson ER, McKay DB, Sousa MC, Takeda S, Wilbanks SM. Structure and properties of the 70-kilodalton heat-shock proteins. In: Fink AL, Goto Y, editors. Molecular chaperones in the life cycle of proteins: structure, function, and mode of action. Marcel Dekker, Inc. New York; 1998. p.95-122.

Hamilton AJ, Jeavons L, Youngchim S, Vanittanakom N. Recognition of fibronectin by *Penicillium marneffe* conidia via a sialic acid-dependent process and its relationship to the interaction between conidia and laminin. *Infect Immun* 1999; 67: 5200-5.

Hamilton AJ, Jeavons L, Youngchim S, Vanittanakom N, Hay RJ. Sialic acid-dependent recognition of laminin by *Penicillium marneffe* conidia. *Infect Immun* 1998; 66: 6024-6.

Hijarrubia MJ, Casqueiro J, Gutierrez S, Fernandez FJ, Martin JF. Characterization of the bip gene of *Aspergillus awamori* encoding a protein with an HDEL retention signal homologous to the mammalian BiP involved in polypeptide secretion. *Curr Genet* 1997; 32: 139-46.

Ian GC, Caroline AA. cDNA Library Protocols. Humana Press. Totowa New Jersey. USA; 1997.

Jayanetra P, Nitiyanant P, Ajello L, Padhye AA, Lolekha S, Atichartakarn V, Vathesatogit P, Sathaphatayavongs B, Prajaktam R. Penicilliosis marneffei in Thailand: report of five human cases. *Am J Trop Med Hyg* 1984; 33: 637-44.

Jeavons L, Hamilton AJ, Vanittanakom N, Ungpakorn R, Evans EG, Sirisanthana T, Hay RJ. Identification and purification of specific *Penicillium marneffei* antigens and their recognition by human immune sera. *J Clin Microbiol* 1998; 36: 949-54.

Jones PD and See J. *Penicillium marneffei* infection in patients infected with human immunodeficiency virus: late presentation in an area of nonendemicity. *Clin Infect Dis* 1992; 4: 744.

Jonniaux JL, Coster F, Purnelle B, Goffeau A. A 21.7 kb DNA segment on the left arm of yeast chromosome XIV carries *WHI3*, *GCR2*, *SPX18*, *SPX19*, an homologue to the heat shock gene *SSB1* and 8 new open reading frames of unknown function. *Yeast* 1994; 10:1639-45.

Joshi A, Gugrani HC, Vijayan VK. Survival of *Penicillium marneffei* in sterile and unsterile soil. *J Med Mycol* 2003; 13: 211-2.

Takeya H, Udon H, Ikuno N, Yamamoto Y, Mitsutake K, Miyazaki T, Tomono K, Koga H, Tashiro T, Nakayama E, Kohno S. A 77-kilodalton protein of *Cryptococcus neoformans*, a member of the heat shock protein 70 family, is a major antigen detected in the sera of mice with pulmonary cryptococcosis. *Infect Immun* 1997; 65: 1653-8.

Kapoor M, Curle CA, Runham C. The *hsp70* gene family of *Neurospora crassa*: cloning, sequence analysis, expression, and genetic mapping of the major stress-inducible member. *J Bacteriol* 1995; 177: 212-21.

Kasuya T, Nakajima H, Kitamoto K. Cloning and characterization of the *bipA* gene encoding ER chaperone BiP from *Aspergillus oryzae*. J Biosci Bioeng 1999; 88: 472-8.

Kaufman L, Standard PG, Jalbert M, Kantipong P, Limpakarnjanarat K, Mastro TD. Diagnostic antigenemia tests for penicilliosis marneffeii. J Clin Microbiol 1996; 34: 2503-5.

Kiang JG, Tsokos DC. Heat shock protein 70 kDa: molecular biology, biochemistry, and physiology. Pharmacol Ther 1998; 80: 183-201.

Kogushi Y, Kawakami K, Kon S, Segawa T, Maeda M, Uede T, Saito A. *Penicillium marneffeii* causes osteopontin-mediated production of interleukin1 by peripheral blood mononuclear cells. Infect Immun 2002; 70: 1042-8.

Kozak M. Point mutations define a sequence flanking the AUG initiator codon that modulates translation by eukaryotic ribosomes. Cell 1986; 44: 283-92.

Kozutsumi Y, Segal M, Normington M, Gething M-J, Sambrook J. The presence of malfolded proteins in the endoplasmic reticulum signals the induction of glucose-regulated proteins. Nature 1988; 332: 462-4.

Kudeken N, Kawakami K, Kusano N, Saito A. Cell-mediated immunity in host resistance against infection caused by *Penicillium marneffeii*. J Med Vet Mycol 1996; 34: 371-8.

Kudeken N, Kawakami K, Saito A. CD4⁺ T cell-mediated fatal hyperinflammatory reactions in mice infected with *Penicillium marneffeii*. Clin Exp Immunol 1997; 107: 468-73.

Kudeken N, Kawakami K, Saito A. Cytokine-induced fungicidal activity of human polymorphonuclear leukocytes against *Penicillium marneffe*. FEMS Immunol Med Microbiol 1999a 26: 115-24.

Kudeken N, Kawakami K, Saito A. Mechanisms of the in vitro fungicidal effects of human neutrophils against *Penicillium marneffe* induced by granulocyte-macrophage colony-stimulating factor (GM-CSF). Clin Exp Immunol 2000; 119: 472-8.

Kudeken N, Kawakami K, Saito A. Role of superoxide anion in the fungicidal activity of murine peritoneal exudate macrophages against *Penicillium marneffe*. Microbiol Immunol 1999b; 43: 323-30.

Kumar S, Tamura K, Nei M. MEGA3: Integrated software for Molecular Evolutionary Genetics Analysis and sequence alignment. Brief Bioinform 2004; 5: 150-63.

Kupfer DM, Drabenstot SD, Buchanan KL, Lai H, Zhu H, Dyer DW, Roe BA, Murphy JW. Introns and splicing elements of five diverse fungi. Eukaryot Cell 2004; 3: 1088-100.

Leung SM, Hightower LE. Mammalian Hsc70 and Hsp70 protein. In: Gething M-J, editor. Guidebook to molecular chaperones and protein- folding catalysts. Oxford University Press, Oxford; 1997. p. 52-8.

Li JC, Pan LQ, Wu SX. Mycologic investigation on *Rhizomys pruinosus* senex in Guangxi as natural carrier with *Penicillium marneffe*. Chin Med J 1989; 102: 477-85.

Lim LP, Sharp PA. Alternative splicing of the fibronectin EIIIB exon depends on specific TGCATG repeats. *Mol Cell Biol* 1998; 18: 3900-6.

Lindquist S. The heat-shock response. *Annu Rev Biochem* 1986; 55: 1151-91.

Lindquist S, Craig EA. The heat-shock proteins. *Annu Rev Genet* 1988; 22: 631-77.

Li PC, Tsui MC, Ma KF. *Penicillium marneffei*: indicator disease for AIDS in southeast Asia. *AIDS* 1992; 2: 240-1.

LoBuglio KF, Taylor J. Phylogenetic and PCR identification of the human pathogenic fungus *Penicillium marneffei*. *J Clin Microbiol* 1995; 33: 85-9.

Lo Y, Tinteln K, Lippert U, Hoppe T. Disseminated *Penicillium marneffei* infection in an African AIDS patient. *Trans R Soc Trop Med Hyg* 2000; 94: 187.

MacFarlane J, Blaxter ML, Bishop RP, Miles MA, Kelly JM. Identification and characterization of a *Leishmania donovani* antigen belonging to the 70 kDa heat shock protein family. *Eur J Biochem* 1990; 190: 377-84.

Maneu V, Cervera AM, Martinez JP, Gozalbo D. Molecular cloning of a *Candida albicans* gene (*SSB1*) coding for a protein related to the Hsp70 family. *Yeast* 1997; 13: 677-81.

Maresca B, Kobayashi GS. Hsp70 in parasites: as an inducible protective protein and as an antigen. *Experientia* 1994; 50: 1067-74.

Mayer MP, Bukau B. Hsp70-chaperone systems: diversity of cellular functions and mechanisms of action. *J Biol Chem* 1998; 273: 261-8.

Mifflin LC, Cohen RE. Characterization of denatured protein inducers of the heat shock (stress) response in *Xenopus laevis* oocytes. J Biol Chem 1994; 269: 15710-7.

Minchiotti G, Gargano S, Maresca B. The intron-containing *hsp82* gene of the dimorphic pathogenic fungus *Histoplasma capsulatum* is properly spliced in severe heat shock conditions. Mol Cell Biol 1991; 11: 5624-30.

Modafferi EF, Black DL. A complex intronic splicing enhancer from the c-src pre-mRNA activates inclusion of a heterologous exon. Mol Cell Biol 1997; 17: 6537-45.

Modafferi EF, Black DL. Combinatorial control of a neuron-specific exon. RNA 1999; 5: 687-706.

Mohri S, Yoshikawa K, Sagara H, Nakajima H. A case of *Penicillium marneffei* infection in an AIDS patient: the first case in Japan. Nippon Ishinkin Gakkai Zasshi 2000; 1: 23-6.

Morimoto RI. Cells in stress: transcriptional activation of heat shock genes. Science 1993; 259:1409–10.

Morimoto RI. Regulation of the heat shock transcriptional response: cross talk between a family of heat shock factors, molecular chaperones, and negative regulators. Genes Dev 1998;12:3788–96.

Morshauser RC, Wong H, Flynn GC, Zuiderweg ERP. The peptidebinding domain of the chaperone protein *hsc70* has an unusual secondary structure topology. Biochem 1995; 34: 6261-6.

Mount SM. A catalog of splice junction sequences. Nucleic Acids Res 1982; 10: 459-72.

Mukai H, Kuno T, Tanaka H, Hirata D, Miyakawa T, Tanaka C. Isolation and characterization of *SSE1* and *SSE2*, new members of the *HSP70* multigene family. *Gene* 1993; 132: 57-66.

Nakai A, Morimoto RI. Characterization of a novel chicken heat shock transcription factor, HSF3, suggests a new regulatory pathway. *Mol Cell Biol* 1993; 13: 1983-97.

Nakai A, Tanabe M, Kawazoe Y, Inazawa J, Morimoto RI. HSF4, a new member of the human heat shock factor gene family which lacks properties of a transcriptional activator. *Mol Cell Biol* 1997; 17: 469-81.

Navarro RE, Stringer MA, Hansberg W, Timberlake WE, Aguirre J. *catA*, a new *Aspergillus nidulans* gene encoding a developmentally regulated catalase. *Curr Genet* 1996; 29: 352-9.

Nelson KE, Kaufman L, Cooper CR, Merz WG. *Penicillium marneffei*: An AIDS-related illness from Southeast Asia. *Infect Med* 1999; 16: 118-21, 128.

Normington K, Kohno K, Kozutsumi Y, Gething MJ, Sambrook J. *S. cerevisiae* encodes an essential protein homologous in sequence and function to mammalian BiP. *Cell* 1989; 57: 1223-36.

Oishi K, Sugiura R, Shuntoh H, Kuno T. Cloning and characterization of *hsc1+*, a heat shock cognate gene of the fission yeast *Schizosaccharomyces pombe*. *Gene* 1996; 181: 45-9.

Pautler KB, Padhye AA, Ajello L. Imported penicilliosis marneffei in the United States: report of a second human infection. *Sabouraudia* 1984; 22: 433-8.

Peto TE, Bull R, Millard PR, Mackenzie DW, Campbell CK, Haines ME Mitchell RG. Systemic mycosis due to *Penicillium marneffe* in a patient with antibody to human immunodeficiency virus. *J Infect* 1988; 3: 285-90.

Piehl MR, Kaplan RL and Haber MH. Disseminated penicillosis in a patient with acquired immunodeficiency syndrome. *Arch Pathol Lab Med* 1988; 12: 1262-4.

Pitt JJ. The Genus *Penicillium* and its Teleomorphic States *Eupenicillium* and *Talaromyces*. Academic Press. New York, USA; 1979.

Polla BS. Heat shock proteins in host-parasite interactions. *Immunol Today* 1991; 12: A38-41.

Polla BS, Mariethoz E, Hubert D, Barazzzone C. Heat-shock proteins in host-pathogen interactions: implications for cystic fibrosis. *Trends Microbiol* 1995; 3: 392-6.

Pongpom P. Cloning and analysis of genes encoding antigenic proteins from *Penicillium marneffe* [Ph.D. Thesis]. Chiang Mai Univ.; 2004.

Pongpom P, Cooper CR Jr, Vanittanakom N. Isolation and characterization of a catalase-peroxidase gene from the pathogenic fungus, *Penicillium marneffe*. *Med Mycol* 2005; (inpress)

Powell MJ, Watts FZ. Isolation of a gene encoding a mitochondrial HSP70 protein from *Schizosaccharomyces pombe*. *Gene* 1990; 95: 105-10.

Prariyachatigul C, Chaiprasert A, Geenkajorn K, Kappe R, Chuchottaworn C, Termsetjaroen S, Srimuang S. Development and evaluation of a one-tube seminested PCR assay for the detection and identification of *Penicillium marneffe*. *Mycoses* 2003; 46: 447-54.

Ranjana KH, Priyaokumar K, Singh TJ, Gupta CC, Sharmila L, Singh PN Chakrabarti A. Disseminated *Penicillium marneffe*i infection in HIV-infected patients in Manipur stated, India. J Infect 2002; 45: 268-71.

Raper KB, Thoms CA. Manual of the Penicillia. Williams & Wilkins. Baltimore, USA; 1949.

Rensing SA, Maier UG. Phylogenetic analysis of the stress-70 protein family. J Mol Evol 1994; 39: 80-6.

Rezaie S, Ban J, Mildner M, Poitschek C, Brna C, Tschachler E. Characterization of a cDNA clone, encoding a 70 kDa heat shock protein from the dermatophyte pathogen *Trichophyton rubrum*. Gene 2000; 241: 27-33.

Ritossa F. A new puffing pattern induced by temperature shock and DNP in *Drosophila*. Experientia 1962; 18: 571-3.

Rodriguez-Medina JR, Rymond BC. Prevalence and distribution of introns in non-ribosomal protein genes of yeast. Mol Gen Genet 1994; 243: 532-9.

Roilides E, Lyman CA, Sein T, Petratiene R, Walsh TJ. Macrophage colony-stimulating factor enhances phagocytosis and oxidative burst of mononuclear phagocytes against *Penicillium marneffe*i conidia. FEMS Immunol Med Microbiol 2003; 36: 19-26.

Romfo CM, Alvarez CJ, van Heeckeren WJ, Webb CJ, Wise JA. Evidence for splice site pairing via intron definition in *Schizosaccharomyces pombe*. Mol Cell Biol 2000; 20: 7955-70.

Rongrungruang Y, Levitz SM. Interactions of *Penicillium marneffe*i with human leukocytes *in vitro*. Infect Immun 1999; 67: 4732-6.

Sambrook J, Russell DW. Molecular cloning: a laboratory manual, 3rd edition. Cold Spring Harbor Laboratory Press, Cold Spring Harbor, New York. USA; 2001.

Sanger F, Nicklen S, Coulson AR. DNA sequencing with chain-terminating inhibitors. Proc Natl Acad Sci USA 1977; 74: 5463-7.

Segretain G. Description d'une nouvelle espèce de penicillium: *Penicillium merneffeii* n.sp. Bull Soc Mycol Fr 1959a ; 75: 412.

Segretain G. *Penicillium merneffeii* n.sp. agent d'une mycose du système réticuloendothélial. Mycopathol Mycol Appl 1959b; 11: 327.

Simpson CG, Hedley PE, Watters JA, Clark GP, McQuade C, Machray GC, Brown JW. Requirements for mini-exon inclusion in potato invertase mRNAs provides evidence for exon-scanning interactions in plants. RNA 2000; 6: 422-33.

Singh PN, Ranjana K, Singh YI, Singh KP, Sharma SS, Kulachandra M, Kabakumar Y, Chakrabarti A, Padhye AA, Kaufman L, Ajello L. Indigenous disseminated *Penicillium marneffeii* infection in the state of Manipur, India: report of four autochthonous cases. J Clin Microbiol 1999; 37: 2699-702.

Sirisanthana T. Disseminated *Penicillium marneffeii* infection in patients with acquired immunodeficiency syndrome. Japanese J Med Mycol 1996; 37: 5-8.

Sirisanthana T, Supparatpinyo K. Epidemiology and management of penicilliosis in human immunodeficiency virus-infected patients. J Infect Dis 1998a; 3: 48-53.

Sirisanthana T, Supparatpinyo K, Perriens J, Nelson KE. Amphotericin B and itraconazole for treatment of disseminated *Penicillium marneffei* infection in human immunodeficiency virus-infected patients. Clin Infect Dis 1998b; 26: 1107-10.

Sisto F, Miluzio A, Leopardi O, Mirra M, Boelaert JR, Taramelli D. Differential cytokine pattern in the spleens and livers of BALB/c mice infected with *Penicillium marneffei*: protective role of gamma interferon. Infect Immun 2003; 71: 465-73.

Slater MR, Craig EA. The SSA1 and SSA2 genes of the yeast *Saccharomyces cerevisiae*. Nucleic Acids Res 1989a; 17: 805-6.

Slater MR, Craig EA. The SSB1 heat shock cognate gene of the yeast *Saccharomyces cerevisiae*. Nucleic Acids Res 1989b; 17: 4891.

So SY, Chau PY, Jones BM, Wu PC, Pun KK, Lam WK, Lowton JW. A case of invasive penicillosis in Hong Kong with immunologic evaluation. Am Rev Respir Dis 1985 Apr; 4: 662-5.

Spingola M, Grate L, Haussler D, Ares M Jr. Genome-wide bioinformatic and molecular analysis of introns in *Saccharomyces cerevisiae*. RNA 1999; 5: 221-34.

Stedman TT, Buck GA. Identification, characterization, and expression of the BiP endoplasmic reticulum resident chaperonins in *Pneumocystis carinii*. Infect Immun 1996; 64: 4463-71.

Stedman TT, Butler DR, Buck GA. The HSP70 gene family in *Pneumocystis carinii*: molecular and phylogenetic characterization of cytoplasmic members. J Eukaryot Microbiol 1998; 45: 589-99.

Stefani RM, Gomes SL. A unique intron-containing *hsp70* gene induced by heat shock and during sporulation in the aquatic fungus *Blastocladiella emersonii*. *Gene* 1995; 152: 19-26.

Sterner DA, Berget SM. In vivo recognition of a vertebrate mini-exon as an exon-intron-exon unit. *Mol Cell Biol* 1993; 13: 2677-87.

Supparatpinyo K, Chiewchanvit S, Hirunsri P, Uthammachai C, Nelson KE, Sirisanthana T. *Penicillium marneffe*i infection in patients infected with human immunodeficiency virus. *Clin Infect Dis* 1992; 14: 871-4.

Supparatpinyo K, Khamwan C, Baosoung V, Nelson KE, Sirisanthana T. Disseminated *Penicillium marneffe*i infection in Southeast Asia. *Lancet* 1994; 344: 110-3.

Supparatpinyo K, Nelson KE, Merz WG, Breslin BJ, Cooper CR Jr, Kamwan C, Sirisanthana T. Response to antifungal therapy by human immunodeficiency virus-infected patients with disseminated *Penicillium marneffe*i infections and in vitro susceptibilities of isolates from clinical specimens. *Antimicrob Agents Chemother* 1993; 37: 2407-11.

Supparatpinyo K, Perriens J, Nelson KE, Sirisanthana T. A controlled trial of itraconazole to prevent relapse of *Penicillium marneffe*i infection in patients infected with the human immunodeficiency virus. *N Engl J Med* 1998; 339: 1739-43.

Techel D, Hafker T, Muschner S, Reimann M, Li Y, Monnerjahn C, Rensing L. Molecular analysis of a glucose-regulated gene (*grp78*) of *Neurospora crassa*. *Biochim Biophys Acta* 1998; 1397: 21-6.

Titorenko VI, Evers ME, Diesel A, Samyn B, Van Beeumen J, Roggenkamp R, Kiel JA, van der Klei IJ, Veenhuis M. Identification and characterization of cytosolic *Hansenula polymorpha* proteins belonging to the Hsp70 protein family. *Yeast* 1996; 12: 849-57.

Todd RB, Greenhalgh JR, Hynes MJ, Andrianopoulos A. TupA, the *Penicillium marneffei* Tup1p homologue, represses both yeast and spore development. *Mol Microbiol* 2003; 48: 85-94.

Usui T, Yoshida M, Kasahara K, Honda A, Beppu T, Horinouchi S. A novel *HSP70* gene of *Schizosaccharomyces pombe* that confers K-252a resistance. *Gene* 1997; 189: 43-7.

van der Heide M, Hollenberg CP, van der Klei IJ, Veenhuis M. Overproduction of BiP negatively affects the secretion of *Aspergillus niger* glucose oxidase by the yeast *Hansenula polymorpha*. *Appl Microbiol Biotechnol* 2002; 58: 487-94.

van Gemenen IA, Punt PJ, Drint-Kuyvenhoven A, Broekhuijsen MP, van't Hoog A, Beijersbergen A, Verrips CT, van den Hondel CA. The ER chaperone encoding *bipA* gene of black *Aspergilli* is induced by heat shock and unfolded proteins. *Cene* 1997; 198: 43-52.

Vanittanakom N, Cooper CR Jr, Chariyalertsak S, Youngchim S, Nelson KE Sirisanthana T. Restriction endonuclease analysis of *Penicillium marneffei*. *J Clin Microbiol* 1996; 34: 1834-6.

Vanittanakom N, Mekaprateep M, Sittisombut N, Supparatpinyo K, Kanjanasthiti P. Western immunoblot analysis of protein antigens of *Penicillium marneffei*. *J Med Vet Mycol* 1997; 35: 123-31.

Vanittanakom N, Mekaprateep M, Sriburee P, Vanittanakom P, Khanjanasthiti

P. Efficiency of floatation method in the isolation of *Penicillium marneffei* from seed soil. J Med Vet Mycol 1995; 33: 271-3.

Vanittanakom N, Merz WG, Sittisombut N, Khamwan C, Nelson KE,

Sirisanthana T. Specific identification of *Penicillium marneffei* by a polymerase chain reaction/hybridization technique. Med. Mycol 1998; 36: 169-75.

Vanittanakom N, Sirisanthana T. *Penicillium marneffei* infection in patients

infected with human immunodeficiency virus. Curr Top Med Mycol 1997; 8: 35-42.

Vanittanakom N, Vanittanakom P, Hay RJ. Rapid identification of *Penicillium*

marneffei by PCR-based detection of specific sequences on the rRNA gene. J Clin Microbiol 2002; 40: 1739-42.

Viviani MA, Tortorano AM, Rizzardini G, Quirino T, Kaufman L, Padhye AA,

Ajello L. Treatment and serological studies of an Italian case of penicilliosis *marneffei* contracted in Thailand by a drug addict infected with the human immunodeficiency virus. Eur J Epidemiol 1993; 9: 79-85.

Wei N, Lin CQ, Modafferi EF, Gomes WA, Black DL. A unique intronic splicing

enhancer controls the inclusion of the agrin Y exon. RNA 1997; 3:1275-88.

Wei XG, Ling YM, Li C, Zhang FS. Study of 179 bamboo rats carrying *Penicillium*

marneffei (in Chinese). China J Zoonoses 1987; 3: 34-5.

Werner-Washburne M, Stone DE, Craig EA. Complex interactions among

members of an essential subfamily of *hsp70* genes in *Saccharomyces cerevisiae*. Mol Cell Biol 1987; 7: 2568-77.

Wong SS, Ho TY, Ngan AH, Woo PC, Que TL, Yeun KY. Biotyping of *Penicillium marneffei* reveals concentration-dependent growth inhibition by galactose. J Clin Microbiol 2001a.; 4: 1416-21.

Wong SS, Wong KH, Hui WT, Lee SS, Lo JY, Cao L, Yuen KY. Differences in clinical and laboratory diagnostic characteristics of penicillosis maneffei in human immunodeficiency virus (HIV)-and non-HIV-infected patients. J Clin Microbiol. 2001b; 12: 4535-40.

Woo PC, Zhen H, Cai JJ, Yu J, Lau SK, Wang J, Teng JL, Wong SS, Tse RH, Chen R, Yang H, Liu B, Yuen KY. The mitochondrial genome of the thermal dimorphic fungus *Penicillium marneffei* is more closely related to those of molds than yeasts. FEBS Lett 2003; 18; 555: 469-77.

Wu C. Heat shock transcription factors: structure and regulation. Annu Rev Cell Dev Biol 1995; 11: 441-69.

Yost HJ, Lindquist S. Heat shock proteins affect RNA processing during the heat shock response of *Saccharomyces cerevisiae*. Mol Cell Biol 1991; 11: 1062-8.

Yost HJ, Lindquist S. RNA splicing is interrupted by heat shock and is rescued by heat shock protein synthesis. Cell 1986; 45: 185-93.

Youngchim S, Hay RJ, Hamilton AJ. Melanizaation of *Penicillium marneffei* in vitro and in vivo. Microbiology 2005; 151: 291-9.

Youngchim S, Vanittanakom N, Hamilton AJ. Analysis of the enzymatic activity of mycelial and yeast phases of *Penicillim marneffei*. Med Mycol 1999; 6: 445-50.

Young DB, Lathigra R, Hendrix R, Sweetser D, Young RA. Stress proteins are immune targets in leprosy and tuberculosis. *Proc Natl Acad Sci USA* 1988; 85: 4267-70.

Yuen KY, Wong SS, Tsang DN, Chau P. Serodiagnosis of *Penicillium marneffe*i infection. *Lancet* 1994; 344: 444-5.

Yuen WC, Chan YF, Loke SL, Seto WH, Poon GP, Wong KK. Chronic lymphadenopathy caused by *Penicillium marneffe*i: a condition mimicking tuberculous lymphadenopathy. *Br J Surg* 1986; 73: 1007-8.

Zhang L, Ashiya M, Sherman TG, Grabowski PJ. Essential nucleotides direct neuron-specific splicing of gamma 2 pre-mRNA. *RNA* 1996; 2: 682-98.

Zuber S, Hynes MJ, Andrianopoulos A. G-protein signaling mediates asexual development at 25°C but has no effect on yeast-like growth at 37°C in the dimorphic fungus *Penicillium marneffe*i. *Eukaryot cell* 2002; 1: 440-7.

Zuber S, Hynes MJ, Andrianopoulos A. The G-protein α -subunit GasC plays a major role in germination in the dimorphic fungus *Penicillium marneffe*i. *Genetics* 2003; 164: 487-99.