

REFERENCES

- Ajello, L., Padhye, A. A., Sukroongreung, S., Nilakul, C. H. & Tantimavanic, S.** (1995) Occurrence of *Penicillium marneffei* infections among wild bamboo rats in Thailand. *Mycopathologia* **131**: 1-8.
- Andrianopoulos, A.** (2002) Control of morphogenesis in the human fungal pathogen *Penicillium marneffei*. *International Journal of Medical Microbiology* **292**: 331-347.
- Bailão, A. M., Schrank, A., Borges, C. L., Dutra, V., Walquíria Inês Molinari-Madlum, E. E., Soares Felipe, M. S., Soares Mendes-Giannini, M. J., Martins, W. S., Pereira, M. & de Almeida Soares, C. M.** (2006) Differential gene expression by *Paracoccidioides brasiliensis* in host interaction conditions: representational difference analysis identifies candidate genes associated with fungal pathogenesis. *Microbes and Infection* **8**: 2686-2697.
- Barbosa, M. S., Bão, S. N., Andreotti, P. F., de Faria, F. P., Felipe, M. S., dos Santos Feitosa, L., Mendes-Giannini, M. J. & de Almeida Soares, C. M.** (2006) Glyceraldehyde-3-phosphate dehydrogenase of *Paracoccidioides brasiliensis* is a cell surface protein involved in fungal adhesion to extracellular matrix proteins and interaction with cells. *Infection and Immunity* **74**: 382-389.
- Barbosa, M. S., Cunha Passos, D. A., Felipe, M. S., Jesuíno, R. S., Pereira, M. & de Almeida Soares, C. M.** (2004) The glyceraldehyde-3-phosphate dehydrogenase homologue is differentially regulated in phases of *Paracoccidioides brasiliensis*: molecular and phylogenetic analysis. *Fungal Genetic Biology* **41**: 667-675.

Barelle, C. J., Priest, C. L., Maccallum, D. M., Gow, N. A., Odds, F. C. & Brown, A. J. (2006) Niche-specific regulation of central metabolic pathways in a fungal pathogen. *Cellular Microbiology* **6**: 961-971.

Bhardwaj, S., Shukla, A., Mukherjee, S., Sharma, S., Guptasarma, P., Chakraborti, A. K. & Chakrabarti, A. (2007) Putative structure and characteristics of a red water-soluble pigment secreted by *Penicillium marneffei*. *Medical Mycology* **45**: 419-427.

Blankenship, J. R., Wormley, F. L., Boyce, M. K., Schell, W. A., Filler, S. G., Perfect, J. R. & Heitman, J. (2003) Calcineurin is essential for *Candida albicans* survival in serum and virulence. *Eukaryotic Cell* **2**: 422-430.

Boyce, K. J. & Andrianopoulos, A. (2007) A p21-activated kinase is required for conidial germination in *Penicillium marneffei*. *PLoS Pathogens* **3**: 162.

Borneman, A. R., Hynes, M. J. & Andrianopoulos, A. (2000) The *abaA* homologue of *Penicillium marneffei* in two developmental programmes: conidiation and dimorphic growth. *Molecular Microbiology* **38**: 1034-1047.

Borneman, A. R., Hynes, M. J. & Andrianopoulos, A. (2001) An *STE12* homolog from the asexual, dimorphic fungus *Penicillium marneffei* complements the defect in sexual development of an *Aspergillus nidulans steA* mutant. *Genetics* **157**: 1003-1014.

Borneman, A. R., Hynes, M. J. & Andrianopoulos, A. (2002) 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*. *Molecular Microbiology* **44**: 621-631.

Boyce, K. J., Hynes, M. J. & Andrianopoulos, A. (2001) The *CDC42* homolog of the dimorphic fungus *Penicillium marneffei* is required for correct cell polarization during growth but not development. *Journal of Bacteriology* **83**: 3447-3457.

Boyce, K. J., Hynes, M. J. & Andrianopoulos, A. (2003) Control of morphogenesis and actin localization by the *Penicillium marneffei RAC* homolog. *Journal of Cell Science* **116**: 1249-1260.

Breathnach, R. & Chambon, P. (1981) Organization and expression of eukaryotic split genes coding for proteins. *Annual Review Biochemistry* **50**: 349-383.

Brown, S. M., Campbell, L. T. & Lodge, J. K. (2007) *Cryptococcus neoformans*, a fungus under stress. *Current Opinion in Microbiology* **10**: 320-325.

Brummer, E. & Stevens, D. A. (1989) Candidacidal mechanisms of peritoneal macrophages activated with lymphokines or gamma-interferon. *Medical Microbiology* **28**: 173-181.

Brummer, E. & Stevens, D. A. (1995) Antifungal mechanisms of activated murine bronchoalveolar or peritoneal macrophages for *Histoplasma capsulatum*. *Clinical and Experimental Immunology* **102**: 65-70.

Bullock, W. E. (1993) Interactions between human phagocytic cells and *Histoplasma capsulatum*. *Archives of Medical Research* **24**: 219-223.

Bullock, W. E. & Wright, S. D. (1987) Role of the adherence-promoting receptors, CR3, LFA-1, and p150, 95, in binding of *Histoplasma capsulatum* by human macrophages. *The Journal of Experimental Medicine* **165**: 195-210.

Calera, J. A., Paris, S., Monod, M., Hamilton, A. J., Debeaupuis, J. P., Diaquin, M., López-Medrano, R., Leal, F. & Latgé, J. P. (1997) Cloning and disruption of the antigenic catalase gene of *Aspergillus fumigatus*. *Infection and Immunity* **65**: 4718-4724.

Cánovas, D. & Andrianopoulos, A. (2006) Developmental regulation of the glyoxylate cycle in the human pathogen *Penicillium marneffei*. *Molecular Microbiology* **62**: 1725-1738.

Cao, L., Chan, C. M., Chen, D., Vanittanakom, N., Lee, C., Chan, C. M., Sirisanthana, T., Tsang, D. N. & Yuen, K. Y. (1999) Detection of cell wall mannoprotein Mp1p in culture supernatants of *Penicillium marneffei* and in sera of penicilliosis patients. *Journal of Clinical Microbiology* **37**: 981-986.

Cao, L., Chan, C. M., Lee, C., Wong, S. S. & Yuen, K. Y. (1998a) *MP1* encodes an abundant and highly specific antigenic cell wall mannoprotein in the pathogenic fungus *Penicillium marneffei*. *Infection and Immunity* **66**: 966-973.

Cao, L., Chen, D., Lee, C., Chan, C. M., Chan, K. M., Vanittanakom, N., Tsang, D. N. & Yuen, K. Y. (1998b) Detection of specific antibodies to an antigenic mannoprotein for diagnosis of *Penicillium marneffei* penicilliosis. *Journal of Clinical Microbiology* **36**: 3028-3031.

Capponi, M., Sureau, P. & Segretain G. (1956) Penicilliose de *Rhizomys sinensis*. *Bulletin de la Societe de Pathologie Exotique et de ses Filiales* **49**: 418-421.

de Carvalho, M. J., Amorim Jesuino, R. S., Daher, B. S., Silva-Pereira, I., de Freitas, S. M., Soares, C. M. & Felipe, M. S. (2003) Functional and genetic characterization of calmodulin from the dimorphic and pathogenic fungus *Paracoccidioides brasiliensis*. *Fungal Genetics and Biology* **39**: 204-210.

Chan, J. K. C., Tsang, D. N. C. & Wong, D. K. K. (1989) *Penicillium marneffei* in bronchoalveolar lavage fluid. *Acta Cytologica* **33**: 523–526.

Chan, Y. F. & Chow, T. C. (1990) Ultrastructural observations on *Penicillium marneffei* in natural human infection. *Ultrastructural Pathology* **14**: 439-452.

Chang, E. C., Crawford, B. F., Hong, Z., Bilinski, T. & Kosman, D. J. (1991) Genetic and biochemical characterization of Cu, Zn superoxide dismutase mutants in *Saccharomyces cerevisiae*. *Journal of Biological Chemistry* **266**: 4417-4424.

Chang, K. C., Chan, C. K., Chow, K. C. & Lam, C. W. (1998) *Penicillium marneffei* infection and solitary pulmonary nodule. *Hong Kong Medical Journal* **4**: 59-62.

Chang, C. C., Liao, S. T., Huang, W. S., Liu, J. D. & Shih, L. S. (1995) Disseminated *Penicillium marneffei* infection in a patient with acquired immunodeficiency syndrome. *Journal of the Formosan Medical Association* **94**: 572-575.

Chariyalertsak, S., Sirisanthana, T., Supparatpinyo, K. & Nelson, K. E. (1996a) Seasonal variation of disseminated *Penicillium marneffei* infections in northern Thailand: a clue to the reservoir? *Journal of Infectious Disease* **173**: 1490-1493.

Chariyalertsak, S., Sirisanthana, T., Supparatpinyo, K., Praparattanapan, J. & Nelson, K. E. (1997) Case-control study of risk factors for *Penicillium marneffei* infection in human immunodeficiency virus-infected patients in northern Thailand. *Clinical Infectious Disease* **24**: 1080-1086.

- Chariyalertsak, S., Vanittanakom, P., Nelson, K. E., Sirisanthana, T. & Vanittanakom, N.** (1996b). *Rhizomys sumatrensis* and *Cannomys badius*, new natural animal hosts of *Penicillium marneffei*. *Journal of Medical and Veterinary Mycology* **34**: 105–110.
- Chaiyaroj, S. C., Chawengkirttikul, R., Sirisinha, S., Watkins, P. & Srinoulprasert, Y.** (2003) Antigen detection assay for identification of *Penicillium marneffei* infection. *Journal of Clinical Microbiology* **41**: 432–434.
- Chatterjee, S. S., Hossain, H., Otten, S., Kuenne, C., Kuchmina, K., Machata, S., Domann, E., Chakraborty, T. & Hain, T.** (2006) Intracellular gene expression profile of *Listeria monocytogenes*. *Infection and Immunity* **74**: 1323-1338.
- Chiang, C. T., Leu, H. S., Wu, T. L. & Chan, H. L.** (1998) *Penicillium marneffei* fungemia in an AIDS patient: the first case report in Taiwan. *Changgeng Yi Xue Za Zhi* **21**: 206-210.
- Chiewchanvit, S., Mahanupab, P., Hirunsri, P. & Vanittanakom, N.** (1991) Cutaneous manifestations of disseminated *Penicillium marneffei* mycosis in five HIV-infected patients. *Mycoses* **34**: 245-249.
- Chongtrakool, P., Chaiyaroj, S. C., Vithayasai, V., Trawatcharegon, S., Teanpaisan, R., Kalnawakul, S. & Sirisinha, S.** (1997) Immunoreactivity of a 38-kilodalton *Penicillium marneffei* antigen with human immunodeficiency virus-positive sera. *Journal of Clinical Microbiology* **35**: 2220-2223.
- Cogliati, M., Roverselli, A., Boelaert, J. R., Taramelli, D., Lombardi, L. & Viviani, M. A.** (1997) Development of an In vitro macrophage system to assess *Penicillium marneffei* growth and susceptibility to nitric oxide. *Infection and Immunity* **65**: 279-284.

Cooper, C. R. Jr. & Haycocks, N. G. (2000) *Penicillium marneffei*: an insurgent species among the penicillia. *Journal of Eukaryotic Microbiology* **47**: 24-28.

Cooper, C. R. Jr. & McGinnis, M. R. (1997) Pathology of *Penicillium marneffei*. An emerging acquired immunodeficiency syndrome-related pathogen. *Archives of Pathology and Laboratory Medicine* **121**: 798-804.

Cooper, C. R. Jr. & Vanittanakom, N. (2008) Insights into the pathogenicity of *Penicillium marneffei*. *Future Microbiology* **3**: 43-55.

Cox, G. M., Harrison, T. S., McDade, H. C., Taborda, C. P., Heinrich, G., Casadevall, A. & Perfect, J. R. (2003) Superoxide dismutase influences the virulence of *Cryptococcus neoformans* by affecting growth within macrophages. *Infection and Immunity* **71**: 173-180.

van Cutsem, J., Meulemans, L., Van Gerven, F. & Stynen, D. (1990) Detection of circulating galactomannan by Pastorex *Aspergillus* in experimental invasive aspergillosis. *Mycoses* **33**: 61-69.

Deng, Z., Ribas, J. L., Gibson, D. W. & Conner, D. H. (1988) Infections caused by *Penicillium marneffei* in China and Southeast Asia. Review of eighteen published cases and report of four more Chinese cases. *Reviews of Infectious Disease* **10**: 640-652.

Deng, Z., Yun, M. & Ajello, L. (1986) Human penicilliosis marneffei and its relation to the bamboo rat (*Rhizomys pruinosus*). *Journal of Medical and Veterinary Mycology* **24**: 383-389.

Deng, Z. L. & Connor, D. H. (1985) Progressive disseminated penicilliosis caused by *Penicillium marneffei*: report of eight cases and differentiation of the causative organism from *Histoplasma capsulatum*. *American Journal of Clinical Pathology* **84**: 323-327.

Derengowski, L. S., Tavares, A. H., Silva, S., Procópio, L. S., Felipe, M. S. S. & Silva-Pereira, I. (2008) Upregulation of glyoxylate cycle genes upon *Paracoccidioides brasiliensis* internalization by murine macrophages and in vitro nutritional stress condition. *Medical Mycology* **46**: 125-134.

Desai, G., Nassar, F., Brummer, E. & Stevens, D. A. (1995) Killing of *Histoplasma capsulatum* by macrophage colony stimulating factor-treated human monocyte-derived macrophages: role for reactive oxygen intermediates. *Journal of Medical Microbiology* **43**: 224-229.

Desakorn, V., Simpson, A. J., Wuthiekanun, V., Sahassananda, D., Rajanuwong, A., Pitisuttithum, P., Howe, P. A., Smith, M. D. & White, N. J. (2002) Development and evaluation of rapid urinary antigen detection tests for diagnosis of penicilliosis marneffei. *Journal of Clinical Microbiology* **40**: 3179-3183.

Desakorn, V., Smith, M. D., Walsh, A. L., Simpson, A. J., Sahassananda, D., Rajanuwong, A., Wuthiekanun, V., Howe, P., Angus, B. J., Suntharasamai, P. & White, N. J. (1999) Diagnosis of *Penicillium marneffei* infection by quantitation of urinary antigen by using an enzyme immunoassay. *Journal of Clinical Microbiology* **37**: 117-121.

Diatchenko, L., Lukyanov, S., Lau, Y. F. & Siebert, P. D. (1999) Suppression subtractive hybridization: a versatile method for identifying differentially expressed genes. *Methods in Enzymology* **303**: 349-380.

- Di Salvo, A. F., Fickling, A. M. & Ajello, L.** (1973) Infection caused by *Penicillium marneffei*: description of first natural infection in man. *American Journal of Clinical Pathology* **60**: 259.
- Drouhet, E.** (1992) Central nervous system mycoses in pediatrics. *Minerva Pediatrica* **44**: 69-77.
- Fan, W., Kraus, P. R., Boily, M. J. & Heitman, J.** (2005) *Cryptococcus neoformans* gene expression during murine macrophage infection. *Eukaryotic Cell* **4**: 1420-1433.
- Feder, M. E. & Krebs, R. A.** (1997) Ecological and evolutionary physiology of heat shock proteins and the stress response in *Drosophila*: complementary insights from genetic engineering and natural variation. *EXS (Basel)* **83**: 155-173.
- Fradin, C., Kretschmar, M., Nichterlein, T., Gaillardin, C., d'Enfert, C. & Hube, B.** (2003) Stage-specific gene expression of *Candida albicans* in human blood. *Molecular Microbiology* **47**: 1523-1543.
- Gil-Navarro, I., Gil, M. L., Casanova, M., O'Connor, J. E., Martínez, J. P. & Gozalbo, D.** (1997) The glycolytic enzyme glyceraldehyde-3-phosphate dehydrogenase of *Candida albicans* is a surface antigen. *Journal of Bacteriology* **179**: 4992-4999.
- Gralla, E. B. & Kosman, D. J.** (1992) Molecular genetics of superoxide dismutases in yeasts and related fungi. *Advances Genetics* **30**: 251-319.
- Graham, J. E. & Clark-Curtiss, J. E.** (1999) Identification of *Mycobacterium tuberculosis* RNAs synthesized in response to phagocytosis by human macrophages by selective capture of transcribed sequences (SCOTS). *Proceedings of the National Academy of Sciences USA* **96**: 11554-11559.

Grise, G., Aouar, M., Brasseur, P. & Humbert, G. (1997) *Penicillium marneffei* infection: a pathology to be known. *Annales de Biologie Clinique (Paris)* **55**: 241-242.

Gozalbo, D., Gil-Navarro, I., Azorín, I., Renau-Piqueras, J., Martínez, J. P. & Gil, M. L. (1998) The cell wall-associated glyceraldehyde-3-phosphate dehydrogenase of *Candida albicans* is also a fibronectin and laminin binding protein. *Infection and Immunity* **66**: 2052-2059.

Gugnani, H., Fisher, M. C., Paliwal-Johsi, A., Vanittanakom, N., Singh, I. & Yadav, P. S. (2004) Role of *Cannomys badius* as a natural animal host of *Penicillium marneffei* in India. *Journal of Clinical Microbiology* **11**: 5070-5075.

Gurr, S. J. & Unkles, S. E. (1987) In Kinghorn JR, editor. Gene structure in Eukaryotic Microbes. IRL press, Oxford: .93-139.

Hamilton, A. J. & Holdom, M. D. (1999) Antioxidant systems in the pathogenic fungi of man and their role in virulence. *Medical Mycology* **37**: 375-389.

Hamilton, A. J., Jeavons, L., Youngchim, S. & Vanittanakom, N. (1999) Recognition of fibronectin by *Penicillium marneffei* conidia via a sialic acid-dependent process and its relationship to the interaction between conidia and laminin. *Infection and Immunity* **67**: 5200-5205.

Hamilton, A. J., Jeavons, L., Youngchim, S., Vanittanakom, N. & Hay, R. J. (1998) Sialic acid-dependent recognition of laminin by *Penicillium marneffei* conidia. *Infection and Immunity* **66**: 6024-6026.

- Harth, G. & Horwitz, M. A.** (1999) Export of recombinant *Mycobacterium tuberculosis* superoxide dismutase is dependent upon both information in the protein and mycobacterial export machinery. A model for studying export of leaderless proteins by pathogenic mycobacteria. *Journal of Biological Chemistry* **274:** 4281-4292.
- Haycocks, N. G.** (2001) Thermally regulated gene expression in *Penicillium marneffei* [Ph.D. Thesis]. The University of Texas medical branch at Galveston, Texas.
- Hearn, V. M., Wilson, E. V. & Mackenzie, D. W.** (1992) Analysis of *Aspergillus fumigatus* catalases possessing antigenic activity. *Journal of Medical Microbiology* **36:** 61-67.
- Hien, T. V., Loc, P. P., Hoa, N. T., Duong, N. M., Quang, V. M., McNeil, M. M., Dung, N. T. & Ashford, D. A.** (2001) First cases of disseminated penicilliosis marneffei infection among patients with acquired immunodeficiency syndrome in Vietnam. *Clinical Infectious Disease* **32:** 78-80.
- Hilmarsdottir, I., Meynard, J. L., Rogeaux, O., Guermonprez, G., Datry, A., Katlama, C., Brücker, G., Coutellier, A., Danis, M. & Gentilini, M.** (1993) Disseminated *Penicillium marneffei* infection associated with human immunodeficiency virus: a report of two cases and a review of 35 published cases. *Journal of Acquired Immune Deficiency Syndromes* **6:** 466-471.
- Hsueh, P. R., Teng, L. J., Hung, C. C., Hsu, J. H., Yang, P. C., Ho, S. W. & Luh, K. T.** (2000) Molecular evidence for strain dissemination of *Penicillium marneffei*: an emerging pathogen in Taiwan. *Journal of Infectious Disease* **181:**1706-1712.

Hulshof, C. M., van Zanten, R. A., Sluiters, J. F., van der Ende, M. E., Samson, R. S., Zondervan, P. E. & Wagenvoort, J. H. (1990) *Penicillium marneffei* infection in an AIDS patient. *European Journal of Clinical Microbiology and Infectious Disease* **9**: 370.

Hung, C. C., Hsueh, P. R., Chen, M. Y., Hsiao, C. H., Chang, S. C. & Luh, K. T. (1998) Invasive infection caused by *Penicillium marneffei*: an emerging pathogen in Taiwan. *Clinical Infectious Disease* **26**: 202-203.

Huynh, T. X., Nguyen, H. C., Dinh Nguyen, H. M., Do, M. T., Odermatt-Biays, S., Degrémont, A. & Malvy, D. (2003) *Penicillium marneffei* infection and AIDS. A review of 12 cases reported in the Tropical Diseases Centre, Ho Chi Minh City (Vietnam). *Santé* **13**: 149-153.

Hwang, C. S., Rhie, G. E., Oh, J. H., Huh, W. K., Yim, H. S. & Kang, S. O. (2002) Copper- and zinc-containing superoxide dismutase (Cu/Zn SOD) is required for the protection of *Candida albicans* against oxidative stresses and the expression of its full virulence. *Microbiology* **148**: 3705-3713.

Jayanetra, P., Nititayanant, P., Ajello, L., Padhye, A. A., Lolekha, S., Atichartakarn, V., Vathesatogit, P., Sathaphatayavongs, B. & Prajaktam, R. (1984) Penicilliosis marneffei in Thailand: report of five human cases. *American Journal of Tropical Medicine and Hygiene* **33**: 637-644.

Jeavons, L., Hamilton, A. J., Vanittanakom, N., Ungpakorn, R., Evans, E. G., Sirisanthana, T. & Hay, R. J. (1998) Identification and purification of specific *Penicillium marneffei* antigens and their recognition by human immune sera. *Journal of Clinical Microbiology* **36**: 949-954.

Johnson, C. H., Prigge, J. T., Warren, A. D. & McEwen, J. E. (2003) Characterization of an alternative oxidase activity of *Histoplasma capsulatum*. *Yeast* **20**: 381-388.

- Jones, P. D. & See, J.** (1992) *Penicillium marneffei* infection in patients infected with human immunodeficiency virus: late presentation in an area of nonendemicity. *Clinical Infectious Disease* **15**: 744.
- Joseph, J. D. & Means, A. R.** (2002) Calcium binding is required for calmodulin function in *Aspergillus nidulans*. *Eukaryotic Cell* **1**: 119-125.
- Kaufman, L., Standard, P. G., Anderson, S. A., Jalbert, M. & Swisher, B. L.** (1995) Development of specific fluorescent-antibody test for tissue form of *Penicillium marneffei*. *Journal of Clinical Microbiology* **33**: 2136-2138.
- Keller, R., Gehri, R., Keist, R., Huf, E. & Kayser, F. H.** (1991) The interaction of macrophages and bacteria: a comparative study of the induction of tumoricidal activity and of reactive nitrogen intermediates. *Cellular Immunology* **134**: 249-256.
- Ko, K. F.** (1994) Retropharyngeal abscess caused by *Penicillium marneffei*: an unusual cause of upper airway obstruction. *Otolaryngology Head Neck Surgery* **110**: 445-446.
- Kogushi, Y., Kawakami, K., Kon, S., Segawa, T., Maeda, M., Uede, T. & Saito, A.** (2002) *Penicillium marneffei* causes osteopontin-mediated production of interleukin1 by peripheral blood mononuclear cells. *Infection and Immunity* **70**: 1042-1048
- Kok, I., Veenstra, J., Rietra, P. J., Dirks-Go, S., Blaauwgeers, J. L. & Weigel, H. M.** (1994) Disseminated *Penicillium marneffei* infection as an imported disease in HIV-1 infected patients. Description of two cases and a review of the literature. *Netherlands Journal of Medicine* **44**: 18-22.

Kraus, P. R & Heitman, J. (2003) Coping with stress: calmodulin and calcineurin in model and pathogenic fungi. *Biochemical and Biophysical Research Communications* **311:** 1151-7.

Kudeken, N., Kawakami, K., Kusano, N. & Saito, A. (1996) Cell-mediated immunity in host resistance against infection caused by *Penicillium marneffei*. *Journal of Medical and Veterinary Mycology* **34:** 371-378.

Kudeken, N., Kawakami, K. & Saito, A. (1997) CD4⁺ T cell-mediated fatal hyperinflammatory reactions in mice infected with *Penicillium marneffei*. *Clinical Experimental Immunology* **107:** 468-473.

Kudeken, N., Kawakami, K. & Saito, A. (1998) Differential susceptibilities of yeasts and conidia of *Penicillium marneffei* to nitric oxide (NO)-mediated fungicidal activity of murine macrophages. *Clinical Experimental Immunology* **112:** 287-293.

Kudeken, N., Kawakami, K. & Saito, A. (1999a) Cytokine-induced fungicidal activity of human polymorphonuclear leukocytes against *Penicillium marneffei*. *FEMS Immunology and Medical Microbiology* **26:** 115-124.

Kudeken, N., Kawakami, K. & Saito, A. (1999b) Role of superoxide anion in the fungicidal activity of murine peritoneal exudate macrophages against *Penicillium marneffei*. *Microbiology and Immunology* **43:** 323-330.

Kudeken, N., Kawakami, K. & Saito, A. (2000) Mechanisms of the in vitro fungicidal effects of human neutrophils against *Penicillium marneffei* induced by granulocyte-macrophage colony-stimulating factor (GM-CSF). *Clinical Experimental Immunology* **119**: 472-478.

Kumar, S., Tamura, K. & Nei, M. (2004) MEGA3: Integrated software for Molecular Evolutionary Genetics Analysis and sequence alignment. *Briefings in Bioinformatics* **5**: 150-63.

Kummasook, A., Pongpom, P. & Vanittanakom, N. (2007) Cloning, characterization and differential expression of an *hsp70* gene from the pathogenic dimorphic fungus, *Penicillium marneffei*. *DNA Sequence* **18**: 385-394.

Li, J. C., Pan, L. Q. & Wu, S. X. (1989) Mycologic investigation on *Rhizomys pruinous senex* in Guangxi as natural carrier with *Penicillium marneffei*. *Chinese Medical Journal (English)* **106**: 477-85.

Liang, P., Averboukh, L., Keyomarsi, K., Sager, R. & Pardee, A. B. (1992) Differential display and cloning of messenger RNAs from human breast cancer versus mammary epithelial cells. *Cancer Research* **52**: 6966-6968.

Liao, X., Ran, Y., Chen, H., Meng, W., Xiang, B., Kang, M., Xiong, Z., Zhuang, J., Peng, X., Deng, C., Li, G. & Liu, W. (2002) Disseminated *Penicillium marneffei* infection associated with AIDS, report of a case. *Zhonghua Yi Xue Za Zhi* **82**: 325-329.

Lindquist, S. & Craig, E. A. (1988) The heat-shock proteins. *Annual Review of Genetics* **22**: 631-677.

- Liu, H., Xi, L., Zhang, J., Li, X., Liu, X., Lu, C. & Sun, J.** (2007) Identifying differentially expressed genes in the dimorphic fungus *Penicillium marneffei* by suppression subtractive hybridization. *FEMS Microbiology Letter* **270**: 97-103.
- Liu, M. T., Wong, C. K. & Fung, C. P.** (1994) Disseminated *Penicillium marneffei* infection with cutaneous lesions in an HIV-positive patient. *British Journal of Dermatology* **131**: 280-283.
- Liu, Z. M. & Kolattukudy, P. E.** (1999) Early expression of the calmodulin gene, which precedes appressorium formation in *Magnaporthe grisea*, is inhibited by self-inhibitors and requires surface attachment. *Bacteriology* **181**: 3571-3577.
- Lo, H. J., Köhler, J. R., DiDomenico, B., Loebenberg, D., Cacciapuoti, A. & Fink, G. R.** (1997) Nonfilamentous *C. albicans* mutants are avirulent. *Cell* **90**: 939-949.
- Lo, Y., Tintelnot, K., Lippert, U. & Hoppe, T.** (2000) Disseminated *Penicillium marneffei* infection in an African AIDS patient. *Transaction of Royal Society of Tropical Medicine and Hygiene* **94**: 187.
- LoBuglio, K. F. & Taylor, J.** (1995) Phylogenetic and PCR identification of the human pathogenic fungus *Penicillium marneffei*. *Journal of Clinical Microbiology* **33**: 85-89.
- Lorenz, M. C., Bender, J. A. & Fink, G. R.** (2004) Transcriptional response of *Candida albicans* upon internalization by macrophages. *Eukaryotic Cell* **3**: 1076-1087.
- Lorenz, M. C. & Fink, G. R.** (2001) The glyoxylate cycle is required for fungal virulence. *Nature* **412**: 83-86.

- Lorenz, M. C. & Fink, G. R.** (2002) Life and death in a macrophage: role of the glyoxylate cycle in virulence. *Eukaryotic Cell* **1**: 657-662.
- Lynch, M. & Kuramitsu, H.** Expression and role of superoxide dismutases (SOD) in pathogenic bacteria. (2000) *Microbes and Infection* **2**: 1245-55.
- Maniar, J. K., Chitale, A. R., Miskeen, A., shah, K. & Maniar, A.** (2005) *Penicillium marneffei* infection: an AIDS-defining illness. *Indian Journal of Dermatology, Venereology and Leprology* **71**: 202-204.
- Martin, E. & Bhakdi, S.** (1991) Quantitative analysis of opsonophagocytosis and of killing of *Candida albicans* by human peripheral blood leukocytes by using flow cytometry. *Journal of Clinical Microbiology* **29**: 2013-2023.
- Mayer, M. P. & Bukau B.** (2005) Hsp70 chaperones: cellular functions and molecular mechanism. *Cellular and Molecular Life Sciences* **6**: 670-84.
- McDonald, L. J. & Moss, J.** (1993) Stimulation by nitric oxide of an NAD linkage to glyceraldehyde-3-phosphate dehydrogenase. *Proceedings of the National Academy of Sciences USA* **90**: 6238-6241.
- McShane, H., Tang, C. M. & Conlon, C. P.** (1998) Disseminated *Penicillium marneffei* infection presenting as a right upper lobe mass in an HIV positive patient. *Thorax* **53**: 905-906.
- Missall, T. A., Lodge, J. K. & McEwen, J. E.** (2004) Mechanisms of resistance to oxidative and nitrosative stress: implications for fungal survival in mammalian hosts. *Eukaryotic Cell* **3**: 835-846.
- Modun, B., Morrissey, J. & Williams, P.** (2000) The staphylococcal transferrin receptor: a glycolytic enzyme with novel functions. *Trends in Microbiology* **8**: 231-237.

Modun, B. & Williams, P. (1999) The staphylococcal transferrin-binding protein is a cell wall glyceraldehyde-3-phosphate dehydrogenase. *Infection and Immunity* **67:** 1086-1092.

Mootsikapan, P. & Srikulbutr, S. (2006) Histoplasmosis and penicilliosis: comparison of clinical features, laboratory finding and outcome. *International Journal of Infectious Diseases* **10:** 66-71.

Moreira, S. F., Bailão, A. M., Barbosa, M. S., Jesuino, R. S., Felipe, M. S., Pereira, M. & de Almeida Soares, C. M. (2004) Monofunctional catalase P of *Paracoccidioides brasiliensis*: identification, characterization, molecular cloning and expression analysis. *Yeast* **21:** 173-182.

Nathan, C. & Shiloh, M. U. (2000) Reactive oxygen and nitrogen intermediates in the relationship between mammalian hosts and microbial pathogens. *Proceedings of the National Academy of Sciences USA* **97:** 8841-8848.

Newman, S. L. (1999) Macrophage in host defense against *Histoplasma capsulatum*. *Trend in Microbiology* **7:** 67-71.

Newman, S. L., Bucher, C., Rhodes, J. & Bullock, W. E. (1990) Phagocytosis of *Histoplasma capsulatum* yeasts and microconidia by human cultured macrophages and alveolar macrophages. Cellular cytoskeleton requirement for attachment and ingestion. *The Journal of Clinical Investigation* **85:** 223-230.

Nittler, M. P., Hocking-Murray, D., Foo, C. K. & Sil, A. (2005) Identification of *Histoplasma capsulatum* transcripts induced in response to reactive nitrogen species. *Molecular Biology of the Cell* **16:** 4792-4813.

- Panichakul, T., Chawengkirttikul, R., Chaiyaroj, S. C. & Sirisinha, S.** (2002) Development of a monoclonal antibody-based enzyme-linked immunosorbent assay for the diagnosis of *Penicillium marneffei* infection. *American Journal of Tropical Medicine and Hygiene* **67**: 443-447.
- Paris, S., Wysong, D., Debeaupuis, J. P., Shibuya, K., Philippe, B., Diamond, R. D. & Latge, J. P.** (2003) Catalases of *Aspergillus fumigatus*. *Infection and Immunity* **71**: 3551-3562.
- Pautler, K. B., Padhye, A. A. & Ajello, L.** (1984) Imported penicilliosis marneffei in the United States: report of a second human infection. *Sabouraudia* **22**: 433-438.
- Perfect, J. R., Rude, T. H., Wong, B., Flynn, T., Chaturvedi, V. & Niehaus, W.** (1996) Identification of a *Cryptococcus neoformans* gene that directs expression of the cryptic *Saccharomyces cerevisiae* mannitol dehydrogenase gene. *Journal of Bacteriology* **178**: 5257-5262.
- Peto, T. E., Bull, R., Millard, P. R., Mackenzie, D. W., Campbell, C. K., Haines, M. E. & Mitchell, R. G.** (1988) Systemic mycosis due to *Penicillium marneffei* in a patient with antibody to human immunodeficiency virus. *Journal of Infection* **16**: 285-290.
- Philippe, B., Ibrahim-Granet, O., Prévost, M. C., Gougerot-Pocidalo, M. A., Sanchez Perez, M., Van der Meer, A. & Latgé, J. P.** (2003) Killing of *Aspergillus fumigatus* by alveolar macrophages is mediated by reactive oxidant intermediates. *Infection and Immunity* **71**: 3034-3042.

- Piddington, D. L., Fang, F. C., Laessig, T., Cooper, A. M., Orme, I. M. & Buchmeier, N. A.** (2001) Cu, Zn superoxide dismutase of *Mycobacterium tuberculosis* contributes to survival in activated macrophages that are generating an oxidative burst. *Infection and Immunity* **69:** 4980-4987.
- Pierard, G. E., Arrese Estrada, J., Piérard-Franchimont, C., Thiry, A. & Stynen, D.** (1991) Immunohistochemical expression of galactomannan in the cytoplasm of phagocytic cells during invasive aspergillosis. *American Journal of Clinical Pathology* **96:** 373-376.
- Prariyachatigul, C., Chaiprasert, A., Geenkajorn, K., Kappe, R., Chuchottaworn, C., Termsetjaroen, S. & Srimuang, S.** (2003) Development and evaluation of a one-tube seminested PCR assay for the detection and identification of *Penicillium marneffei*. *Mycoses* **46:** 447-454.
- Pongpom, P.** (2004) Cloning and analysis of genes encoding antigenic proteins from *Penicillium marneffei* [Ph.D. Thesis]. Chiang Mai University, Chiang Mai.
- Pongpom, P., Cooper, C. R. Jr., Vanittanakom, N.** (2005) Isolation and characterization of a catalase-peroxidase gene from the pathogenic fungus, *Penicillium marneffei*. *Medical mycology* **43:** 403-411.
- Pongsunk, S., Andrianopoulos, A. & Chaiyaroj, S. C.** (2005) Conditional lethal disruption of TATA-binding protein gene in *Penicillium marneffei*. *Fungal Genetics and Biology* **42:** 893-903.
- Potoka, D. A., Takao, S., Owaki, T., Bulkley, G. B. & Klein, A. S.** (1998) Endothelial cells potentiate oxidant-mediated Kupffer cell phagocytic killing. *Free Radical Biology and Medicine* **24:** 1217-1227.
- Powderly, W. G.** (1997) Penicilliosis. *Journal of the International Association of Physicians in AIDS Care* **3:** 25-26.

el-Rady, J. & Shearer, G. Jr. (1996) Isolation and characterization of a calmodulin-encoding cDNA from the pathogenic fungus *Histoplasma capsulatum*. *Journal of Medical and Veterinary Mycology* **34**: 163-169.

Ranjana, K. H., Priyokumar, K., Singh, T. J., Gupta, Ch. C., Sharmila, L., Singh, P. N. & Chakrabarti, A. (2002) Disseminated *Penicillium marneffei* infection among HIV-infected patients in Manipur state. *Indian Journal of Infection* **45**: 268-271

Rasmussen, C. D., Means, R. L., Lu, K. P., May, G. S. & Means, A. R. (1990) Characterization and expression of the unique calmodulin gene of *Aspergillus nidulans*. *Journal of Biological Chemistry* **265**: 13767-13775.

Ridder, R. & Osiewacz, H. D. (1992) Sequence analysis of the gene coding for glyceraldehyde-3-phosphate dehydrogenase (*gpd*) of *Podospora anserina*: use of homologous regulatory sequences to improve transformation efficiency. *Current Genetics* **21**: 207-213.

Roilides, E., Lyman, C. A., Sein, T., Petraitiene, R. & Walsh, T. J. (2003) Macrophage colony-stimulating factor enhances phagocytosis and oxidative burst of mononuclear phagocytes against *Penicillium marneffei* conidia. *FEMS Immunology and Medical Microbiology* **36**: 19-26.

Rokiah, I., Ng, K. P. & Soo-Hoo, T. S. (1995) *Penicillium marneffei* infection in an AIDS patient--a first case report from Malaysia. *Medical Journal of Malaysia* **50**: 101-104.

Romandini, P., Bonotto, C., Bertoloni, G., Beltramini, M. & Salvato, B. (1994) Superoxide dismutase, catalase and cell dimorphism in *Candida albicans* cells exposed to methanol and different temperatures. *Comparative Biochemistry and Physiology Part C: Pharmacology, Toxicology and Endocrinology* **108**: 53-57.

Rongrungruang, Y. & Levitz, S. M. (1999) Interactions of *Penicillium marneffei* with human leukocytes *in vitro*. *Infection and Immunity* **67**: 4732-4736.

Sabie, F. T. & Gadd, G. M. (1989) Involvement of a Ca_2^+ -calmodulin interaction in the yeast-mycelial (Y-M) transition of *Candida albicans*. *Mycopathologia* **108**: 47-54.

Sambrook, J. & Russell, D. W. (2001) Molecular cloning: a laboratory manual, 3rd edition. Cold Spring Harbor Laboratory Press, Cold Spring Harbor, New York. USA.

Sanger, F., Nicklen, S. & Coulson, A. R. (1977) DNA sequencing with chain-terminating inhibitors. *Proceedings of the National Academy of Sciences USA* **74**: 5463-5467.

Sar, B., Boy, S., Keo, C., Ngeth, C. C., Prak, N., Vann, M., Monchy, D. & Sarthou, J. L. (2006) *In vitro* antifungal-drug susceptibilities of mycelial and yeast forms of *Penicillium marneffei* isolates in Cambodia. *Clinical Microbiology* **44**: 4208-4210.

Sasada, M. & Johnston, R. B. (1980) Macrophage microbicidal activity: correlation between phagocytosis-assoeiated oxidative metabolism and the killing of *Candida* by macrophages. *The Journal of Experimental Medicine* **152**: 85-98.

Satapatayavongs, B., Damrongkitchaiporn, S., Saengditha, P., Kiatboonsri, S. & Jayanetra, P. (1989) Disseminated penicilliosis associated with HIV infection (letter). *Journal of Infection* **19**: 84-85.

- Schena, M., Shalon, D., Heller, R., Chai, A., Brown, P. O. & Davis, R. W.** (1996) Parallel human genome analysis: microarray-based expression monitoring of 1000 genes. *Proceedings of the National Academy of Sciences USA* **93**: 10614-10619.
- Schnappinger, D., Ehrt, S., Voskuil, M. I., Liu, Y., Mangan, J. A., Monahan, I. M., Dolganov, G., Efron, B., Butcher, P. D., Nathan, C. & Schoolnik, G. K.** (2003) Transcriptional adaptation of *Mycobacterium tuberculosis* within macrophages: Insights into the phagosomal environment. *The Journal of Experimental Medicine* **198**: 693-704.
- Schonbaum, G. & Chance, B.** (1976) Catalase. *Enzymes* **13**: 363-409.
- Schulman, H.** (1993) The multifunctional Ca_2^+ /calmodulin-dependent protein kinases. *Current Opinion in Cell Biology* **5**: 247-253.
- Segretain, G.** (1959a) Description d'une nouvelle espèce de penicillium: *Penicillium marneffei* n.sp. *Bulletin de la Societe Mycologie de France* **75**: 412.
- Segretain, G.** (1959b) *Penicillium marneffei* n.sp. agent d'une mycose du système réticuloendothélial. *Mycopathologia et Mycologia Applicata* **11**: 327.
- Sharma, A., Hazarika, N. K., Barua, P., Dey, I. & Tudu, N. K.** (2007) *Penicillium marneffei* infection in a HIV infected child. *Indian Journal of Medical Research* **126**: 580-582.
- Silva, C. L.** (1999) The potential use of heat-shock proteins to vaccinate against mycobacterial infections. *Microbes and infection* **1**: 429-435.
- Singh, R. & Green, M. R.** (1993) Sequence-specific binding of transfer RNA by glyceraldehyde-3-phosphate dehydrogenase. *Science* **259**: 365-368.

- Singh, P. N., Ranjana, K., Singh, Y. I., Singh, K. P., Sharma, S. S., Kulachandra, M., Kabakumar, Y., Chakrabarti, A., Padhye, A. A., Kaufman, L. & Ajello, L.** (1999) Indigenous disseminated *Penicillium marneffei* infection in the state of Manipur, India: report of four autochthonous cases. *Journal of Clinical Microbiology* **37:** 2699-2702.
- Sirisanthana, V. & Sirisanthana, T.** (1993) *Penicillium marneffei* infection in children infected with human immunodeficiency virus. *The Pediatric Infectious Disease Journal* **12:** 1021-1025.
- Sirisanthana, V. & Sirisanthana, T.** (1995) Disseminated *Penicillium marneffei* infection in human immunodeficiency virus-infected children. *Pediatric Infectious Disease Journal* **14:** 935-940.
- Sirisanthana, T., Supparatpinyo, K., Perriens, J., & Nelson, K. E.** (1998) Amphotericin B and itraconazole for treatment of disseminated *Penicillium marneffei* infection in human immunodeficiency virus-infected patients. *Clinical Infectious Disease* **26:** 1107-1110.
- Sirover, M. A.** (1997) Role of the glycolytic protein, glyceraldehyde-3-phosphate dehydrogenase, in normal cell function and in cell pathology. *Cellular Biochemistry* **66:** 133-140.
- Sirover, M. A.** (1999) New insights into an old protein: the functional diversity of mammalian glyceraldehyde-3-phosphate dehydrogenase. *Biochimica et Biophysica Acta* **1432:** 159-184.
- Sisto, F., Miluzio, A., Leopardi, O., Mirra, M., Boelaert, J.R. & Taramelli, D.** (2003) Differential cytokine pattern in the spleens and livers of BALB/c mice infected with *Penicillium marneffei*: protective role of gamma interferon. *Infection and Immunity* **71:** 465-473.

Supparatpinyo, K., Chiewchanvit, S., Hirunsri, P., Uthammachai, C., Nelson, K.

E. & Sirisanthana, T. (1992) *Penicillium marneffei* infection in patients infected with human immunodeficiency virus. *Clinical Infectious Disease* **14**: 871-874.

Supparatpinyo, K., Khamwan, C., Baosoung, V., Nelson, K. E. & Sirisanthana,

T. (1994) Disseminated *Penicillium marneffei* infection in Southeast Asia. *Lancet* **344**: 110-113.

Supparatpinyo, K., Nelson, K. E., Merz, W. G., Breslin, B. J., Cooper, C. R. Jr.,

Kamwan, C. & Sirisanthana, T. (1993) Response to antifungal therapy by human immunodeficiency virus-infected patients with disseminated *Penicillium marneffei* infections and in vitro susceptibility of isolates from clinical specimens. *Antimicrobial Agents and Chemotherapy* **37**: 2407-2411.

Supparatpinyo, K., Perriens, J., Nelson, K. E., & Sirisanthana, T. (1998) A

controlled trial of itraconazole to prevent relapse of *Penicillium marneffei* infection in patients infected with the human immunodeficiency virus. *New England Journal of Medicine* **339**: 1739-1743.

Supparatpinyo, K. & Sirisanthana, T. (1994) Disseminated *Penicillium marneffei*

infection diagnosed on examination of a peripheral blood smear of a patient with human immunodeficiency virus infection. *Clinical Infectious Disease* **18**: 246-247.

Taramelli, D., Brambilla, S., Sala, G., Brucolieri, A., Tognazioli C., Riviera-

Uzielli, L. & Boelaert, J. R. (2000) Effects of iron on extracellular and intracellular growth of *Penicillium marneffei*. *Infection and Immunity* **68**: 1724-1726.

Taramelli, D., Tognazioli, C., Ravagnani, F., Leopardi, O., Giannulis, G. &

Boelaert, J. R. (2001) Inhibition of intramacrophage growth of *Penicillium marneffei* by 4-aminoquinolines. *Antimicrobial Agents Chemotherapy* **45:** 1450-1455.

Tavares, A. H., Silva, S. S., Dantas, .A, Campos, E. G., Andrade, R. V.,

Maranhão, A. Q., Brígido, M. M., Passos-Silva, D. G., Fachin, A. L., Teixeira, S. M., Passos, G. A., Soares, C. M., Bocca, A. L., Carvalho, M. J., Silva-Pereira, I. & Felipe, M. S. (2007) Early transcriptional response of *Paracoccidioides brasiliensis* upon internalization by murine macrophages. *Microbes and Infection* **9:** 583-590.

Taylor, J. M. & Heinrichs, D. E. (2002) Transferrin binding in *Staphylococcus aureus*: involvement of a cell wall-anchored protein. *Molecular Microbiology* **43:** 1603-1614.

Thongcharoen, P., Wasi, C., Louisirirotchanakul, S., Parry, J., Connell, J. &

Mortimer, P. (1992) Immunoglobulin G antibody capture enzyme-linked immunosorbent assay: a versatile assay for detection of anti-human immunodeficiency virus type 1 and 2 antibodies in body fluids. *Journal of Clinical Microbiology* **30:** 3288-3289.

Todd, R. B., Greenhalgh, J. R., Hynes, M. J. & Andrianopoulos, A. (2003) TupA,

the *Penicillium marneffei* Tup1p homologue, represses both yeast and spore development. *Molecular Microbiology* **48:** 85-94.

Tolnai, S. (1975) A method for viable cell count. *Methods in Cell Science* **1:** 37-38.

Trewatcharegon, S., Chaiyaroj, S. C., Chongtrakook, P. & Sirisinha, S. (2000)

Production and characterization of monoclonal antibodies reactive with the mycelial and yeast phases of *Penicillium marneffei*. *Medical Mycology* **38:** 91-96.

- Tsang, D. N., Li, P.C., Tsui, M. S., Lau, Y. T., Ma, K. F. & Yeoh, E. K.** (1991) *Penicillium marneffei*: another pathogen to consider in patients infected with human immunodeficiency virus. *Review of Infectious Disease* **13**: 766-767.
- Tsui, W. M., Ma, K. F. & Tsang, D. N.** (1992) Disseminated *Penicillium marneffei* infection in HIV-infected subject. *Histopathology* **20**: 287-293.
- Tsunemi, Y., Takahashi, T. & Tarmaki, T.** (2003) *Penicillium marneffei* infection diagnosed by polymerase chain reaction from the skin specimen. *Journal of the American Academy of Dermatology* **49**: 344-346.
- Twigg, H. L.** (2004). Macrophages in innate and acquired immunity. *Seminars in Respiratory and Critical Care Medicine* **25**: 21-31.
- Ukarapol, N., Sirisanthana, V. & Wongsawasdi, L.** (1998) *Penicillium marneffei* mesenteric lymphadenitis in human immunodeficiency virus-infected children. *Journal of the Medical Association of Thailand* **81**: 637-640.
- Valeyrie, L., Botterel, F., Minozzi, C., Roger, P., Bourrée, P. & Vittecoq, D.** (1999) Prolonged fever revealing disseminated infection due to *Penicillium marneffei* in a French HIV-seropositive patient. *AIDS* **13**: 731-732.
- Vanittanakom, N., Cooper, C. R. Jr., Fisher, M. C. & Sirisanthana, T.** (2006) *Penicillium marneffei* infection and recent advances in the epidemiology and molecular biology aspects. *Clinical Microbiology Review* **19**: 95-110.
- Vanittanakom, N., Mekaprateep, M., Sriburee, P., Vanittanakom, P. & Khanjanasthiti, P.** (1995) Efficiency of the flotation method in the isolation of *Penicillium marneffei* from seeded soil. *Journal of Medical and Veterinary Mycology* **33**: 271-273.

- Vanittanakom, N., Mekaprateep, M., Sittisombut, N., Supparatpinyo, K. & Kanjanasthiti, P.** (1997) Western immunoblot analysis of protein antigens of *Penicillium marneffei*. *Journal of Medical and Veterinary Mycology* **35:** 123-131.
- Vanittanakom, N., Merz, W. G., Sittisombut, N., Khamwan, C., Nelson, K. E. & Sirisanthana, T.** (1998) Specific identification of *Penicillium marneffei* by a polymerase chain reaction/hybridization technique. *Medical Mycology* **36:** 169-175.
- Vanittanakom, N. & Sirisanthana, T.** (1997) *Penicillium marneffei* infection in patients infected with human immunodeficiency virus. *Current Topics in Medical Mycology* **8:** 35-42.
- Vanittanakom, N., Vanittanakom, P. & Hay, R. J.** (2002) Rapid identification of *Penicillium marneffei* by PCR-based detection of specific sequences on the rRNA gene. *Journal of Clinical Microbiology* **40:** 1739-1742.
- Veenhuis, M., Mateblowski, M., Kunau, W. H., Harder, W.** (1987) Proliferation of microbodies in *Saccharomyces cerevisiae*. *Yeast* **3:** 77-84.
- Vilar, F. J., Hunt, R., Wilkins, E. G., Wilson, G. & Jones, N. P.** (2000) Disseminated *Penicillium marneffei* in a patient infected with human immunodeficiency virus. *International Journal of STD and AIDS* **11:** 126-128.
- Viviani, M. A., Tortorano, A.M., Pagano, A., Vigevani, G. M., Gubertini, G., Cristina, S., Assaisso, M. L., Suter, F., Farina, C. & Minetti B.** (1990) European experience with itraconazole in systemic mycoses. *Journal of the American Academy of Dermatology* **23:** 587-593.

- Viviani, M. A., Tortorano, A. M., Rizzardini, G., Quirino, T., Kaufman, L., Padhye, A. A. & Ajello, L.** (1993) Treatment and serological studies of an Italian case of penicilliosis marneffei contracted in Thailand by a drug addict infected with the human immunodeficiency virus. *European Journal of Epidemiology* **9**: 79-85.
- Wong, K. H., Lee, S. S. & Chan, K. C.** (2006) Twenty years of clinical human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS) in Hong Kong. *Hong Kong Medical Journal* **12**: 133-140.
- Wong, K. H., Lee, S. S., Chan, K. C. & Choi, T.** (1998) Redefining AIDS: case exemplified by *Penicillium marneffei* infection in HIV-infected people in Hong Kong. *International Journal of STD & AIDS* **9**: 555-556.
- Wong, S. S., Ho, T. Y., Ngan, A. H., Woo, P. C., Que, T. L. & Yuen, K. Y.** (2001) Biotyping of *Penicillium marneffei* reveals concentration-dependent growth inhibition by galactose. *Journal of Clinical Microbiology* **4**:1416-1421.
- Woo, P. C., Chong, K. T., Tse, H., Cai, J. J., Lau, C. C., Zhou, A. C., Lau, S. K. & Yuen, K. Y.** (2006) Genomic and experimental evidence for a potential sexual cycle in the pathogenic thermal dimorphic fungus *Penicillium marneffei*. *FEBS Letters* **580**: 3409-3416.
- Woo, P. C., Zhen, H., Cai, J. J., Yu, J., Lau, S. K., Wang, J., Teng, J. L., Wong, S. S., Tse, R. H., Chen, R., Yang, H., Liu, B. & Yuen, K. Y.** (2003) The mitochondrial genome of the thermal dimorphic fungus *Penicillium marneffei* is more closely related to those of molds than yeasts. *FEBS Letters* **555**: 469-477.
- Xi, L., Xu, X., Liu, W., Li, X., Liu, Y., Li, M., Zhang, J. & Li, M.** (2007) Differentially expressed proteins of pathogenic *Penicillium marneffei* in yeast and mycelial phases. *Journal of Medical Microbiology* **56**: 298-304.

Youngchim, S., Hay, R. J. & Hamilton, A. J. (2005) Melanization of *Penicillium marneffei* *in vitro* and *in vivo*. *Microbiology* **151**: 291-299.

Youngchim, S., Vanittanakom, N. & Hamilton, A. J. (1999) Analysis of the enzymatic activity of mycelial and yeast phases of *Penicillium marneffei*. *Medical Mycology* **37**: 445-450.

Yuen, W. C., Chan, Y. F., Loke, S. L., Seto, W. H., Poon, G. P. & Wong, K. K. (1986) Chronic lymphadenopathy caused by *Penicillium marneffei*: a condition mimicking tuberculous lymphadenopathy. *British Journal of Surgery* **73**: 1007-1008.

Yuen, K. Y., Pascal, G., Wong, S. S., Glaser, P., Woo, P. C., Kunst, F., Cai, J. J., Cheung, E. Y., Medigue, C. & Danchin, A. (2003) Exploring the *Penicillium marneffei* genome. *Achieves of Microbiology* **179**: 339-353.

Yuen, K. Y., Wong, S. S., Tsang, D. N. & Chau, P. (1994) Serodiagnosis of *Penicillium marneffei* infection. *Lancet* **344**: 444-445.

Zancopé-Oliveira, R. M., Reiss, E., Lott, T. J., Mayer, L. W. & Deepe, G. S. Jr. (1999) Molecular cloning, characterization, and expression of the M antigen of *Histoplasma capsulatum*. *Infection and Immunity* **67**: 1947-1953.

Zuber, S., Hynes, M. J. & Andrianopoulos, A. (2002) 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 marneffei*. *Eukaryotic cell* **1**: 440-447.

Zuber, S., Hynes, M. J. & Andrianopoulos, A. (2003) The G-protein α -subunit GasC plays a major role in germination in the dimorphic fungus *Penicillium marneffei*. *Genetics* **164**: 487-499.