

VIII. REFERENCES

- Ajello, L., Padhye, A. A., Sukroongreung, S., Nilakul, C. H. & Tantimavanic, S. (1995) Occurrence of *Penicillium marneffe* infections among wild bamboo rats in Thailand. *Mycopathologia* 131: 1-8.
- Altshul, S. F., Gish, W., Miller, W., Myers, E. W. & Lipman, D. J. (1990) Basic local alignment search tool. *Journal of Molecular Biology* 213: 403-410.
- Babcock, G.T. & Wikström, M. (1992) Oxygen activation and the conservation of energy in cell respiration. *Nature* 356: 301-309.
- Bandyopadhyay, P. & Steinman, H. M. (1998) *Legionella pneumophila* catalase-peroxidases: cloning of the *katB* gene and studies of KatB function. *Journal of Bacteriology* 180: 5369-5374.
- Borneman, A. R., Hynes, M. J. & Andrianopoulos, A. (2000) The *abaA* homologue of *Penicillium marneffe* 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 marneffe* 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 marneffe*. *Molecular Microbiology* 44: 621-631.
- Boyce, K. J., Hynes, M. J. & Andrianopoulos, A.** (2001) The *CDC42* homolog of the dimorphic fungus *Penicillium marneffe* 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 marneffe* *RAC* homolog. *Journal of Cell Science* 116: 1249-1260.
- Branden, C. & Tooze, J.** (1999) Introduction to Protein Structure, 2nd edition. Garland Publishing, Inc., New York, USA.
- Brown, S. M., Howell, M. L., Vasil, M. L., Anderson, A. J. & Hassett, D. J.** (1995) Cloning and characterization of the *katB* gene of *Pseudomonas aeruginosa* encoding a hydrogen peroxide-inducible catalase: purification of KatB, cellular localization, and demonstration that it is essential for optimal resistance to hydrogen peroxide. *Journal of Bacteriology* 177: 6536-6544.
- Brunner, W., Schmidt, H. & Karch, H.** (1996) *KatP*, a novel catalase-peroxidase encoded by the large plasmid of enterohaemorrhagic *Escherichia coli* O157:H7. *Microbiology* 142 (Pt 11): 3305-3315.

- 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. (1998b) *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. (1998a) 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.
- Chan, Y. F. & Chow, T. C. (1990) Ultrastructural observations on *Penicillium marneffei* in natural human infection. *Ultrastructural Pathology* **14**: 439-452.
- 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., Supparatpinyo, K., Sirisanthana, T. & Nelson, K. E. (2002)**
A controlled trial of itraconazole as primary prophylaxis for systemic fungal infections in patients with advanced human immunodeficiency virus infection in Thailand. *Clinical Infectious Disease* **34**: 277-284.
- 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.
- Chiewchanwit, 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.
- Chromczynski, P. & sacchi, N. (1987)** Single-step method of RNA isolation by acid guanidinium thiocyanate-phenol-chloroform extraction. *Analytical Biochemistry*. **162**: 156-159.
- 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. (1998)** From bamboo rats to humans: the odyssey of *Penicillium marneffei*. *ASM News* **64**: 390-397.

- Cooper, C. R. Jr., Breslin, B. J., Dixon, D. M. & Salkin, I. F. (1992) DNA typing of isolates associated with the 1988 sporotrichosis epidemic. *Journal of Clinical Microbiology* 30: 1631-1635.
- 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.
- Cui, J., Tanaka, R., Taguchi, H., Sano, A., Ito, E., Fukushima, K., Takeo, K., Yoshida, S., Nishimura, K. & Miyaji, M. (1997) Histopathological and electron microscopical studies on experimental *Penicillium marneffei* infection in mice. *Journal of Medical and Veterinary Mycology* 35: 347-353.
- 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.
- 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.
- 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.

- El-Rady, J. & Shearer, G. Jr. (1997) Cloning and analysis of an actin-encoding cDNA from the dimorphic pathogenic fungus *Histoplasma capsulatum*. *Journal of Medical and Veterinary Mycology* **35**: 159-166.
- Falquet, L., Pagni, M., Bucher, P., Hulo, N., Sigrist, C. J., Hofmann, K. & Bairoch, A. (2002) The PROSITE database, its status in 2002. *Nucleic Acids Research* **30**: 235-238.
- Finzel, B. C., Poulos, T. L. & Kraut, J. (1984) Crystal structure of yeast cytochrome c peroxidase refined at 1.7-Å resolution. *Journal of Biological Chemistry* **259**: 13027-13036.
- Fraaije, M. W., Roubroeks, H. N., Hagen, W. R. & Van Berkel, W. J. H. (1996) Purification and characterization of an intracellular catalase-peroxidase from *Penicillium simplicissimum*. *European Journal of Biochemistry* **235**: 192-198.
- Frisvad, R. A. & Filtenberg, O. (1990) Revision of *Penicillium* subgenus *Furatum* based on secondary metabolites and conventional characters. In: Modern Concepts in *Penicillium* and *Aspergillus* Classification. RA Samson and JI Pitt (Eds). Plenum Press. New York. 159-172.
- Fulle, H. J. (2003) Quality assessment of cDNA libraries. *Methods in Molecular Biology* **221**: 145-153.
- Garcia, E., Nedialkov, Y. A., Elliott, J., Motin, V. L. & Brubaker, R. R. (1999) Molecular characterization of *KatY* (antigen 5), a thermoregulated chromosomally encoded catalase-peroxidase of *Yersinia pestis*. *Journal of Bacteriology* **181**: 3114-3122.
- Hagen, F. S., Gray, C. L. & Kuijper, J. L. (1988) Assaying the quality of cDNA libraries. *Biotechniques* **6**: 340-345.

- Hamilton, A. J., Jeavons, L., Youngchim, S. & Vanittanakom, N. (1999)** Recognition of fibronectin by *Penicillium marneffe* 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 marneffe* conidia. *Infection and Immunity* **66**: 6024-6026.
- Han, J. H. & Rutter, W. J. (1987)** Lambda gt22, an improved lambda vector for the directional cloning of full-length cDNA. *Nucleic Acids Research* **15**: 6304.
- Herruer, M. H., Mager, W. H., Rave, H. A., Vreken, P., Wilms, E. & Planta, R. J. (1988)** Mild temperature shock affects transcription of yeast ribosomal protein genes as well as the stability of their mRNAs. *Nucleic Acids Research* **16**: 7917-7929.
- Hodgson, J. (1993)** Expression systems: a user's guide. Emphasis has shifted from the vector construct to the host organism. *Biotechnology* **11**: 887-893.
- Hu, G. (1993)** DNA polymerase-catalyzed addition of nontemplated extranucleotides to the 3' end of a DNA fragment. *DNA and Cell Biology* **12**: 763-770.
- Ian, G.C. & Caroline, A. A. (1997)** cDNA Library Protocols. Humana Press. Totowa. New Jersey. USA.
- Imwidthaya, P., Sekhon, A. S., Mastro, T. D., Garg, A. K. & Ambrosie, E. (1997)** Usefulness of a microimmunodiffusion test for the detection of *Penicillium marneffe* antigenemia, antibodies, and exoantigens. *Mycopathologia* **138**: 51-55.

- Jackett, P. S., Aber, V. R. & Lowrie, D. B. (1978) Virulence and resistance to superoxide, low pH and hydrogen peroxide among strains of *Mycobacterium tuberculosis*. *Journal of General Microbiology* 104: 37-45.
- Jayanetra, P., Nitiyanant, 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.
- Kabsch, W. & Vandekerckhove, J. (1992) Structure and function of actin. *Annual Review of Biophysics and Biomolecular Structure* 21: 49-76.
- 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.
- 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.
- 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.
- Lefebvre, M. & Valvano, M. (2001) *In vitro* resistance of *Burkholderia cepacia* complex isolates to reactive oxygen species in relation to catalase and superoxide dismutase production. *Microbiology* **147**: 97-109.

- 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.
- Long, S. & Salin, M. L. (2000) Archaeal promoter-directed expression of the *Halobacterium salinarum* catalase-peroxidase gene. *Extremophiles* **4**: 351-356.
- Loprasert, S., Whangsuk, W., Sallabhan, R. & Mongkolsuk, S. (2003) Regulation of the *KatG-dpsA* operon and the importance of KatG in survival of *Burkholderia pseudomallei* exposed to oxidative stress. *FEBS letter* **542**: 17-21.
- Manca, C., Paul, S., Barry, C. E. 3rd, Freedman, V. H. & Kaplan, G. (1999) *Mycobacterium tuberculosis* catalase and peroxidase activities and resistance to oxidative killing in human monocytes *in vitro*. *Infection and Immunity* **67**: 74-79.
- Marcus, F. & Harrsch, P.B. (1990) Amino acid sequence of spinach chloroplast fructose-1,6-bisphosphatase. *Archives of Biochemistry and Biophysics* **279**: 151-157.
- Maundrell, K. (1990) *nmt1* of fission yeast. A highly transcribed gene completely repressed by thiamine. *The Journal of Biological Chemistry* **265**: 10857-10864.

- Meissner, P. S., Sisk, W. P. & Berman, M. L. (1987) Bacteriophage lambda cloning system for the construction of directional cDNA libraries. *Proceedings of the National Academy of Sciences USA* **84**: 438-447.
- Mohri, S., Yoshikawa, K., Sagara, H. & Nakajima, H. (2000) A case of *Penicillium marneffei* infection in an AIDS patient: the first case in Japan. *Nippon Ishinkin Gakkai Zasshi* **41**: 23-26.
- Murphy, A. J. M. & Efstratiadis, A. (1987) Cloning vectors for expression of cDNA libraries in mammalian cells. *Proceedings of the National Academy of Sciences USA* **84**: 8277-8281.
- Mutsuda, M., Ishikawa, T., Takeda, T. & Shigeoka, S. (1996) The catalase-peroxidase of *Synechococcus* PCC 7942: purification, nucleotide sequence analysis and expression in *Escherichia coli*. *Biochemical Journal* **316**: 251-257.
- Palazzolo, M. J. & Meyerowitz, E. M. (1987) A family of lambda phage cDNA cloning vectors, lambda SWAJ, allowing the amplification of RNA sequences. *Gene* **52**: 197-206.
- Palazzo, M. J., Hamilton, B. A., Ding, D. L., Martin, C. H., Mead, D. A., Mierendorf, R. C., Raghavan, K. V., Meyerowitz, E. M., & Lipshitz, H. D. (1990) Phage lambda cDNA cloning vectors for subtractive hybridization, fusion protein synthesis and Cre-loxP automatic plasmid subcloning. *Gene* **88**: 25-36.
- 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.
- Peraza, L. & Hansberg, W. (2002)** *Neurospora crassa* catalases, singlet oxygen and cell differentiation. *Biological Chemistry* **383**: 569-575.
- Pitt, J. I. (1979)** The Genus *Penicillium* and its Teleomorphic States *Eupenicillium* and *Talaromyces*. Academic Press. New York. USA.
- Poolsri, W. (1999)** Purification and characterization of highly immunogenic protein antigens from *Penicillium marneffei*. M.S. thesis. Chiang Mai University.
- Raper, K. B. & Thoms, C. A. (1949)** Manual of the Penicillia. Williams & Wilkins. Baltimore. USA.
- 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.
- Rongrungruang, Y. & Levitz, S. M. (1999)** Interactions of *Penicillium marneffei* with human leukocytes *in vitro*. *Infection and Immunity* **67**: 4732-4736.
- Ruxrungtham, K. & Phanuphak, P. (2001)** Update of HIV/AIDS in Thailand. *Journal of Medical Association of Thailand* **84** (Suppl 1): S1-S17.
- 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.
- Satapatayavongs, B., Damrongkitchaiporn, S., Saengditha, P., Kiatboonsri, S. & Jayanetra, P. (1989) Disseminated penicilliosis associated with HIV infection (letter). *Journal of Infection* 19: 84-85.
- Scherer, G., Telford, J., Baldari, C., & Pirrotta, V. (1981) Isolation of cloned genes differentially expressed at early and late stages of *Drosophila* embryonic development. *Developmental Biology* 86: 438-447.
- Scherer, M., Wei, V., Liese, R. & Fischer, R. (2002) *Aspergillus nidulans* catalase-peroxidase gene (*cpeA*) is transcriptionally induced during sexual development through the transcription factor StuA. *Eukaryotic Cell* 1: 725-735.
- Segretain, G. (1959a) Description d'une nouvelle espe`ce de penicillium: *Penicillium merneffei* n.sp. *Bulletin de la Societe Mycologie de France* 75: 412.
- Segretain, G. (1959b) *Penicillium marneffei* n.sp. agent d'une mycose du syste`me re'ticuloendothe'rial. *Mycopathologia et Mycologia Applicata* 11: 327.
- Sekhon, A. S., Li, J. S. K. & Garg, A. K. (1982) Penicilliosis marneffei: serological and exoantigen studies. *Mycopathologia* 77: 51-57.
- Short, J. M., Fernandez, J. M., Sorge, J. A., & Huse, W. D. (1988) Lambda ZAP: a bacteriophage lambda expression vector with in vivo excision properties. *Nucleic Acids Research* 16: 7583-7600.

- 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, T. (1996) Disseminated *Penicillium marneffei* infection in patients with acquired immunodeficiency syndrome. *Japanese Journal of Medical Mycology* 37: 5-8.
- 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.
- Stukey, J. E., McDonough, V. M. & Martin, C. E. (1990) The *OLE1* gene of *Saccharomyces cerevisiae* encodes the 9 fatty acid desaturase and can be functionally replaced by the rat stearoyl-CoA desaturase gene. *The journal of Biological Chemistry* 265: 20144-20149.
- 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. (1994a) 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.
- Swaroop, A. & Weissman, S. M. (1988) Charon BS (+) and (-), versatile lambda phage vectors for constructing directional cDNA libraries and their efficient transfer to plasmids. *Nucleic Acids Research* **16**: 8739.
- Taramelli, D., Brambilla, S., Sala, G., Bruccoleri, 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.
- 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.
- Vanittanakom, N., Cooper, C. R. Jr., Chariyalertsak, S., Youngchim, S., Nelson, K. E. & Sirisanthana, T. (1996) Restriction endonuclease analysis of *Penicillium marneffei*. *Journal of Clinical Microbiology* **34**: 1834-1836.

- Vanittanakom, N., Mekaprateep, M., Sittisombut, N., Supparatpinyo, K. & Kanjanasthiti, P. (1997) Western immunoblot analysis of protein antigens of *Penicillium marneffe*. *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 marneffe* by a polymerase chain reaction/hybridization technique. *Medical Mycology* **36**: 169-175.
- Vanittanakom, N. & Sirisanthana, T. (1997) *Penicillium marneffe* 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 marneffe* by PCR-based detection of specific sequences on the rRNA gene. *Journal of Clinical Microbiology* **40**: 1739-1742.
- Welinder, K. G. (1991) Bacterial catalase-peroxidases are gene duplicated members of the plant peroxidase superfamily. *Biochimica et Biophysica Acta* **1080**: 215-220.
- Wilson, T. M., Lisle, G. W. D. & Collins, D. M. (1995) Effect of *inhA* and *katG* on isoniazid resistance and virulence of *Mycobacterium bovis*. *Molecular Microbiology* **15**: 1009-1015.
- 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 marneffe* is more closely related to those of molds than yeasts. *FEBS Letters* **555**: 469-477.

- Yamada, Y., Fujiwara, T., Sato, T., Igarashi, N. & Tanaka, N.** (2002) The 2.0 Å crystal structure of catalase-peroxidase from *Haloarcula marismortui*. *Nature Structural Biology* 9: 691-695.
- Young, R. A. & Davis, R. W.** (1983) Efficient isolation of genes by using antibody probes. *Proceedings of the National Academy of Sciences USA* 80: 1194-1198.
- 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. *Archives 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.
- 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.
- 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.
- Zügel, U. & Kaufmann, S. H. E.** (1999) Role of heat shock proteins in protection from and pathogenesis of infectious disease. *Clinical Microbiology Reviews* 12: 19-39.