

## References

- Abyzov, S. S., 1993: Microorganisms in the Antarctic ice. In Friedman, I. E. (ed.), *Antarctic Microbiology*. New York: Wiley-Liss Inc, 265-295.
- Abyzov, S. S., Mitskevich, I., and Poglazova, M., 1998: Microflora of the Deep Glacier Horizons of Central Antarctica. *Microbiology*, 67: 451-458.
- Agnew, L. L., Kelly, M., Howard, J., Jeganathan, S., Batterham, M., Ffrench, R. A., Gold, J., and Watson, K., 2003: Altered lymphocyte heat shock protein 70 expression in patients with HIV disease. *AIDS*, 17: 1985-1988.
- Amano, N., Shinmen, Y., Akimoto, K., Kawashima, H., and Amachi, T., 1992: Chemotaxonomic significance of fatty acid composition in the genus *Mortierella* (Zygomycetes, Mortierellaceae). *Mycotaxon*, 44: 257-265.
- Ames, B. and Wakimoto, P., 2002: Are vitamin and mineral deficiencies a major cancer risk? *Nature Reviews: Cancer*, 2: 694-704.
- Anwar, A., Siegel, D., Kepa, J. K., and Ross, D., 2002: Interaction of the molecular chaperone hsp70 with human NAD(P)H:quinone oxidoreductase 1. *The Journal of Biological Chemistry*, 277: 14060-14067.
- Arrieta, J. M., Weinbauer, M. G., and Herndl, G. J., 2000: Interspecific variability in sensitivity to UV radiation and subsequent recovery in selected isolates of marine bacteria. *Applied and Environmental Microbiology*, 66: 1468-1473.
- Asher, G., Lotem, J., Cohen, B., Sachs, L., and Shaul, Y., 2001: Regulation of p53 stability and p53-dependent apoptosis by NADH quinone oxidoreductase 1. *Proceedings of the National Academy of Sciences USA*, 98: 1188-1193.

- Asher, G., Lotem, J., Kama, R., Sach, L., and Shaul, Y., 2002a: NQO1 stabilizes p53 through a distinct pathway. *Proceedings of the National Academy of Sciences USA*, 99: 3099-3104.
- Asher, G., Lotem, J., Sachs, L., Kahana, C., and Shaul, Y., 2002b: Mdm-2 and ubiquitin-independent p53 proteasomal degradation regulated by NQO1. *Proceedings of the National Academy of Sciences USA*, 99: 13125-13130.
- Augustyn, O., Kock, J., and Ferreira, D., 1990: Differentiation between yeasts species and strains within a species by cellular fatty acid analysis. 3. *Saccharomyces sensu lato*, *Arxiozyma* and *Pachytichospora*. *Applied Microbiology*, 13: 44-55.
- Australian Antarctic Division, 2004. URL <http://www.aad.gov.au/>
- Azmi, O. and Seppelt, R., 1998: The broad-scale distribution of microfungi in the Windmill Islands region, continental Antarctica. *Polar Biology*, 19: 92-100.
- Bandoni, J., 1987: Taxonomic overview of the *Tremalles*. *Studies in Mycology*, 30: 87-110.
- Baniwal, S., Bharti, K., Chan, K., Fauth, M., Ganguli, A., Kotak, S., Mishra, S., Nover, L., Port, M., Scharf, K., Tripp, J., Weber, C., Zielinski, D., and von Koskull-Doring, P., 2004: Heat stress response in plants: a complex game with chaperones and more than twenty heat stress transcription factors. *Journal of Biosciences*, 29: 471-487.
- Barja, G., Lopez-Torres, M., Perez-Campo, R., Rojas, C., Cadenas, S., Prat, J., and Pamplona, R., 1994: Dietary vitamin C decreases endogenous protein oxidative damage, malondialdehyde and lipid peroxidation and maintains fatty acid unsaturation in the guinea pig liver. *Free Radical Biology & Medicine*, 17: 105-115.
- Barnett, J., Payne, R., and Yarrow, D., 1990: *Yeasts: Characteristics and Identification*. 2nd ed. Cambridge: University Press.
- Battino, M., Ferri, E., Gorini, A., Federico Villa, R., Rodriguez Huertas, J., Fiorella, P., Genova, M. L., Lenaz, G., and Marchetti, M., 1990: Natural distribution and occurrence of coenzyme Q homologues. *Membrane Biochemistry*, 9: 179-190.

- Bauer, R., Oberwinkler, F., and Vanky, K., 1997: Ultrastructural markers and systematics in smut fungi and allied taxa. *Canadian Journal of Microbiology*, 75: 1273-1314.
- Beal, M., 2004: Mitochondrial dysfunction and oxidative damage in Alzheimer's and Parkinson's diseases and coenzyme Q<sub>10</sub> as a potential treatment. *Journal of Bioenergetics and Biomembranes*, 36: 381-386.
- Beckman, K. and Ames, B., 1998: The free radical theory of aging matures. *Physiological Reviews*, 78: 547-581.
- Beissert, S. and Granstein, R., 1996: UV-induced cutaneous photobiology. *Critical Reviews in Biochemistry and Molecular Biology*, 31: 381-404.
- Bendich, A., 2004: From 1989 to 2001: what have we learned about the "biological actions of beta-carotene"? *Journal of Nutrition*, 134: 225S-230S.
- Berbee, M. and Taylor, J., 1992: Detecting morphological convergence in true fungi, using 18S rRNA gene sequence data. *Biosystems*, 28: 117-125.
- Berbee, M., 1996: Loculoascomycete origins and evolution of filamentous ascomycete morphology based on 18S rRNA gene sequence data. *Molecular Biology and Evolution*, 13: 462-470.
- Beyer, R. E., Segura-Aguilar, J., Di Bernardo, S., Cavazzoni, M., Fato, R., Fiorentini, D., Galli, M. C., Setti, M., Landi, L., and Lenaz, G., 1996: The role of DT-diaphorase in the maintenance of the reduced antioxidant form of coenzyme Q in membrane systems. *Proceedings of the National Academy of Sciences USA*, 93: 2528-2532.
- Bijur, G., Davis, R., and Jope, R., 1999: Rapid activation of heat shock factor-1 DNA binding by H<sub>2</sub>O<sub>2</sub> and modulation by glutathione in human neuroblastoma and Alzheimer's disease cybrid cells. *Brain Research. Molecular Brain Research*, 71: 69-77.
- Birgisson, H., Delgado, O., Garcia Arroyo, L., Hatti-Kaul, R., and Mattiasson, B., 2003: Cold-adapted yeasts as producers of cold-active polygalacturonases. *Extremophiles*, 7: 185-193.
-



- 
- Black, H., 2004: Reassessment of a free radical theory of cancer with emphasis on ultraviolet carcinogenesis. *Integrative Cancer Therapies*, 3: 279-293.
- Boekhout, T., Bandoni, J., Fell, J. W., and Kwon-Chung, K., 1998: Discussion of teleomorphic and anamorphic genera of heterobasidiomycetous yeasts. In Fell, J. W. (ed.), *The Yeasts, A Taxonomic Study*: Elsevier, 609-625.
- Boekhout, T. and Nakase, T., 1998: *Bullera* Derx. In Fell, J. W. (ed.), *The Yeasts: a Taxonomic Study*. Amsterdam: Elsevier, 731-741.
- Boekhout, T., Robert, V., Smith, M. T., Stalpers, J., Yarrow, D., Boer, P., Buis, R., Gijswijt, G., Kurtzman, C. P., Fell, J. W., Guého, E., Guillot, J., and Roberts, I., 2002: Yeasts of the World. Amsterdam: UNESCO-Publishing.
- Bowman, J. and McMeekin, T., 1996: Biodiversity beneath the ice. *Microbiology Australia*, November: 18-21.
- Bowman, J., 2000: Description of *Cellulophaga algicola* sp. nov., isolated from the surfaces of Antarctic algae, and reclassification of *Cytophaga uliginosa* (ZoBell and Upham 1944) Reichenbach 1989 as *Cellulophaga uliginosa* comb. nov. *International Journal of Systematic and Evolutionary Microbiology*, 50: 1861-1868.
- Bowman, J., Rea, S., McCammon, S., and McMeekin, T., 2000: Diversity and community structure within anoxic sediment from marine salinity meromictic lakes and a coastal meromictic marine basin, Vestfold Hills, Eastern Antarctica. *Environmental Microbiology*, 2: 227-237.
- Bowman, J. and Nichols, D., 2002: *Aequorivita* gen. nov., a member of the family Flavobacteriaceae isolated from terrestrial and marine Antarctic habitats. *International Journal of Systematic and Evolutionary Microbiology*, 52: 1533-1541.
- Bowry, V., Mohr, D., Cleary, J., and Stocker, R., 1995: Prevention of tocopherol-mediated peroxidation in ubiquinol-10-free human low density lipoprotein. *The Journal Of Biological Chemistry*, 270: 5756-5763.
-



- Bozal, N., Montes, M. J., Tudela, E., Jimenez, F., and Guinea, J., 2002: *Shewanella frigidimarina* and *Shewanella livingstonensis* sp. nov., isolated from Antarctic coastal areas. *International Journal of Systematic and Evolutionary Microbiology*, 52: 195-205.
- Bradford, M., 1976: A rapid and sensitive method for the quantitation of microgram quantities of protein utilizing the principle of protein-dye binding. *Analytical biochemistry*, 7: 248-254.
- Braunwald, E., Fauci, A., Kasper, D., Hauser, S., Longo, D., and Jameson, J. L., 2001: *Harrison's Principles of Internal Medicine*. 15th ed. New York: McGraw-Hill.
- British Antarctic Survey, 2004. URL <http://www.antarctica.ac.uk/>
- British Antarctic Survey Press Releases, 2005: Antarctic glaciers thinning fast. URL <http://www.antarctica.ac.uk/>
- Brock, T., 1985: Life at high temperatures. *Science*, 230: 132-138.
- Brock, T., 2000: *Biology of Microorganisms*. 9th ed. London: Prentice-Hall.
- Brody, T., Larner, J., Minneman, K., and Neu, H., 1994: *Human Pharmacology*. 2 ed. St. Louis: Mosby-Year Book.
- Brondz, I. and Olsen, I., 1990: Multivariate analyses of cellular carbohydrates and fatty acids of *Candida albicans*, *Torulopsis glabrata*, and *Saccharomyces cerevisiae*. *The Journal of Clinical Microbiology*, 28: 1854-1857.
- Bruneau, S. and Guinet, R., 1989: Rapid identification of medically important yeasts by electrophoretic protein patterns. *FEMS Microbiology Letters*, 49: 329-333.
- Bruns, T. D., Vilgalys, R., Barns, S. M., Gonzalez, D., Hibbett, D. S., Lane, D. J., Simon, L., Stickel, S., Szaro, T. M., Weisburg, W. G., and Sogin, M. L., 1992: Evolutionary relationships within the fungi: analyses of small subunit ribosomal DNA sequences. *Applied and Environmental Microbiology*, 61: 681-689.

- 
- Bujdakova, H., Melkusova, S., Soji, I., Mokras, M., and Mikami, Y., 2004: Discrimination between *Candida albicans* and *Candida dubliensis* isolated from HIV-positive patients by using commercial method in comparison with PCR assay. *Folia Microbiologica*, 49: 484-490.
- Buschges, R., Bahrenberg, G., Zimmermann, M., and Wolf, K., 1994: NADH: ubiquinone oxidoreductase in obligate aerobic yeasts. *Yeast*, 10: 475-479.
- Çakatay, U., Kayali, R., Sivas, A., and Tekeli, F., 2005: Prooxidant activities of alphas-lipoic acid on oxidative protein damage in the aging rat heart muscle. *Archives of Gerontology and Geriatrics*, 40: 231-240.
- Calabrese, V., Scapagnini, G., Colombrita, C., Ravagna, A., Pennisi, G., Giuffrida, S. A., Galli, F., and Butterfield, D., 2003: Redox regulation of heat shock protein expression in aging and neurodegenerative disorders associated with oxidative stress: a nutritional approach. *Amino Acids*, 25: 437-444.
- Campbell, I. B. and Claridge, G. G. C., 1987: *Antarctica: soils, weathering processes and environment*. Amsterdam: Elsevier.
- Cavicchioli, R., Siddiqui, K., Andrews, D., and Sowers, K., 2002: Low-temperature extremophiles and their applications. *Current Opinions in Biotechnology*, 13: 253-261.
- Cheng, T., Zhu, Z., Masuda, S., and Morcos, N., 2001: Effects of multinutrient supplementation on antioxidant defence systems in healthy human beings. *Journal of Nutritional Biochemistry*, 12: 388-395.
- Chenna, R., Sugawara, H., Koike, T., Lopez, R., Gibson, T. J., Higgins, D. G., and Thompson, J. D., 2003: Multiple sequence alignment with the Clustal series of programs. *Nucleic Acids Research*, 31: 3497-3500.
- Chernov, I. and Bab'eva, I. P., 1988: New species of *Cryptococcus* yeast from tundra soil. *Mikrobiologiya*, 57: 1031-1034.
-

- Clairmont, A., Sies, H., Ramachandran, S., Lear, J., Smith, A., Bowers, B., Jones, P., Fryer, A., and Strange, R., 1999: Association of NAD(P)H: quinone oxidoreductase (NQO1) null with numbers of basal cell carcinogens: use of multivariate model to rank the relative importance of this polymorphism and those at other relevant loci. *Carcinogenesis*, 20: 1235-1240.
- Cockell, C. and Knowland, J., 1999: Ultraviolet radiation screening compounds. *Biological Reviews of the Cambridge Philosophical Society*, 74: 311-345.
- Collins, M., Lawson, P., Labrenz, M., Tindall, B., Weiss, N., and Hirsch, P., 2002: *Nesterenkonia lacusekhoensis* sp. nov., isolated from hypersaline Ekho Lake, East Antarctica, and emended description of the genus *Nesterenkonia*. *International Journal of Systematic and Evolutionary Microbiology*, 52: 1145-1150.
- Crane, F. and Navas, P., 1997: The diversity of coenzyme Q function. *Molecular Aspects of Medicine*, 18: S1-6.
- Crane, F., 2001: Biochemical functions of Coenzyme Q<sub>10</sub>. *Journal of the American College of Nutrition*, 20: 591-598.
- Daniel, R., 2005: The metagenomics of soil. *Nature Reviews Microbiology*, 3: 470-478.
- Davidson, J. F. and Schiestl, R. H., 2001: Mitochondrial respiratory electron carriers are involved in oxidative stress during heat stress in *Saccharomyces cerevisiae*. *Molecular and Cellular Biology*, 21: 8483-8489.
- de Barros Lopes, M., Rainieri, S., Henschke, P., and Langridge, P., 1999: AFLP fingerprinting for analysis of yeast genetic variation. *International Journal of Systematic Bacteriology*, 49: 915-924.
- Deak, R., Bodai, L., Aarts, H., and Maraz, A., 2004: Development of a novel, simple and rapid molecular identification system for clinical *Candida* species. *Medical Mycology*, 42: 311-318.



- Deegenaaars, M. L. and Watson, K., 1998a: Heat shock response in psychrophilic and psychrotrophic yeast from Antarctica. *Extremophiles*, 2: 41-49.
- Deegenaaars, M. L. and Watson, K., 1998b: Heat shock response in the thermophilic enteric yeast *Arxiozyma telluris*. *Applied and Environmental Microbiology*, 64: 3063-3065.
- Demain, A. L., Phaff, H. J., and Kurtzman, C. P., 1998: The industrial and agricultural significance of yeasts. In Fell, J. W. (ed.), *The Yeasts, A Taxonomic Study*. Amsterdam: Elsevier, 13-19.
- Di Menna, M., 1960: Yeasts in Antarctica. *Journal of General Microbiology*, 23: 1-23.
- Di Menna, M., 1966: Yeasts in Antarctic Soils. *Antonie van Leeuwenhoek Journal of Microbiology*, 32: 29-38.
- Diaz, M. and Fell, J., 2000: Molecular analyses of the IGS & ITS regions of rDNA of the psychrophilic yeasts in the genus *Mrakia*. *Antonie van Leeuwenhoek*, 77: 7-12.
- Diekema, D., Petroelje, B., Messer, S., Hollis, R., and Pfaller, M., 2005: Activities of available and investigational antifungal agents against *Rhodotorula* species. *Journal of Clinical Microbiology*, 43: 476-478.
- Drabkova, M., Pokorna, J., Koci, R., and Marova, I., 2003: Changes of carotenoid production in red yeast cells stressed by salt, hydrogen peroxide and heavy metals. *XXIth YGM Conference*.
- Dunlap, W., Fujisawa, A., Yamamoto, Y., and Inoue, M., 2005: Tropical UV-tolerant bacteria may provide a pharmacomimetic model for anti-aging research and cancer prevention. *Marine Biotechnology (in press)*.
- Dunlap, W. C. and Schick, J. M., 1998: Ultraviolet radiation-absorbing mycosporine-like amino acids in coral reef organisms: a biochemical and environmental perspective. *Journal of Phycology*, 34: 418-430.

- 
- Dunlap, W. C., Schick, J. M., and Yamamoto, Y., 1999: Sunscreens, oxidative stress and antioxidant functions in marine organisms of the Great Barrier Reef. *Redox Report*, 4: 301-306.
- Dunlap, W. C., Fujisawa, A., and Yamamoto, Y., 2002: UV radiation increases the reduced coenzyme Q ratio in marine bacteria. *Redox Report*, 7: 320-323.
- Fairfield, K. and Fletcher, R., 2002: Vitamins for chronic disease prevention in adults: scientific review. *Journal of the American Medical Association*, 287: 3116-3126.
- FDA and EPA, 2004: What you need to know about mercury in fish and shellfish. URL <http://www.cfsan.fda.gov/~dms/admehg3.html>
- Fell, J., Boekhout, T., Fonseca, A., Scorzetti, G., and Statzell-Tallman, A., 2000: Biodiversity and systematics of basidiomycetous yeasts as determined by large-subunit rDNA D1/D2 domain sequence analysis. *International Journal of Systematic and Evolutionary Microbiology*, 50: 1351-1371.
- Fell, J. W., Statzell-Tallman, A., Hunter, I., and Phaff, H., 1969: *Leucosporidium* gen. n., the heterobasidiomycetous stage of several yeasts of the genus *Candida*. *Antonie van Leeuwenhoek*, 35: 433-462.
- Fell, J. W. and Hunter, I., 1974: *Torulopsis austromarina* sp. n. A yeast isolated from the Antarctic Ocean. *Antonie van Leeuwenhoek*, 40: 297-306.
- Fell, J. W., 1976: Yeasts in oceanic regions. In Jones, E. (ed.), *Recent Advances in Aquatic Mycology*. London: Elek Science, 93-124.
- Fell, J. W. and Statzell-Tallman, A., 1998a: *Cryptococcus* Vuillemin. In Kurtzman, C. P. (ed.), *The Yeasts: A Taxonomic Study*. Amsterdam: Elsevier, 742-767.
- Fell, J. W. and Statzell-Tallman, A., 1998b: *Rhodotorula* F.C. Harrison. In Fell, J. W. and Kurtzman, C. P. (eds.), *The Yeasts: A Taxonomic Study*. Amsterdam: Elsevier, 800-827.
-

- 
- Fell, J. W., Boekhout, T., Fonseca, A., and Sampaio, J. P., 2001: Basidiomycetous yeasts. In Lemke, P. (ed.), *The Mycota VII. Systematics and Evolution*. Berlin: Springer-Verlag, 1-36.
- Feller, G. and Gerday, C., 2003: Psychrophilic enzymes: hot topics in cold adaptation. *Nature Reviews Microbiology*, 1: 200-208.
- Fickers, P., Benetti, P., Wache, Y., Marty, A., Mauersberger, S., Smit, M., and Nicaud, J., 2005: Hydrophobic substrate utilisation by the yeast *Yarrowia lipolytica*, and its potential applications. *FEMS Yeast Research*, 5: 527-543.
- Fleet, G. H., 1993: *Wine microbiology and biotechnology*. London: CRC Press.
- Fleming, R., Drees, J., Loggie, B., Russell, G., Geisinger, K., Moriss, R., Sach, D., and McQuellon, R., 2000: Clinical significance of a NAD(P)H: quinone oxidoreductase 1 polymorphism in patients with disseminated peritoneal cancer receiving interperitoneal hyperthermic chemotherapy with mitoycin C. *Pharmacogenetics*, 12: 31-37.
- Folkers, K., Langsjoen, P., Nara, Y., and et.al, 1988: Biochemical deficiencies of coenzyme Q10 in HIV-infection and exploratory treatment. *Biochemical and Biophysical Research Communications*, 153: 888-896.
- Folkers, K., Hanioka, T., Xia, L., McRee, J., and Langsjoen, P., 1991: Coenzyme Q10 increases T4/T8 ratios of lymphocytes in ordinary subjects and relevance to patients having the AIDS related complex. *Biochemical and Biophysical Research Communications*, 176: 786-791.
- Fonseca, A., Scorzetti, G., and Fell, J., 2000: Diversity in the yeast *Cryptococcus albidus* and related species as revealed by ribosomal DNA sequence analysis. *Canadian Journal of Microbiology*, 46: 7-27.
- Forsmark-Andree, P., Dallner, G., and Ernster, L., 1995: Endogenous ubiquinol prevents protein modification accompanying lipid peroxidation in beef heart submitochondrial particles. *Free Radical Biology and Medicine*, 19: 749-757.
-



- 
- Garssen, J., Norval, M., el-Ghorr, A., Gibbs, N., Jones, C., Cerimele, D., de Simone, C., Caffieri, S., Dall'Acqua, F., de Gruijl, F., Sontag, Y., and van Loveren, H., 1998: Estimation of the effect of increasing UVB exposure on the human immune system and related resistance to infectious diseases and tumors. *Journal of Photochemistry and Photobiology. B, Biology*, 42: 167-179.
- Genova, M. L., Pich, M. M., Biondi, A., Bernacchia, A., Falasca, A., Bovina, C., Formiggini, G., Castelli, G. P., and Lenaz, G., 2003: Mitochondrial Production of Oxygen Radical Species and the Role of Coenzyme Q as an Antioxidant. *Experimental Biology and Medicine*, 228: 506-513.
- Georlette, D., Blaise, V., Collins, T., D'Amico, S., Gratia, E., Hoyoux, A., Marx, J., Sonan, G., Feller, G., and Gerday, C., 2004: Some like it cold: biocatalysis at low temperatures. *FEMS Microbiology Reviews*, 28: 25-42.
- Gething, M.-J., 1997: *Guidebook to Molecular Chaperones and Protein-Folding Catalysts*. New York: Oxford University Press.
- Godon, C., Lagniel, G., Lee, J., Buhler, J.-M., Kieffer, S., Perrot, M., Boucherie, H., Toledano, M. B., and Labarre, J., 1998: The H<sub>2</sub>O<sub>2</sub> stimulon in *Saccharomyces cerevisiae*. *Journal of Biological Chemistry*, 273: 22480-22489.
- Golubev, W. I., 1977: Cryptococcus-like organisms producing mycelium with clamp-connections. *Proceedings of the Fifth International Specialized Symposium on Yeasts*: 33-34.
- Gómez-Díaz, C., Burón, M., Alcaín, F., González-Ojeda, R., González-Reyes, J., Bello, R., Herman, M., Navas, P., and Villalba, J. M., 2003: Effect of dietary coenzyme Q and fatty acids on the antioxidant status of rat tissues. *Protoplasma*, 221: 11-17.
- Goodman, G., Thornquist, M., Balmes, J., Cullen, M., Meyskens, F. J., Omenn, G., Valanis, B., and Williams, J. J., 2004: The Beta-Carotene and Retinol Efficacy Trial: incidence of lung cancer and cardiovascular disease mortality during 6 year follow-up after stopping beta-carotene and retinol supplements. *Journal of the National Cancer Institution*, 96: 1743-1750.
-

- 
- Goto, S., Sugyama, J., and Iizuka, H., 1969: A Taxonomic study of Antarctic yeasts. *Mycologia*, 61: 748-774.
- Gotz, M., Gerstner, A., Harth, R., Dirr, A., Janetzky, B., and Kuhn, W., 2000: Altered redox state of platelet coenzyme Q10 in Parkinson's disease. *Journal of Neural Transmission*, 107: 41-48.
- Gross, C. and Watson, K., 1998: *De novo* protein synthesis is essential for thermotolerance acquisition in a *Saccharomyces cerevisiae* trehalose synthase mutant. *Biochemistry and Molecular Biology International*, 45: 663-671.
- Guarro, J., Gene, J., and Stchigel, A., 1999: Developments in fungal taxonomy. *Clinical Microbiology Reviews*, 12: 454-500.
- Guffogg, S., 2001: A Taxonomic study of Antarctic yeast. Honours, School of Biological, Biomedical and Molecular Sciences, University of New England, Armidale. Pages pp.
- Guffogg, S., Thomas-Hall, S., Holloway, P., and Watson, K., 2004: A novel psychrotolerant member of the hymenomycetous yeasts from Antarctica: *Cryptococcus waticus* sp. nov. *International Journal of Systematic and Evolutionary Microbiology*, 54: 275-277.
- Haase, G., Sonntag, L., van de Peer, Y., Uijthof, J., Podbieiski, A., and Melzer-Krick, B., 1995: Phylogenetic analysis of ten black yeast species using nuclear small subunit rRNA gene sequences. *Antonie van Leeuwenhoek*, 68: 19-33.
- Hader, D., 2000: Effects of solar UV-B radiation on aquatic ecosystems. *Advances in Space Research*, 26: 2029-2040.
- Hader, D., Kumar, H., Smith, R., and Worrest, R., 2003: Aquatic ecosystems: effects of solar ultraviolet radiation and interactions with other climatic change factors. *Photochemical and Photobiological Sciences*, 2: 39-50.
- Halliday, G., 2005: Inflammation, gene mutation and photoimmunosuppression in response to UVR-induced oxidative damage contributes to photocarcinogenesis. *Mutation Research*, 571: 107-120.
-

- 
- Halliwell, B. and Gutteridge, J., 1999: *Free Radicals in Biology and Medicine*. 3 ed: Oxford: Clarendon Press.
- Hamamoto, M., Nagahama, T., and M, T., 2002: Systematic study of basidiomycetous yeasts - evaluation of the ITS regions of rDNA to delimit species of the genus *Rhodosporidium*. *FEMS Yeast Research*, Aug: 409-413.
- Harth, V., Donat, S., Ko, Y., Abel, J., Vetter, H., and Bruning, T., 2000: NAD(P)H quinone oxidoreductase gene expression in human colon carcinoma cells: characterisation of a mutation which modulates DT-diaphorase activity and mitomycin sensitivity. *Cancer Research*, 52: 797-802.
- Hasegawa, M., Iida, Y., Yano, T., Takaiwa, F., and Iwabuchi, M., 1985: Phylogenetic relationships among eukaryotic kingdoms inferred from ribosomal RNA sequences. *Journal of Molecular Evolution*, 22: 32-38.
- Heinrich, U., Gartner, C., Wiebusch, M., Eichler, O., Sies, H., Tronnier, H., and Stahl, W., 2002: Supplementation with  $\beta$ -carotene or a similar amount of mixed carotenoids protects humans from UV-induced erythema. *American Society for Nutritional Sciences*, 133: 98-101.
- Holbrook, N. and Ikeyama, S., 2002: Age-related decline in cellular response to oxidative stress: links to growth factor signalling pathways with common defects. *Pharmacology*, 64: 99-105.
- Howard, J., Jones, G., Oliver, C., and Watson, K., 2002: Dietary intake of antioxidant supplements modulate antioxidant status and heat shock protein 70 synthesis. *Redox Report*, 7: 308-311.
- Ingraham, J. L. and Stokes, J. L., 1959: Psychrophilic bacteria. *Bacteriological Reviews*, 23: 97-108.
- Isaac, C., Jones, A., and Pickard, M., 1990: Production of cyclosporins by *Tolypocladium niveum* strains. *Antimicrobial Agents and Chemotherapy*, 34: 121-127.
-



- 
- Johnson, D., Campbell, C., Lee, J., Callaghan, T., and Gwynn-Jones, D., 2002: Arctic microorganisms respond more to elevated UV-B radiation than CO<sub>2</sub>. *Nature*, 416: 82-83.
- Jones, S. A., McArdle, F., Jack, C. I., and Jackson, M., 1999: Effect of antioxidant supplementation on the adaptive response of human skin fibroblasts to UV-induced oxidative stress. *Redox Report*, 4: 291-299.
- Kaikkonen, J., Tuomainen, T., Nyysönen, K., and Salonen, J., 2002: Coenzyme Q10: absorption, antioxidative properties, determinants, and plasma levels. *Free Radical Research*, 36: 389-397.
- Kampinga, H., 1993: Thermotolerance in mammalian cells. Protein denaturation and aggregation, and stress proteins. *Journal of Cell Science*, 104: 11-17.
- Kapitsa, A. P., Ridley, J. K., Robin, G. d. Q., Siegert, M. J., and Zotikov, I. A., 1996: A large deep freshwater lake beneath the ice of central East Antarctica. *Nature*, 381: 684-686.
- Kennedy, T. and Liebler, D., 1992: Peroxyl radical scavenging by  $\beta$ -carotene in lipid bilayers. Effect of oxygen partial pressure. *Journal of biological chemistry*, 267: 4658-4663.
- Khan, S., 2004: Newly isolated Antarctic yeasts: Highly resistant to UV radiation. Masters, School of Biological, Biomedical and Molecular Sciences, University of New England, Armidale.
- Knekt, P., Ritz, J., Pereira, M., O'Reilly, E., Augustsson, K., Fraser, G., Goldbourt, U., Heitmann, B., Hallmans, G., Liu, S., Pietinen, P., Spiegelman, D., Stevens, J., Virtamo, J., Willett, W., Rimm, E., and Ascherio, A., 2004: Antioxidant vitamins and coronary heart disease risk: a pooled analysis of 9 cohorts. *American Journal of Clinical Nutrition*, 80: 1508-1520.
- Knight, J., 2000: The biochemistry of aging. *Advances in Clinical Chemistry*, 35: 1-62.
- Kobayasi, Y., 1937: On the genus *Holtermannia* of Tremellaceae. *Science Reports of the Tokyo Bunrika Daigaku, Section B*, 3: 75-81.
-

- 
- Koci, R., Drabkova, M., Pokorna, J., and Marova, I., 2003a: Influence of UV-irradiation and ethanol on the production of carotenoids by industrial red yeasts. *XXIth YGM Conference*.
- Koci, R., Marova, I., Koutny, O., and Pokorna, J., 2003b: Application of exogenous stress factors to higher production of carotenoids by industrial red yeast. *XXIth YGM Conference*.
- Konaka, R., Kasahara, E., Dunlap, W., Yamamoto, Y., Chien, K., and Inoue, M., 2001: Ultraviolet irradiation of titanium dioxide in aqueous dispersion generates singlet oxygen. *Redox Report*, 6: 319-325.
- Kontush, A., Reich, A., Baum, K., Spranger, T., Finckh, B., Kohlschutter, A., and Beisiegel, U., 1997: Plasma ubiquinol-10 is decreased in patients with hyperlipidaemia. *Atherosclerosis*, 129: 119-126.
- Krajinovic, M., Labuda, D., Mathonnet, G., Labuda, M., Moghrabi, A., Champagne, J., and Sinnett, D., 2002a: Polymorphisms in genes encoding drugs and xenobiotic metabolizing enzymes, DNA repair enzymes, and response to treatment of childhood acute lymphoblastic leukemia. *Clinical Cancer Research*, 8: 802-810.
- Krajinovic, M., Sinnett, H., Richer, C., Labuda, D., and Sinnett, D., 2002b: Role of NQO1, MPO and CYP2E1 genetic polymorphisms in the susceptibility to childhood acute lymphoblastic leukemia. *International Journal of Cancer*, 97: 230-236.
- Kregel, K., 2002: Heat shock proteins: modifying factors in physiological stress responses and acquired thermotolerance. *Journal of Applied Physiology*, 92: 2177-2186.
- Kuenning, K., 2003: Yeastie Boyz find fungi everywhere. URL <http://www.polar.org/antsun/oldissues2003-2004/Sun012504/fungiEverywhere.htm>
- Kuraishi, H., Itoh, M., Katayama, Y., Ito, T., Hasegawa, A., and Sugiyama, J., 2000: Ubiquinone systems in fungi. V. Distribution and taxonomic implications of ubiquinones in Eurotiales, Onygenales and the related plectomycete genera, except for
-

*Aspergillus, Paecilomyces, Penicillium*, and their related telemorphs. *Antonie van Leeuwenhoek*, 77: 179-186.

Kurtzman, C. and Phaff, H., 1987: Molecular taxonomy. In Harrison, J. (ed.), *The Yeasts*. London: Academic Press, 63-94.

Kurtzman, C., 1994: Molecular Taxonomy of Yeasts. *Yeast*, 10: 1727-1740.

Kurtzman, C. and Robnett, C., 1997: Identification of clinically important Ascomycetous yeasts based on nucleotide divergence in the 5' end of the large-subunit (26S) ribosomal DNA gene. *The Journal of Clinical Microbiology*, 35: 1216-1223.

Kurtzman, C. and Robnett, C., 1998: Identification and phylogeny of ascomycetous yeasts from analysis of nuclear large subunit (26S) ribosomal DNA partial sequences. *Antonie van Leeuwenhoek*, 73: 331-371.

Kurtzman, C. P., 1998a: Discussion of telemorphic and anamorphic ascomycetous yeasts and a key to genera. In Fell, J. W. (ed.), *The Yeasts: A Taxonomic Study*. Amsterdam: Elsevier, 111-121.

Kurtzman, C. P., 1998b: Nuclear DNA hybridization: Quantitation of close genetic taxa. In Fell, J. W. (ed.), *The Yeasts, A Taxonomic Study*. Amsterdam: Elsevier, 63-68.

Kurtzman, C. P. and Blanz, P., 1998: Ribosomal RNA/DNA sequence comparisons for assessing phylogenetic relationships. In Fell, J. W. (ed.), *The Yeasts, A Taxonomic Study*: Elsevier, 69-74.

Kurtzman, C. P. and Fell, J. W., 1998: Definition, classification and nomenclature of the yeasts. In Fell, J. W. (ed.), *The Yeasts, A Taxonomic Study*. Amsterdam: Elsevier, 3-5.

Lachance, M. and Starmer, W. T., 1998: Ecology and yeasts. In Fell, J. W. (ed.), *The Yeasts, A Taxonomic Study*. Amsterdam: Elsevier, 21-30.



- 
- Lagendijk, J., Ubbink, J. B., and Vermaak, W. H., 1996: Measurement of the ratio between the reduced and oxidized forms of coenzyme Q<sub>10</sub> in human plasma as a possible marker of oxidative stress. *Journal of Lipid Research*, 37: 67-75.
- Lahav, R. A., Nejdat, A., and Abeliovich, A., 2003: Alterations in protein synthesis and levels of heat shock 70 proteins in response to salt stress of the halotolerant yeast *Rhodotorula mucilaginosa*. *Antonie van Leeuwenhoek*, 85: 259-269.
- Lammeli, V., 1970: Cleavage of structural mutants during assembly of the head of bacteriophage T4. *Nature*, 227: 680-685.
- Lammeli, V. and Favre, 1973: Maturation of the head of bacteriophage T4. I. DNA packaging events. *Journal of Molecular Biology*, 80: 575-599.
- Langsjoen, P., Vadhanavikit, S., and Folkers, K., 1985: Response of patients in classes III and IV of cardiomyopathy to therapy in a blind and crossover trial with coenzyme Q<sub>10</sub>. *Proceedings of the National Academy of Sciences USA*, 82: 4240-4244.
- Larson, R., Wang, Y., Banerjee, M., Wiemels, J., Hartford, C., Le Beau, M., and Smith, M., 1999: Prevalence of the inactivating 609 →T polymorphism in the NAD(P)H: quinone oxidoreductase (NQO1) gene in patients with primary and therapy-related myeloid leukemia. *Blood*, 94: 803-807.
- Lee, I., Cook, N., Gaziano, J., Gordon, D., Ridker, P., Manson, J., Hennekens, C., and Buring, J., 2005: Vitamin E in the primary prevention of cardiovascular disease and cancer: the Women's Health Study: a randomized controlled trial. *Journal of the American Medical Association*, 294: 56-65.
- Levine, R., Garland, D., Oliver, C., Amici, A., Climent, I., Lenz, A., Ahn, B., Shaltiel, S., and Stadtman, E., 1990: Determination of carbonyl content in oxidatively modified proteins. *Methods in Enzymology*, 186: 464-478.
- Lewis, S., Cherry, N., Niven, R., Barber, P., and Povey, A., 2001: Polymorphisms in the NAD(P)H: quinone oxidoreductase gene and small lung cancer risk in a UK population. *Lung Cancer*, 34: 177-183.
-

- Libkind, D., Brizzio, S., and van Broock, M., 2004a: *Rhodotorula mucilaginosa*, a carotenoid producing yeast strain from a Patagonian high-altitude lake. *Folia Microbiology*, 49: 19-25.
- Libkind, D., Perez, P., Sommaruga, R., Dieguez Mdel, C., Ferraro, M., Brizzio, S., Zagarese, H., and van Broock, M., 2004b: Constitutive and UV-inducible synthesis of photoprotective compounds (carotenoids and mycosporines) by freshwater yeasts. *Photochemical and Photobiological Sciences*, 3: 281-286.
- Lin, P., Wang, H., Lee, H., Wang, S., Hsueh, Y., Tsai, K., and Chen, C., 1999: NAD(P)H: quinone oxidoreductase polymorphism and lung cancer in Taiwan. *Journal of Toxicology and Environmental Health. Part A.*, 58: 187-197.
- Lind, C., Cadenas, E., Hochstein, P., and Ernster, L., 1990: DT-Diaphorase: Purification, Properties and Function. *Methods in Enzymology*, 186: 287-301.
- Linnane, A., Kovalenko, S., and Gingold, E., 1998: The universality of bioenergetic disease. Age-associated cellular bioenergetic degradation and amelioration therapy. *Annals of the New York Academy of Sciences*, 854: 2343-2348.
- Lorenz, P. and Eck, J., 2005: Metagenomics and industrial applications. *Nature Reviews Microbiology*, 3: 510-516.
- Luft, R. and Landau, B., 1995: Mitochondrial medicine. *Journal of Internal Medicine*, 238: 405-421.
- Macario, A. and Conway de Macario, E., 2000: Stress and molecular chaperones in disease. *International Journal of Clinical and Laboratory Research*, 30: 49-66.
- Malloy, K. D., Holman, M. A., Mitchell, D., and Detrich, H. W., III, 1997: Solar UVB-induced DNA damage and photoenzymatic DNA repair in antarctic zooplankton. *Proceedings of the National Academy of Sciences USA*, 94: 1258-1263.

- 
- Margesin, R., Fonteyne, P., and Redl, B., 2005: Low-temperature biodegradation of high amounts of phenol by *Rhodococcus* spp. and basidiomycetous yeasts. *Research in Microbiology*, 156: 68-75.
- Margulis, L., 1998: *Five Kingdoms: An illustrated guide to the phyla of life on Earth*. 3 ed. New York: W.H. Freeman & Company, 520 pp.
- Marin, A., Lopez de Cerain, A., Hamilton, E., Lewis, A., Martinez-Penuela, J., Idoate, M., and Bello, J., 1997: DT-diaphorase and cytochrome B5 reductase in human lung and breast tumours. *British Journal of Cancer*, 76: 923-929.
- Marks, R., 1999: Photoprotection and prevention of melanoma. *European Journal of Dermatology*, 9: 406-412.
- Marks-Hull, H., Shiao, T., Araki-Susaki, K., Traver, R., and Vasiliou, V., 1997: Expression of ALDH3 and NQO1 in human corneal epithelial and breast adenocarcinoma cells. *Advances in Experimental Medicine and Biology*, 414: 59-68.
- Marot-Leblond, A., Grimaud, L., David, S., Sullivan, D., Coleman, D., Ponton, J., and Robert, R., 2004: Evaluation of a rapid immunochromatographic assay for identification of *Candida albicans* and *Candida dubliensis*. *Journal of Clinical Microbiology*, 42: 4956-4960.
- Martinez, J., Perez-Serrano, J., Bernadina, W., and Rodriguez-Caabeiro, F., 2002: Oxidative, heat and anthelmintic stress responses in four species of *Trichinella*: comparative study. *Journal of Experimental Zoology*, 293: 664-674.
- Mason, D., Schafer, F., Shick, J., and Dunlap, W., 1998: Ultraviolet radiation-absorbing mycosporine-like amino acids (MAAs) are acquired from their diet by medaka fish (*Oryzias latipes*) but not by SKH-1 hairless mice. *Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology*, 120: 587-598.
- Mayer, V., 1970: Induction by UV-light of sectored and non-sectored petite mutants of *Saccharomyces cerevisiae*. *Mutation Research*, 9: 255-260.
-



- 
- Mayr, E., 1963: *Animal Species and Evolution*: Harvard University Press.
- McAlister, L., Strausberg, S., Kulaga, A., and Finkelstein, D., 1979: Altered patterns of protein synthesis induced by heat shock of yeast. *Current Genetics*, 1: 63-74.
- McAlister, L. and Finkelstein, D., 1980: Heat shock proteins and thermal resistance in yeast. *Biochemical and Biophysical Research Communications*, 93: 819-824.
- McCannon, S. and Bowman, J., 2000: Taxonomy of Antarctic *Flavobacterium* species: description of *Flavobacterium gillisiae* sp. nov., *Flavobacterium tegetincola* sp. nov. and *Flavobacterium xanthum* sp. nov., nom. rev. and reclassification of [*Flavobacterium*] *salegens* as *Salegentibacter salegens* gen. nov., comb. nov. *International Journal of Systematic and Evolutionary Microbiology*, 50: 1055-1063.
- McNeely, J., Miller, K., Reid, W., Mittermeier, R., and Werner, T., 1990: *Conserving the World's Biological Diversity*. International Union for Conservation of Nature and Natural Resources, World Resources Institute, Conservation International, World Wildlife Fund US and the World Bank., Washington, DC.
- Medina-Bellver, J., Marin, P., Delgado, A., Rodriguez-Sanchez, A., Reyes, E., Ramos, J., and Marques, S., 2005: Evidence for in situ crude oil biodegradation after the Prestige oil spill. *Environmental Microbiology*, 7: 773-779.
- Melkusova, S., Lisalova, M., Pavlik, P., and Bujdakova, H., 2005: The first clinical isolates of *Candida dubliensis* in Slovakia. *Mycopathologia*, 159: 369-371.
- Mendonca-Hagler, L. C. and Phaff, W. J., 1995: Deoxyribonucleic acid-base composition and deoxyribonucleic acid/deoxyribonucleic acid hybrid formation in psychrophobic and related yeasts. *International Journal of Systematic Bacteriology*, 25: 222-229.
- Mevs, U., Stackebrandt, E., Schumann, P., Gallikowski, C., and Hirsch, P., 2000: *Modestobacter multiseptatus* gen. nov., sp. nov., a budding actinomycete from soils of the Asgard Range (Transantarctic Mountains). *International Journal of Systematic and Evolutionary Microbiology*, 50: 337-346.
-

- 
- Meyer, S., Payne, R. W., and Yarrow, D., 1998: *Candida Berkhout*. In Fell, J. W. (ed.), *The Yeasts, A Taxonomic Study*. Amsterdam: Elsevier, 454-573.
- Miller, N. J., Rice-Evans, C., Davies, M., Gopinathan, V., and Milner, A., 1993: A novel method for measuring antioxidant capacity and its application to monitoring the antioxidant status in premature neonates. *Clinical Science*, 84: 407-412.
- Montes, M. J., Belloch, C., Galiana, M., Garcia, M. D., Andres, C., Ferrer, S., Torres-Rodriguez, J. M., and Guinea, J., 1999: Polyphasic taxonomy of a novel yeast isolate from Antarctic environment; Description of *Cryptococcus victoriae* sp. nov. *Systematic and Applied Microbiology*, 22: 97-105.
- Moore, M., Breedveld, M., and Autor, A., 1989: The role of carotenoids in preventing oxidative damage in the pigmented yeast, *Rhodotorula mucilaginosa*. *Archives of Biochemistry & Biophysics*, 1: 419-431.
- Moore, R., 1998: Cytology and ultrastructure of yeasts and yeastlike fungi. In Fell, J. W. (ed.), *The Yeasts: A Taxonomic Study*. Amsterdam: Elsevier, 33-44.
- Morgan, R., Christman, M., Jacobson, F., Storz, G., and Ames, B., 1986: Hydrogen peroxide inducible proteins in *Salmonella typhimurium* overlap with heat shock and other stress proteins. *Proceedings of the National Academy of Sciences USA*, 83: 8059-8063.
- Morimoto, R. I., Tissieres, A., and Georgopoulos, 1990: *Stress Proteins in Biology and Medicine*. New York: Cold Spring Harbor Laboratory Press.
- Morris, C. E., Bardin, M., Berge, O., Frey-Klett, P., Fromin, N., Girardin, H., Guinebretiere, M.-H., Lebaron, P., Thiery, J. M., and Troussellier, M., 2002: Microbial biodiversity: approaches to experimental design and hypothesis testing in primary scientific literature from 1975 to 1999. *Microbiology and Molecular Biology Reviews*, 66: 592-616.
- Moustacchi, E. and Enteric, S., 1970: Differential "liquid holding recovery" for the lethal effect and cytoplasmic "petite" induction by UV light in *Saccharomyces cerevisiae*. *Molecular and General Genetics*, 109: 69-83.
-



- Murray, A. E., Preston, C. M., Massana, R., Taylor, L. T., Blakis, A., Wu, K., and DeLong, E. F., 1998: Seasonal and spatial variability of bacterial and archaeal assemblages in the coastal waters near Anvers Island, Antarctica. *Applied and Environmental Microbiology*, 64: 2585-2595.
- National Science Foundation. The World Fact Book. Accessed May 2005, last updated May 2005. <http://www.cia.gov/cia/publications/factbook/geos/ay.html>
- National Science Foundation's Long-term Ecological Research (LTER) Program. Accessed May 2005, last updated May 2005 <http://lternet.edu/sites/mcm/>
- Newman, S., Dunlap, W., Nicol, S., and Ritz, D., 2000: Antarctic krill (*Euphausia superba*) acquire a UV-absorbing mycosporine-like amino acid from dietary algae. *Journal of Experimental Marine Biology and Ecology*, 255: 93-110.
- Newsham, K. K., 2003: UV-B radiation arising from stratospheric ozone depletion influences the pigmentation of the Antarctic moss *Andreaea regularis*, *Oecologia*, 327-331.
- Nicholson, C. and Fathepure, B., 2005: Aerobic biodegradation of benzene and toluene under hypersaline conditions at the Great Salt Plains, Oklahoma. *FEMS Microbiology Letters*, 245: 257-262.
- Niki, E., 1990: Free radical initiators as source of water- or lipid-soluble peroxy radicals. *Methods in Enzymology*, 186: 100-108.
- Niklowitz, P., Menke, T., Wiesel, T., Mayatepek, E., Zschocke, J., Okun, J., and Andler, W., 2002: Coenzyme Q10 in plasma and erythrocytes: comparison of antioxidant levels in healthy probands after oral supplementation and in patients suffering from sickle cell anemia. *International Journal of Clinical Chemistry*, 326: 155-161.
- Nohl, H., Staniek, K., Kozlov, A., and Gille, L., 2003: The biomolecule ubiquinone exerts a variety of biological functions. *Biofactors*, 18: 23-31.
- Nohl, H., Gille, L., and Staniek, K., 2004: The mystery of reactive oxygen species derived from cell respiration. *Acta Biochimica Polonica*, 51: 223-229.
-



- Nollen, E. A. A. and Morimoto, R. I., 2002: Chaperoning signaling pathways: molecular chaperones as stress-sensing 'heat shock' proteins. *Journal of Cell Science*, 115: 2809-2816.
- Oh, R., 2005: Practical applications of fish oil (omega-3 fatty acids) in primary care. *The Journal of the American Board of Family Practice*, 18: 30-36.
- Omenn, G., Goodman, G., Thornquist, M., Balmes, J., Cullen, M., Glass, A., Keogh, J., Meyskens, F. J., Valanis, B., Williams, J. J., Barnhart, S., Cherniak, M., Brodtkin, C., and Hammar, S., 1996: Risk factors for lung cancer and for intervention effects in CARET, the Beta-Carotene and Retinol Efficacy Trial. *Journal of the National Cancer Institution*, 88: 1550-1559.
- Onofri, S. and Tosi, S., 1992: *Arthrobotrys ferox* sp. nov., a springtail-capturing hyphomycete from continental Antarctica. *Mycotaxon*, 2: 445-451.
- Onofri, S., Pagano, S., Zucconi, L., and Tosi, S., 1999: *Friedmanniomyces endolithicus* (Fungi, Hyphomycetes), anam.-gen. and sp. nov., from continental Antarctica. *Nova Hedwigia*, 68: 175-181.
- Onofri, S., Fenice, M., Cicalini, A., Tosi, S., Magrino, A., Pagano, S., Selbmann, L., Zucconi, L., Vishniac, H. S., Ocampo-Friedman, R., and Friedman, I. E., 2000: Ecology and biology of microfungi from Antarctic rocks and soils. *Italian Journal of Zoology*, Supplement 1: 163-167.
- Osganian, S., Stamfer, M., Rimm, E., Spiegelman, D., Hu, F., Manson, J., and Willett, W., 2003: Vitamin C and risk of coronary heart disease in women. *Journal of the American College of Cardiology*, 42: 246-252.
- Parsons, P. G., 1997: Can skin cancer in humans be prevented by alleviation of oxidative stress? *Redox Report*, 3: 77-83.
- Patrick, L., 2000: Beta-carotene: the controversy continues. *Alternative Medicine Review*, 5: 530-545.

- 
- Peng, J., Jones, G., and Watson, K., 2000: Stress proteins as biomarkers of oxidative stress: effects of antioxidant supplements. *Free Radical Biology & Medicine*, 28: 1598-1606.
- Perrier, V., Dubreucq, E., and Galzy, P., 1995: Fatty acid and carotenoid composition of *Rhodotorula* strains. *Archives of Microbiology*, 164: 173-179.
- Petersen, K. M., 2000: Microbial succession of *Debaryomyces hansenii* strains during the production of Danish surfaced ripened cheeses. *10th International Symposium on Yeast*: 35.
- Petit, J. R., Jouzel, J., Raynaud, D., Barkov, N., Barnola, J.-M., Basile, I., Benders, M., Chappellaz, J., Davis, M., Delaygue, G., Delmotte, M., Kotlyakov, V. M., Legrand, M., Lipenkov, V. Y., Lorius, C., Pepin, L., Ritz, C., Saltzman, E., and Stievenard, M., 1999: Climate and atmospheric history of the past 420,000 years from the Vostok ice core, Antarctica. *Nature*, 399: 429-436.
- Phaff, H., 1998: Chemotaxonomy based on the polysaccharide composition of cell walls and capsules. In Fell, J. W. (ed.), *The Yeasts, A Taxonomic Study*. Amsterdam: Elsevier, 21-30.
- Pokorna, J., Koci, R., Marova, I., Drabkova, M., and Knoppova, M., 2003: Role of carotenoids in stress response of red yeast. *XXIth YGM Conference*.
- Poliakova, A., Chernov, I., and NS, P., 2001: Yeast biodiversity in hydromorphic soils with reference to grass-Sphagnum swamp in Western Siberia and the hammocky tundra region( Barrow, Alaska). *Mikrobiologiya*, 70: 714-720.
- Rao, D., Watson, K., and Jones, G., 1999: Age-related attenuation in the expression of the major heat shock proteins in human peripheral lymphocytes. *Mechanisms of ageing and development*, 107: 105-118.
- Raspor, P., Batic, M., Jamnik, P., Milacic, R., Pas, M., Recek, M., Rezac-Derani, V., and Skrt, M., 2000: Mineral Enriched Yeasts Biomass-Is this an opportunity for better nutrition? *10th International Symposium on Yeast*: 31.
-

- 
- Ray, M., Shivaji, S., Shyamala Rao, N., and Bhargava, P., 1989: Yeast strains from the Schirmacher Oasis, Antarctica. *Polar Biology*, 9: 305-309.
- Reiersöl, S. and di Menna, M., 1958: A new *Cryptococcus* species. *Antonie van Leeuwenhoek, Journal of Microbiology and Serology*, 24: 27-30.
- Reznick, A. and Packer, L., 1994: Oxidative damage to proteins: spectrophotometric method for carbonyl assay. *Methods in Enzymology*, 233: 357-363.
- Ritossa, F., 1962: A new puffing pattern induced by temperature shock and DNP in *Drosophila*. *Experientia*, 18: 571-573.
- Robert, V., Evrard, P., and Hennebert, G. L., 1997: BCCMTM/Allev 2.00 an automated system for the identification of yeasts. *Mycotaxon*, 64: 455-463.
- Rosenfeld, S., Follmann, D., Nunez, O., and Young, N., 2003: Antithymocyte globulin and cyclosporine for severe aplastic anemia: association between hematologic response and long-term outcome. *Journal of the American Medical Association*, 289: 1130-1135.
- Rule, D., 1976: Direct transesterification of total fatty acids of adipose tissue, and of freeze-dried muscle and liver with boron trifluoride in methanol. *Meat Science*, 46: 23-32.
- Saliou, C., Rimbach, G., Moini, H., McLaughlin, L., Hosseini, S., Lee, J., Watson, R., and Packer, L., 2001: Solar ultraviolet-induced erythema in human skin and nuclear factor-kappa-B-dependent gene expression in keratinocytes are modulated by French maritime pine bark extract. *Free Radicals in Biology and Medicine*, 30: 154-160.
- Sampaio, J., Fell, J., Gadanho, M., and Bauer, R., 1999: *Kurtzmanomyces insolitus* sp. nov., a new anamorphic heterobasidiomycetous yeast species. *Systematic and Applied Microbiology*, 22: 619-625.
- Sampaio, J. P., Gadanho, M., Bauer, R., and Weiß, M., 2003: Taxonomic studies in the Microbotryomycetidae: *Leucosporidium golubevii* sp. nov., *Leucosporidiella* gen. nov.
-



- 
- and the new orders Leucosporidiales and Sporidiobolales. *Mycological Progress*, 2: 53-68.
- Sarter, B., 2002: Coenzyme Q10 and cardiovascular disease: a review. *The Journal of Cardiovascular Nursing*, 16: 9-20.
- Schlesinger, M., 1990: Heat shock proteins. *Journal of Biological Chemistry*, 265: 12111-12114.
- Schulze-Osthoff, K., Bakker, A. C., Vanhaesebroeck, B., Beyaert, R., Jacob, W. A., and Fiers, W., 1992: Cytotoxic activity of tumor necrosis factor is mediated by early damage of mitochondrial functions. Evidence for the involvement of mitochondrial radical generation. *The Journal of Biological Chemistry*, 267: 5317-5323.
- Scorzetti, G., Petrescu, I., Yarrow, D., and Fell, J., 2000: *Cryptococcus adeliensis* sp. nov., a xylanase producing basidiomycetous yeast from Antarctica. *Antonie van Leeuwenhoek*, 77: 153-157.
- Scorzetti, G., Fell, J., Fonseca, A., and Statzell-Tallman, A., 2002: Systematics of basidiomycetous yeasts: a comparison of large subunit D1/D2 and internal transcribed spacer rDNA regions. *FEMS Yeast Research*, Dec: 495-517.
- Shick, J. M. and Dunlap, W. C., 2002: MYCOSPORINE-LIKE AMINO ACIDS AND RELATED GADUSOLS: Biosynthesis, Accumulation, and UV-Protective Functions in Aquatic Organisms. *Annual Review of Physiology*, 64: 223-262.
- Shick, J. M., Dunlap, W. C., Pearse, J. S., and Pearse, V. B., 2002: Mycosporine-like Amino Acid Content in Four Species of Sea Anemones in the Genus *Anthopleura* Reflects Phylogenetic but Not Environmental or Symbiotic Relationships. *The Biological Bulletin*, 203: 315-330.
- Shim, H., Hwang, B., Lee, S., and Kong, S., 2005: Kinetics of BTEX biodegradation by a coculture of *Pseudomonas putida* and *Pseudomonas fluorescens* under hypoxic conditions. *Biodegradation*, 16: 319-327.
-

- Simon, M., Reikerstorfer, A., Schwarz, A., Krone, C., Luger, T., Jaattela, M., and Schwarz, T., 1995: Heat shock protein 70 overexpression affects the response to ultraviolet light in murine fibroblasts. Evidence for increased cell viability and suppression of cytokine release. *Journal of clinical Investigations*, 95: 926-933.
- Sinclair, N. and Stokes, J., 1964: Obligately psychrophilic yeasts from the polar regions. *Canadian Journal of Microbiology*, 11: 259-269.
- Singh, R., Wander, G., Rastogi, A., Shukla, P., Mittal, A., Sharma, J., Mehrotra, S., Kapoor, R., and Chopra, R., 1998: Randomized, double-blind placebo-controlled trial of coenzyme Q10 in patients with acute myocardial infarction. *Cardiovascular Drugs and Therapy*, 12: 347-353.
- Smith, M., Wang, Y., Kane, E., Rollinson, S., Wiemels, J., Roman, E., Roddam, P., Cartwright, R., and Morgan, G., 2001: Low NAD(P)H: quinone oxidoreductase 1 activity is associated with increased risk of acute leukemia in adults. *Neoplasia*, 97: 1422-1426.
- Smith, R., Prezelin, B., Baker, K., Bidigare, R., Boucher, N., Coley, T., Karentz, D., MacIntyre, S., Matlick, H., Menzies, D., and al., e., 1992: Ozone depletion: ultraviolet radiation and phytoplankton biology in antarctic waters. *Science*, 255: 952-959.
- Søballe, B. and Poole, R. K., 1999: Microbial ubiquinones: multiple roles in respiration, gene regulation and oxidative stress management. *Microbiology*, 145: 1817-1830.
- Søballe, B. and Poole, R. K., 2000: Ubiquinone limits oxidative stress in *Escherichia coli*. *Microbiology*, 146: 787-796.
- Sohal, R. S., 2004: Coenzyme Q and vitamin E interactions. *Methods in Enzymology*, 378: 146-151.
- Soina, V. S., Vorobyova, E. A., Suzina, N. E., Dmitriev, V. V., Faizutdinova, R. N., Duda, V. I., Vishnivetskaya, T. A., Ostroumova, N. V., and Gilichinsky, D. A., 2000: Viable Ancient Permafrost Yeast. *10th International Symposium on Yeast.*: 140.
-

- Soja, A. and Mortensen, S., 1997: Treatment of congestive heart failure with Coenzyme Q10 illuminated by meta-analyses of clinical trials. *Molecular Aspects of Medicine*, 18: s159-s168.
- Sommaruga, R., Libkind, D., van Broock, M., and Whitehead, K., 2004: Mycosporine-glutaminol-glucoside, a UV-absorbing compound of two *Rhodotorula* yeast species. *Yeast*, 21: 1077-1081.
- Stahl, W., Heinrich, U., Jungmann, H., Sies, H., and Tronnier, H., 2000: Carotenoids and carotenoids plus vitamin E protect against ultraviolet light-induced erythema in humans. *American Journal of Clinical Nutrition*, 71: 795-798.
- Stahl, W., Heinrich, U., Wiseman, S., Eichler, O., Sies, H., and Tronnier, H., 2001: Dietary tomato paste protects against ultraviolet light-induced erythema in humans. *Journal of Nutrition*, 131: 1449-1451.
- Steiner, M., Hillenbrand, M., Borkowski, M., Seiter, H., and Schuff-Werner, P., 1999: 609 C > T polymorphism in NAD(P)H: quinone oxidoreductase gene in patients with prostatic adenocarcinoma or benign prostatic hyperplasia. *Cancer Letters*, 135: 67-71.
- Stewart, G. and Young, D., 2004: Heat-shock proteins and the host-pathogen interaction during bacterial infection. *Current Opinions in Immunology*, 16: 506-510.
- Stocker, R., Bowry, V., and Frei, B., 1991: Ubiquinol-10 protects low density lipoprotein more efficiently against lipid peroxidation than does  $\alpha$ -tocopherol. *Proceedings of the National Academy of Sciences USA*, 88: 1646-1650.
- Stokes, J. L., 1971: *Influence of temperature on growth and metabolism of yeasts*. London: Academic Press, 119-134 pp.
- Suzuki, M. and Nakase, T., 1999: A phylogenetic study of ubiquinone Q-8 species of the genera *Candida*, *Pichia*, and *Citeromyces* based on 18S ribosomal DNA sequence divergence. *Journal of General and Applied Microbiology*, 45: 239-246.



- 
- Suzzi, G., Lombardi, A., Andrighetto, C., Schirone, M., and Tofalo, R., 2000: Diversity of *Debaryomyces Hansenii* - *Candida famata* isolates from dry sausages of south Italy. *10th International Symposium on Yeast*: 37.
- Swann, E. and Taylor, J., 1995: Phylogenetic diversity of yeast-producing basidiomycetes. *Mycological Research*, 99: 1205-1210.
- Swofford, D., 2001: PAUP\* Phylogenetic Analysis Using Parsimony (\*and other methods). Massachusetts: Sinauer Associates.
- Tang, P. H., Miles, M. V., DeGrauw, A., Hershey, A., and Pesce, A., 2001: HPLC analysis of reduced and oxidized coenzyme Q<sub>10</sub> in human plasma. *Clinical Chemistry*, 47: 256-265.
- Thomas, S., Neuzil, J., and Stocker, R., 1997: Inhibition of LDL oxidation by ubiquinol-10. A protective mechanism for coenzyme Q in atherogenesis? *Molecular Aspects of Medicine*, 18: S85-103.
- Thomas-Hall, S., 1997: Isolation and characterisation of Antarctic yeast. Honours, School of Biological, Biomedical and Molecular Sciences, University of New England, Armidale. Pages pp.
- Thomas-Hall, S. and Watson, K., 2001: *Cryptococcus nyarrowii* sp. nov., a basidiomycetous yeast from Antarctica. *International Journal of Systematic and Evolutionary Microbiology*.
- Thomas-Hall, S., Watson, K., and Scorzetti, G., 2002: *Cryptococcus statzelliae* sp. nov. and three novel strains of *Cryptococcus victoriae*, yeasts isolated from Antarctic soils. *International Journal of Systematic and Evolutionary Microbiology*, 52: 2303-2308.
- Thomas-Hall, S., 2005: Phylogenetic studies of fungi. PhD, School of Biological, Biomedical and Molecular Sciences., University of New England, Armidale. Pages pp.
- Tiedje, J. M., 1998: Exploring microbial life in Lake Vostok. *Lake Vostok Workshop*: 19-21.
-

- 
- Tomasetti, M., Littarru, G., Stocker, R., and Alleva, R., 1999: Coenzyme Q<sub>10</sub> enrichment decreases oxidative DNA damage in human lymphocytes. *Free Radical Biology and Medicine*, 27: 1027-1032.
- Torsvik, V., Goksoyr, J., and Daae, F., 1990: High diversity in DNA of soil bacteria. *Applied and Environmental Microbiology*, 56: 782-787.
- Tosi, S., Casado, B., Gerdol, R., and Caretta, G., 2002: Fungi isolated from Antarctic mosses. *Polar Biology*, 25: 262-268.
- Trautinger, F., Kindas-Mugge, I., Barlan, B., Neuner, P., and Knobler, R., 1995: 72-kD heat shock protein is a mediator of resistance to ultraviolet B light. *The Journal of Investigative Dermatology*, 105: 160-162.
- Trautinger, F., Kokesch, C., Klosner, G., Knobler, R., and Kindas-Mugge, I., 1999: Expression of the 72-kD heat shock protein is induced by ultraviolet A radiation in a human fibrosarcoma cell line. *Experimental Dermatology*, 8: 187-192.
- Trautinger, F., 2001: Heat shock proteins in the photobiology of human skin. *Journal of photochemistry and photobiology. B, Biology*, 63: 70-77.
- Traver, R., Horikoshi, T., Danenberg, K., Stadlbauer, T., Danenberg, P., Ross, D., and Gibson, N., 1992: NAD(P)PH: quinone oxidoreductase 1 codon 609 polymorphism and its association to colorectal cancer. *Archives of Toxicology*, 73: 528-531.
- Tringe, S., von Mering, C., Kobayashi, A., Salamov, A., Chen, K., Chang, H., Podar, M., Short, J., Mathur, E., Detter, J., Bork, P., Hugenholtz, P., and Rubin, E., 2005: Comparative metagenomics of microbial communities. *Science*, 308: 554-557.
- Tsimako, M., Guffogg, S., Thomas-Hall, S., and Watson, K., 2002: Resistance to UVB radiation in Antarctic yeasts. *Redox Report*, 7: 312-314.
- Turunen, M., Swiezewska, E., Chojnacki, T., Sindelar, P., and Dallner, G., 2002: Regulatory aspects of coenzyme Q metabolism. *Free Radical Research*, 36: 437-443.
-

- 
- Tyrell, R., 1996: Activation of mammalian gene expression by the UV component of sunlight- from models to reality. *Bioessays*, 18: 139-148.
- Vancanneyt, M., Van Lerberge, E., Berny, J., Hennebert, G., and Kersters, K., 1992: The application of whole-cell protein electrophoresis for the classification and identification of basidiomycetous yeast species. *Antonie van Leeuwenhoek*, 61: 69-78.
- Vandamme, P., Torck, U., Falsen, E., Pot, B., Goossens, H., and Kersters, K., 1998: Whole-cell protein electrophoretic analysis of viridans streptococci: evidence for heterogeneity among *Streptococcus mitis* biovars. *International Journal of Systematic Bacteriology*, 48: 117-125.
- Venter, J., Remington, K., Heidelberg, J., Halpern, A., Rusch, D., Eisen, J., Wu, D., Paulsen, I., Nelson, K., Nelson, W., Fouts, D., Levy, S., Knap, A., Lomas, M., Nealson, K., White, O., Peterson, J., Hoffman, J., Parsons, R., Baden-Tillson, H., Pfannkoch, C., Rogers, Y., and Smith, H., 2004: Environmental genome shotgun sequencing of the Sargasso Sea. *Science*, 304: 66-74.
- Veys, A., Callewaert, W., Waelkens, E., and van Den-Abeeke, K., 1989: Application of gas-liquid chromatography to the routine identification of non-fermenting gram-negative bacteria in clinical specimens. *Journal of Clinical Microbiology*, 27: 1538-1542.
- Vishniac, H., 1985a: *Cryptococcus socialis* sp. nov. and *Cryptococcus consortionis* sp. nov., Antarctic basidioblastomycetes. *International Journal of Systematic and Evolutionary Microbiology*, 35: 119-122.
- Vishniac, H., 1985b: *Cryptococcus friedmannii*, a new species of yeast from the Antarctic. *Mycologia*, 77: 149-153.
- Vishniac, H. S. and Kurtzman, C., 1992: *Cryptococcus antarcticus* sp. nov. and *Cryptococcus albidosimilis* sp. nov., basidioblastomycetes from Antarctic soils. *International Journal of Systematic Bacteriology*, 42: 547-553.
- Vishniac, H. S. and Onofri, S., 2002: *Cryptococcus antarcticus* var. *circumpolaris* var. nov., a basidiomycetous yeast from Antarctica. *Antonie van Leeuwenhoek*, 83: 231-233.
-



- Vishniac, H. S., 2005: Yeast biodiversity in the Antarctic. In Rosa, C. A. and Peters, G. (eds.), *Biochemistry and Ecophysiology of Yeasts*. Berlin: Springer-Verlag, 419-440.
- Vitale, RG and de Hoog, G., 2002: Molecular diversity, new species and antifungal susceptibilities in the *Exophiala spinifera* clade. *Medical Mycology*, 40: 545-556.
- Volkman, M., Whitehead, K., Rutters, H., Rullkotter, J., and Gorbushina, A., 2002: Mycosporine-glutamicol-glucoside: a natural UV-absorbing secondary metabolite of rock-inhabiting microcolonial fungi. *Rapid Communications in Mass Spectrometry*, 17: 897-902.
- Walker, U. and Byrne, F., 1995: The therapy of respiratory chain encephalomyopathy: a critical review of the past and current perspective. *Acta Neurologica Scandinavica*, 92: 273-280.
- Walker, W. and Doolittle, W., 1983: 5S rRNA sequences of eight basidiomycetes and fungi imperfecti. *Nucleic Acids Research*, 11: 7625-7630.
- Watson, K. and Arthur, H., 1976: Leucosporidium yeasts: Obligate psychrophiles which alter membrane-lipid and cytochrome composition with temperature. *Journal of General Microbiology*, 97: 11-18.
- Watson, K., 1980: Homeoviscous adaptation in psychrophilic, mesophilic and thermophilic yeasts. *Membrane fluidity: Biophysical Techniques and Cellular Regulation*. Humana Press, Clifton, NJ. 349-363.
- Watson, K. and Cavicchioli, R., 1983: Acquisition of ethanol tolerance in yeast by a heat shock. *Biotechnology Letters*, 5: 683-687.
- Watson, K., 1987: Temperature relations. In Harrison, J. (ed.), *The Yeasts*. London: Academic Press, 41-71.
- Watson, K., 1990: Microbial stress proteins. *Advances in Microbial Physiology*, 31: 183-223.

- Whittaker, R. H., 1969: New concepts of kingdoms or organisms. Evolutionary relations are better represented by new classifications than by the traditional two kingdoms. *Science*, 163: 150-160.
- Wickerham, L. and Burton, K., 1948: Carbon assimilation tests for the classification of yeasts. *Journal of Bacteriology*, 56: 363-371.
- Wickerham, L., 1951: Taxonomy of Yeasts., *Technical Bulletin*: United States Department of Agriculture.
- Wiemels, J., Pagnamenta, A., Taylor, G., Eden, O., Alexander, F., and Greaves, M., 1999: A lack of functional NAD(P)H: quinone oxidoreductase allele is selectively associated with pediatric leukemias that have MLL fusions. *Cancer Research*, 59: 4095-4099.
- Wills, E., 1969: Lipid peroxide formation in microsomes. General considerations. *The Biochemical Journal*, 113: 315-324.
- Woese, C., Kandler, O., and Wheelis, M., 1990: Towards a natural system of organisms: proposal for the domains Archaea, Bacteria and Eucarya. *Proceedings of the National Academy of Sciences USA*, 87: 4576-4579.
- Woese, C., 1994: There must be a prokaryote somewhere: microbiology's search for self. *Microbiological Reviews*, 58: 1-9.
- Yamada, Y., Sugihara, K., Van Eijk, G., Roeljmans, H., and De Hoog, G., 1989: Coenzyme Q systems in ascomycetous black yeasts. *Antonie van Leeuwenhoek*, 56: 349-356.
- Yamada, Y., 1998: Identification of coenzyme Q (ubiquinone) homologs. In Kurtzman, C. P. and Fell, J. W. (eds.), *The Yeasts: A Taxonomic Study*. Amsterdam: Elsevier, 101-102.
- Yamamoto, Y. and Yamashita, S., 1997: Plasma ratio of ubiquinol and ubiquinone as a marker of oxidative stress. *Molecular Aspects of Medicine*, 18: S79-84.

- Yamamoto, Y. and Yamashita, S., 1999: Plasma ubiquinone to ubiquinol ratio in patients with hepatitis, cirrhosis and hepatoma and in patients treated with percutaneous transluminal coronary reperfusion. *Biofactors*, 9: 241-246.
- Yamazaki, M., Kurtzman, C. P., and Sugiyama, J., 1998: Electrophoretic comparison of enzymes. In Kurtzman, C. P. and Fell, J. W. (eds.), *The Yeasts: A Taxonomic Study*. Amsterdam: Elsevier, 49-53.
- Yarrow, D., 1998: Methods for the isolation, maintenance, classification and identification of yeasts. In Kurtzman, C. P. and Fell, J. W. (eds.), *The Yeasts, A Taxonomic Study*. Amsterdam: Elsevier, 77-101.
- Yin, L., Pu, Y., Liu, T., Tung, Y., Chen, K., and Lin, P., 2001: Genetic polymorphisms of NAD(P)H: quinone oxidoreductase, CYP1A1 and microsomal epoxide hydrolase and lung cancer risk in Nanjing China. *Lung Cancer*, 33: 133-141.
- Young, A., 2004: Methods used to evaluate the immune protection factor of a sunscreen: advantages and disadvantages of different *in vivo* techniques. *Cutis; Cutaneous Medicine for the Practitioner*, 74: 19-23.
- Zhang, P. and Omaye, S., 2001: Antioxidant and prooxidant roles for  $\beta$ -carotene,  $\alpha$ -tocopherol and ascorbic acid in human lung cells. *Toxicology in vitro*, 15: 13-24.
- Zlatanov, M., Pavlova, K., and Grigorova, D., 2001: Lipid composition of some yeast strains from Livingston Island, Antarctica. *Folia Microbiologica*, 46: 402-406.