

20. Perfect JR, Lang SD, Durack DT. Chronic cryptococcal meningitis: a new experimental model in rabbits. *Am J Pathol.* 1980;101:177–94.
21. Kwon-Chung KJ, Bennett JE, Rhodes JC. Taxonomic studies on *Filobasidiella* species and their anamorphs. *Antonie Van Leeuwenhoek.* 1982;48:25–38.
22. Lengeler KB, Cox GM, Heitman J. Serotype AD strains of *Cryptococcus neoformans* are diploid or aneuploid and are heterozygous at the mating-type locus. *Infect Immun.* 2001;69:115–22.
23. Varma A, Wu S, Guo N, Liao W, Lu G, Li A, et al. Identification of a novel gene *URE2* that functionally complements a urease negative clinical strain of *Cryptococcus neoformans*. *Microbiology.* 2006;152:3723–31.
24. Swofford DL. PAUP*: Phylogenetic analysis using parsimony (*and other methods). Version 4. Sunderland (MA): Sinauer Associates, Inc.; 2002.
25. Bell M, Archibald LK, Nwanyanwu O, Dobbie H, Tokars J, Kazembe P, et al. Seasonal variation in the etiology of bloodstream infections in a febrile inpatient population in a developing country. *Int J Infect Dis.* 2001;5:63–9.
26. Franzot SP, Salkin IF, Casadevall A. *Cryptococcus neoformans* var. *grubii*: separate varietal status of *Cryptococcus neoformans* serotype A isolates. *J Clin Microbiol.* 1999;37:838–40.
27. Barreto de Oliveira MT, Boekhout T, Theelen B, Hagen F, Baroni FA, Lazera MS, et al. *Cryptococcus neoformans* shows a remarkable genotypic diversity in Brazil. *J Clin Microbiol.* 2004;42:1356–9.
28. Jain N, Wickes BL, Keller SM, Fu J, Casadevall A, Jain P, et al. Molecular epidemiology of clinical *Cryptococcus neoformans*. *J Clin Microbiol.* 2005;43:5733–42.
29. Dromer F, Mathoulin S, Dupont B, Laporte A. Epidemiology of cryptococcosis in France: a 9 year survey (1985–1993). French Cryptococcosis Study Group. *Clin Infect Dis.* 1996;23:82–90.
30. Hajjeh RA, Conn LA, Stephens DS, Baughman W, Hamill R, Graviss E, et al. Cryptococcosis: population-based multistate active surveillance and risk factors in human immunodeficiency virus-infected persons. Cryptococcal Active Surveillance Group. *J Infect Dis.* 1999;179:449–54.
31. Moosa MYS, Coovadia YM. Cryptococcal meningitis in Durban, South Africa: a comparison of clinical features, laboratory findings, and outcome for human immunodeficiency virus (HIV)-positive and HIV-negative patients. *Clin Infect Dis.* 1997;24:131–4.
32. Chen S, Sorrell T, Nimmo G, Speed B, Currie B, Ellis D, et al. Epidemiology and host-and variety-dependent characteristics of infection due to *Cryptococcus neoformans* in Australia and New Zealand. *Clin Infect Dis.* 2000;31:499–08.
33. Meletiadi J, Walsh TJ, Choi EH, Pappas PG, Ennis D, Douglas J, et al. Study of common functional genetic polymorphisms of FCGR2A, 3A and 3B genes and the risk for cryptococcosis in HIV-uninfected patients. *Med Mycol.* 2007;45:513–8.
34. Casadevall A, Perfect JR. *Cryptococcus neoformans*. Washington: ASM Press; 1998.
35. Friedman GD. The rarity of cryptococcosis in northern California: the 10-year experience of a large defined population. *Am J Epidemiol.* 1983;117:230–4.
36. Hajjeh RA, Conn LA, Stephens DS, Baughman W, Hamill R, Graviss E, et al. Population-based multistate active surveillance and risk factors in human immunodeficiency virus-infected persons. *J Infect Dis.* 1999;179:449–54.
37. Kwon-Chung KJ, Hill WB. Sexuality and pathogenicity of *Filobasidiella neoformans* (*Cryptococcus neoformans*). In: Vanbreuseghem R, DeVroey C, editors. Sexuality and pathogenicity of fungi. New York: Masson; 1981. p. 243–50.
38. Lo D. Cryptococcosis in the Northern Territory. *Med J Aust.* 1976;2:825,828.
39. Sorvillo F, Beall G, Turner PA, Beer VL, Kovacs AA, Kerndt PR. Incidence and factors associated with extrapulmonary cryptococcosis among persons with HIV infection in Los Angeles County. *AIDS.* 1997;11:673–9.

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etymologia

Cryptococcus neoformans

[krip' to-kok'əs ne' o for-mənz], from the Greek—*krypto* (hidden), *kokkos* (berry), *neos* (new); and Latin—*forma* (form)

C. neoformans is an encapsulated yeastlike fungus of the family *Cryptococcaceae*. It was first described in 1894 by German pathologist Otto Busse, who observed the cells in a tumor from the tibia of a woman with sarcoma. Found worldwide in nests and droppings of pigeons, it is the most common species that causes cryptococcosis in humans. The effects range from asymptomatic infection to meningitis, pneumonia, or disseminated disease. The crucial factor is the immune status of the host. With the global emergence of AIDS, the incidence of cryptococcosis is increasing and now represents a major life-threatening infection in these patients.

Source: Dorland's Illustrated Medical Dictionary, 31st edition. Philadelphia: Saunders Elsevier; 2007; <http://www.emedicine.com/med/TOPIC482.HTM>