

***Neurospora tetrasperma* bibliography – Additions**

David D. Perkins - Department of Biological Sciences, Stanford University, Stanford, CA 94305-5020.

Fungal Genet. Newsl. 50:24-26

During the evolutionary divergence of *N. tetrasperma* from the eight-spored *Neurospora* species, ascus development was reprogrammed with the result that each of the four large ascospores is heterokaryotic, containing nuclei of both mating types, and germlings are self-fertile. Unique features of genome organization, cell biology, and population structure have attracted investigators to use this pseudohomothallic, four-spored species for a wide range of studies. A bibliography listing 164 publications was published in 1994 in Fungal Genetics Newsletter 41:72-78. Eighty-six additional publications are listed here. In addition to recent papers, these include some theses, abstracts, and papers that were omitted from the previous list.

-
- Adhvaryu K.K., and R. Maheshwari. 2002. Heterogeneity in NTS of rDNA in localized populations of *Neurospora*. *Curr. Sci.* 82:1015-1020.
- Agarwal, C. P., and R. K. S. Chauhan. 1976. *Neurospora tetrasperma*: New record of its occurrence in Indian soil and its cellulolytic activity. *Proc. Indian Nat. Sci. Acad., Part B: Biol. Sci.* 42:122-124.
- Ardizzi, J. P., and A. M. Srb. 1981. “E-like” ascospore excision mutants in *Neurospora tetrasperma* resistant to either *p*-DL-fluorophenylalanine or methyl benzimidazol-2-yl carbamate. *Neurospora Newslett.* 28:6.
- Arganoza, M. T., J. Min, Z. Hu, and R. A. Akins. 1994. Distribution of seven homology groups of mitochondrial plasmids in *Neurospora*: Evidence for widespread mobility between species in nature. *Curr. Genet.* 26:62-73.
- Attoh, G. T. 1986. Ribosomal DNA systematics of homothallic species of *Neurospora*: A phylogenetic analysis. Ph.D. thesis, Howard University: Diss. Abstr. Intl. 47-10B:4060.
- Belmans, D. L., A. J. van Laere, and J. A. van Assche. 1983. Effect of n-alcohols and high pressure on the heat activation of *Neurospora tetrasperma* ascospores. *Arch. Microbiol.* 134:49-51.
- Bennett, S. M., and H. B. Howe, Jr. 1977. Development of the sexual cycle in *Neurospora tetrasperma*. *Assoc. Southeast Biol. Bull.* 24:36-37. (Abstr.)
- Bhat, A., and D. P. Kasbekar. 2001. Escape from repeat-induced point mutation of a gene-sized duplication in *Neurospora crassa* crosses that are heterozygous for a larger chromosome segment duplication. *Genetics* 157:1581-1590.
- Bistis, G. N. 1996. Trichogynes and fertilization in uni- and bimating type colonies of *Neurospora tetrasperma*. *Fungal Genet. Biol.* 20:93-98.
- Bok, J.-W., and A. J. F. Griffiths. 2000. Possible benefits of kalilo plasmids to their *Neurospora* hosts. *Plasmid* 43:176-180.
- Bok, J.-W., C. He, and A. J. F. Griffiths. 1999. Transfer of *Neurospora* kalilo plasmids among species and strains by introgression. *Curr. Genet.* 36:275-281.
- Buller, A. H. R. 1943. Sex and inheritance of lethal factors in *Neurospora tetrasperma*. Unpublished manuscript deposited in the Library of the Royal Botanic Gardens, Kew. [See G. R. Bisby. 1950. Editor's note in A. H. R. Buller. *Researches on Fungi*, vol.7, p. xv. Univ. Toronto Press.
- Burk, A. G., and S. M. Srb. 1977. Effect of biotin deficiency on formation of ascospores in *Neurospora tetrasperma*. *Genetics* 86:s8-s9. (Abstr.)
- Calhoun, W. F. 1971. Inhibition of perithecial development in *Neurospora tetrasperma*. Ph.D. Thesis, Univ. Georgia. Diss. Abstr. 32:5342-B.
- Calhoun, F., and H. B. Howe, Jr. 1972. Alpha-glucose and beta-glucose utilization by *Neurospora tetrasperma*. *Microbiologica* 5:53-56.
- Cutter, V. M., Jr. 1946. The chromosomes of *Neurospora tetrasperma*. *Mycologia* 38:693-698.
- Debets, A., A. van Mourik, A. J. F. Griffiths, and R. F. Hoekstra. 2001. Stable polymorphism for the kalilo senescence plasmid in Hawaiian populations of *Neurospora*. *Fungal Genet. Newslett.* 48 (Suppl.):62. (Abstr.)
- Dettman, J. R., F. M. Harbinski, and J. W. Taylor. 2001. Ascospore morphology is a poor predictor of the phylogenetic relationships of *Neurospora* and *Gelasinospora*. *Fungal Genet. Biol.* 34:44-61.
- Dettman, J. R., D. J. Jacobson, and J. W. Taylor. 2002. Phylogenetic species recognition in *Neurospora*. *Fungal Genet. Newslett.* 49 (Suppl.):19. (Abstr.)
- Dettman, J. R., and J. W. Taylor. 2003. Microsatellite evolution in *Neurospora*. *Fungal Genet. Newslett.* 50 (Suppl.):144. (Abstr.)
- Dettman, J. R., D. J. Jacobson and J. W. Taylor. 2003. A multilocus geneological approach to phylogenetic species recognition in the model eukaryote *Neurospora*. *Evolution* (accepted subject to revision)
- Dodge, B. O. 1932. The non-sexual and the sexual functions of microconidia of *Neurospora*. *Bull. Torrey Bot. Club* 59:347-360.
- Dodge, B. O. 1939. A new dominant lethal, *E*, in *Neurospora tetrasperma*. *Science* 89:401. (Abstr.)
- Dodge, B. O., J. R. Singleton, and A. Rolnick. 1948. Studies relative to a temporary reversion of *Neurospora tetrasperma* to an 8-spored type. *Science* 108:680. (Abstr.)
- Duran, R., and P. M. Gray. 1989. Nuclear DNA, an adjunct to morphology in fungal taxonomy. *Mycotaxon* 36:205-219.
- Freitag, M., R. L. Williams, G. O. Kothe, and E. U. Selker. 2002. A cytosine methyltransferase homologue is essential for repeat-induced point mutation in *Neurospora crassa*. *Proc. Nat. Acad. Sci. U.S.A.* 99:8802-8807.
- Gallegos, A., D. J. Jacobson, M. P. Skupski, G. Saenz, and D. O. Natvig. 1998. Recombination on the mating-type chromosome in *Neurospora tetrasperma*. *Neurospora 1998* (Asilomar Conference), p.20. (Abstr.)
- Gallegos, A., D. J. Jacobson, N. B. Raju, M. P. Skupski, and D. O. Natvig. 2000. Suppressed recombination and a pairing anomaly on the mating-type chromosome of *Neurospora tetrasperma*. *Genetics* 154:623-633.

- Gilles, A. 1953. Évolution nucléaire chez *Neurospora tetrasperma*. Proc 7th Intern. Bot. Congr. (1950), Stockholm, 432-433. (Abstr.)
- Goddard, D. R. 1935. The reversible heat activation inducing germination and increased respiration in the ascospores of *Neurospora tetrasperma*. J. Gen. Physiol. 19:45-60.
- He, C., N. de Groot, J. W. Bok, and A. J. F. Griffiths. 2000. Kaliilo plasmids are a family of four distinct members with individual global distributions across species. Curr. Genet. 37:39-44.
- Howe, H. B., M. Viswanath Reddy, and S. N. Bennett. 1974. Protoperithecial and polyol mutants of *Neurospora tetrasperma*. Genetics 77:S32. (Abstr.)
- Howe, H. B., M. Viswanath Reddy, and S. N. Bennett. 1975. Polyol non-utilizing mutants of *Neurospora tetrasperma*. Genetics 80:S43. (Abstr.)
- Ito, T., and T. Yokoyama. 1988. Microfungi from soils of bonfire sites at Mt. Daisen, Japan. Trans. Mycol. Soc. Jpn. 29:235-248.
- Jacobson, D. J. 1994. Sexual and vegetative incompatibility as factors controlling reproductive success of the pseudohomothallic fungus *Neurospora tetrasperma*. Abstracts 5th Mycol. Congr., Vancouver, p. 100.
- Jacobson, D. J. 1995. Sexual dysfunction associated with outcrossing in *Neurospora tetrasperma*, a pseudohomothallic ascomycete. Mycologia 87:604-617.
- Johnson, J. W. 1963. Genetic studies of *Neurospora tetrasperma*. M.S. Thesis. Cornell University.
- Lee, S. B. 1990. Molecular evolution of fungi: Mitochondrial inheritance in *Neurospora tetrasperma* and phylogenetics and identification of *Phytophthora* spp. using rDNA. Ph.D. thesis, University of California, Berkeley. Diss. Abstr. Intl. 52-04B:1864.
- Lee, S. B., and J. W. Taylor. 1990. Isolation of DNA from fungal mycelia and single spores. p. 282-287. In: Innis, M. A., et al. (Eds.) PCR Protocols: A Guide to Methods and Applications. Academic Press, San Diego.
- Lee, S. B., and J. W. Taylor. 1993. Uniparental inheritance and replacement of mitochondrial DNA in *Neurospora tetrasperma*. Genetics 134:1063-1075.
- Lewis, M. T., and J. F. Feldman. 1996. Evolution of the *frequency (frq)* locus in ascomycete fungi. Mol. Biol. Evol. 13:1233-1241.
- Lingappa, B. T., and A. S. Sussman. 1958. The endogenous substrates of dormant and germinating ascospores of *Neurospora tetrasperma*. Plant Physiol. 33:x. (Abstr.)
- Lowry, R. J., and A. S. Sussman. 1968. Ultrastructural changes during germination of ascospores of *Neurospora tetrasperma*. J. Gen. Microbiol. 51:403-409.
- Lumley, T. C., S. P. Abbott, and R. S. Currah. 2000. Microscopic ascomycetes isolated from rotting wood in the boreal forest. Mycotaxon 74:395-414.
- Marcinko-Kuehn, M., X. Yang, F. Debets, D. J. Jacobson and A. J. F. Griffiths. 1994. A kaliilo-like linear plasmid in Louisiana field isolates of the pseudohomothallic fungus *Neurospora tetrasperma*. Curr. Genet. 26:336-343.
- Merino, S. T. 1996. Molecular analysis of sexual development genes in two *Neurospora* species (*Neurospora crassa*, *Neurospora tetrasperma*). Ph.D. thesis, University of New Mexico. Diss. Abstr. Intl. 57-10B:6019.
- Merino, S. T., M. A. Nelson, D. J. Jacobson, and D. O. Natvig. 1996. Pseudohomothallism and evolution of the mating-type chromosome in *Neurospora tetrasperma*. Genetics 143:789-799.
- Metzenberg, R. L., and T. A. Randall. 1995. Mating type in *Neurospora* and closely related ascomycetes: Some current problems. Can. J. Bot. 73 (Suppl. 1):S251-S257.
- Nasrallah, J. B., and A. M. Srb. 1978. Immunofluorescent localization of a phase-specific protein in *Neurospora tetrasperma* perithecia. Exper. Mycol. 2:211-215.
- Natvig, D. O., D. J. Jacobson, M. P. Skupski, and A. Gallegos. 1997. Pseudohomothallism and evolution of *Neurospora tetrasperma*. 19th Fungal Genetics Conference, Asilomar, p. 6. (Abstr.)
- Nysterakis, F. 1954. Résistance de *Neurospora tetrasperma* aux fortes doses d'auxine et relation avec l'hypothèse de l'existence des "métabolites antiauxines." Compt. Rend. Acad. Sci. Paris 238:143-145.
- Nysterakis, F. 1955. Obtention de nombreuses souches de *Neurospora tetrasperma* par l'acide indol-b-acétique. Compt. Rend. Acad. Sci. Paris 241:1331-1333.
- Nysterakis, F. 1956. La sensibilité inégale de *Nectria gailigena* et *Neurospora tetrasperma* aux doses d'acides indol-b-acétique serait due à leur capacité différente de synthétiser des corps antagonistes de l'action inhibitrice de l'auxine. Compt. Rend. Acad. Sci. Paris 242:1056-1058.
- Nysterakis, F. 1956. Quelques caractéristiques des souches obtenues à partir de *Neurospora tetrasperma* soumis à l'action de l'acide indol-b-acétique. Compt. Rend. Acad. Sci. Paris 242:1354-1356.
- Nysterakis, F. 1959. Augmentation et diminution dans le temps de la croissance pondérale de *Neurospora tetrasperma* par une seule et même dose d'auxine. Compt. Rend. Acad. Sci. Paris 248:1022-1025.
- Nysterakis, F. 1960. Développement normal sans biotine exogène de quelques souches de *Neurospora tetrasperma*. Compt. Rend. Acad. Sci. Paris 250:1706-1708.
- Nysterakis, F. 1972. Importance de la souche et de la composition du milieu dans la photoinduction d'un rythme circadien de zéonations chez *Neurospora tetrasperma*. Compt. Rend. Acad. Sci. Sér. D. 274:1667-1670.
- Ott, M., and J. Ardizzi. 1989. The effects of griseofulvin on the vegetative growth and sexual phase development of the fungus *Neurospora tetrasperma* Dodge. J. Pennsylvania Acad. Sci. 63:181-185.
- Pandit, A., and R. Maheshwari. 1996. Life history of *Neurospora intermedia* in a sugar cane field. J. Bioscience 21:57-79.
- Perkins, D. D., 1994 *Neurospora tetrasperma* bibliography. Fungal Genet. Newslett. 41:72-78.
- Perkins, D. D., 1994 *Neurospora tetrasperma* helper strains using the gene *E*. Fungal Genet. Newslett. 41:71.
- Plesofsky-Vig, N., A. Paulson, E. P. Hill, L. Glaser, and R. Brambl. 1992. Heat shock gene expression in germinating ascospores of *Neurospora tetrasperma*. FEMS Microbiol. Letters 90:117-122.
- Pöggeler, S. 1999. Phylogenetic relationships between mating-type sequences from homothallic and heterothallic ascomycetes. Curr. Genet 36:222-231.

- Powell, A., 2001. Non-self recognition and population biology in *Neurospora tetrasperma*, a pseudohomothallic ascomycete. Ph.D. thesis, University of New Mexico. Diss. Abstr. Intl. 62-06B:2589.
- Powell, A. J., G. S. Saenz, J. G. Stam, D. J. Jacobson, and D. O. Natvig. 1999. Allelic diversity at the *het-c* locus of *Neurospora tetrasperma* poses an evolutionary dilemma. Fungal Genet. Newslett. 46 (Suppl.):87. (Abstr.)
- Powell, A. J., D. J. Jacobson, and D. O. Natvig. 2001. Allelic diversity at the *het-c* locus of *Neurospora tetrasperma* confirms outcrossing in nature and poses an evolutionary dilemma for pseudohomothallic ascomycetes. J. Mol. Evol. 52:94-102.
- Powell, A. J., D. J. Jacobson, L. Salter, and D. O. Natvig. 2003. Variation among natural isolates of *Neurospora* on small spatial scales. Mycologia (in press).
- Raju, N. B., and D. J. Jacobson. 1999. Incomplete chromosome pairing is correlated with a recombination block on the mating-type chromosome of *Neurospora tetrasperma*. Fungal Genet. Newslett. 46 (Suppl.):87. (Abstr.)
- Raju, N. B., and D. D. Perkins. 1994. Diverse programs of ascus development in pseudohomothallic species of *Neurospora*, *Gelasinospora* and *Podospira*. Develop. Genet. 15:104-118.
- Raju, N. B., and D. D. Perkins. 1999. Programmed ascospore death in the homothallic ascomycete *Coniochaeta tetraspora*. Fungal Genet. Newslett. 46 (Suppl.):88. (Abstr.)
- Raju, N. B., and D. D. Perkins. 2000. Programmed ascospore death in the homothallic ascomycete *Coniochaeta tetraspora*. Fungal Genet. Biol. 30:213-221.
- Raju, N. B., and A. G. Burk. 2001. The genetic basis of abnormal ascospore morphology in *Neurospora*. Fungal Genet. Newslett. 48 (Suppl.):142. (Abstr.)
- Randall, T. A., and R. L. Metzenberg. 1995. Species-specific and mating type-specific DNA regions adjacent to mating type idiomorphs in the genus *Neurospora*. Genetics 140:119-136.
- J.P. Ramussen, A.H. Taylor, L.-J. Ma, S. Purcell, F. Kempken, and D.E.A Catcheside. 2003. *Guest*, a transposable element belonging to the Tc1/mariner superfamily is an ancient invader of *Neurospora* genomes. Fungal Genet. Biol. (Submitted)
- Saenz, G. S., J. G. Stam, D. J. Jacobson, and D. O. Natvig. 2001. Heteroallelism at the *het-c* locus contributes to sexual dysfunction in outcrossed strains of *Neurospora tetrasperma*. Fungal Genet. Biol. 34:123-129.
- Saenz, G. S., D. J. Jacobson, W. D. Dvorachek, and D. O. Natvig. 2003. Sympatric biological and phylogenetic species among pseudohomothallic isolates identified as *Neurospora tetrasperma*. Fungal Genet. Newslett. 50 (Suppl.):144. (Abstr.)
- Shiu, P. K. T., 2000. Mating-type-associated vegetative incompatibility in *Neurospora crassa*. Ph.D. thesis, University of British Columbia. Diss. Abstr. Intl. 62-01B:29.
- Shiu, P. K. T., and N. L. Glass. 2000. Cell and nuclear recognition mechanisms mediated by mating type in filamentous ascomycetes. Curr. Opin. Microbiol. 3:183-188.
- Shiu, P. K. T., N. B. Raju, D. Zickler, and R. L. Metzenberg. 2001. Meiotic silencing by unpaired DNA. Cell 107:905-916.
- Skupski, M. P., D. A. Jackson, and D. O. Natvig. 1997. Phylogenetic analysis of heterothallic *Neurospora* species. Fungal Genet. Biol. 21:152-161.
- Taylor, J. W., G. May, and D. O. Natvig. 1983. Homology among mitochondrial plasmids of *Neurospora tetrasperma* and *Neurospora intermedia*. Mycol. Soc. Am. Newslett. 34:37.
- Thompson-Coffe, C., G. Borioli, D. Zickler, and A. L. Rosa. 1999. Pyruvate decarboxylase filaments are associated with the cortical cytoskeleton of asci and spores over the sexual cycle of filamentous ascomycetes. Fungal. Genet. Biol. 26:71-80.
- Turian, G. and M. Viswanath-Reddy. 1971. Metabolic and ultrastructural aspects of sexual differentiation in *Allomyces* and *Neurospora*. J. Indian Bot. Sci., Golden Jubilee Vol. 50A:78-89.
- Turner, B. C., and D. D. Perkins. 2001. *Neurospora* from natural populations: A global study. Fungal Genet. Biol. 32:67-92.
- Viswanath-Reddy, M. 1972. Aspects of protoperithecial morphogenesis in *Neurospora*. Thèse No. 1590, Université de Genève.
- Viswanath-Reddy, M., and G. Turian. 1972. Temperature-induced synchronous differentiation of ascogonia in *Neurospora*. Experientia 28:99-100.
- Weaver, M. A. 1971. A quantitative study of heterokaryosis and hybridization in *Neurospora tetrasperma*. M. Sc. Thesis, Univ. of Birmingham, U.K. 54 p.