

Neurospora tetrasperma bibliography

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Dodge's discoveries of pseudohomothallism and of heterokaryosis were both accomplished using *Neurospora tetrasperma*, which remained his favorite species. In the decades following Dodge's work, studies involving *N. tetrasperma* were continued in only a few laboratories, notably those of Alfred Sussman, Branch Howe, Adrian Srb, and Robert Metzenberg. The species has now begun to receive increased attention, both for comparative molecular-evolutionary studies and for studies that take advantage of certain unique features. Nuclear, mitochondrial, and plasmid DNA's have been used to explore phylogenetic relationships. Work is progressing on ascus development, recombination, vegetative incompatibility, and mating type.

The following list is a first attempt to bring together the scattered literature on *N. tetrasperma*. (A few entries are also included that deal with pseudohomothallism generally.) The search has not been exhaustive. Please call any nontrivial omissions to my attention.

Neurospora tetrasperma Bibliography

Ardizzi, J. P., 1983 A cytological and genetic study of factors affecting ascospore number in *Neurospora tetrasperma*. Ph.D. thesis, Cornell University, 224 pp. Diss. Abstr. Intern. 44:(1984).

Arganoza, M. T., J. Min, Z. Hu, and R. A. Akins, 1993 A survey of mitochondrial plasmids among *Neurospora* species reveals new homology groups and variant forms of plasmids and dispersion patterns that indicate frequent plasmid horizontal mobility in nature. *Curr. Genet.* (Submitted).

Bennett, S. N. 1975 Genetic studies of protoperithecial development and polyol utilization in *Neurospora*. Ph.D. thesis, University of Georgia. 68 p.

Bennett, S. N., and H. B. Howe, Jr., 1980 A quantitative study of protoperithecial and perithecial development in *Neurospora tetrasperma*. *Trans. Br. Mycol. Soc.* 74:51-59.

Braver, N. B., 1952 Genetic segregations in *Neurospora tetrasperma*. M.S. thesis. University of Missouri, Columbia. 71 p.

Calhoun, F., 1968 Nuclear movement during development of four-spored and eight-spored asci in *Neurospora tetrasperma*. M.S. thesis, University of Georgia, Athens. 48p.

Calhoun, F., 1971 Inhibition of perithecial development in *Neurospora tetrasperma*. Ph.D. thesis, University of Georgia, Athens. 71 p.

Calhoun, F., and H. B. Howe, Jr., 1968 Genetic analysis of eight-spored asci produced by gene E in *Neurospora tetrasperma*. *Genetics* 60:449-459.

- Calhoun, F., and H. B. Howe, Jr., 1968 Ascospore linearity in the four-spored ascus of *Neurospora tetrasperma*. *Genetica* 39:245-249.
- Calhoun, F., and H. B. Howe, Jr., 1972 A method for quantifying small amounts of glucose or glycerol in agar culture media. Gas-liquid chromatography of trimethylsilyl derivatives with reduced pyridine tailing. *J. Chromatographic Sci.* 10:639-641.
- Calhoun, F., and H. B. Howe, Jr., 1972 Nutrient-dependent inhibition of perithecial development due to sequential crosses on the same mycelium of *Neurospora tetrasperma*. *Planta* 108:289-302.
- Calhoun, F., and H. B. Howe, Jr., 1982 Alpha-beta glucose utilization by *Neurospora tetrasperma*. *Microbiologica* 5:53-56.
- Cheng, S.-C., 1954 Studies of the terminal oxidases in *Neurospora tetrasperma* and the phenomenon of heat activation of its ascospores. Ph.D. thesis, University of Pennsylvania., 90 p. *Diss. Abstr.* 14:757.
- Cheng, S.-C., 1954 The terminal respiratory enzymes in *Neurospora tetrasperma*. *Plant Physiol.* 29:458-467.
- Colson, B., 1934 The cytology and morphology of *Neurospora tetrasperma* Dodge. *Ann. Bot.* 48:211-225.
- Cutter, V. M., Jr., 1946 Observations on the chromosomal morphology of *Neurospora tetrasperma* with the acetocarmine smear technique. (Abstr.) *Am. J. Bot.* 33:217.
- Dodge, B. O., 1927 Nuclear phenomena associated with heterothallism and homothallism in the ascomycete *Neurospora*. *J. Agr. Res.* 35:289-305.
- Dodge, B. O., 1928 Production of fertile hybrids in the ascomycete *Neurospora*. *J. Agr. Res.* 36:1-14. Dodge, B. O., 1928 Spore formation in asci with fewer than eight spores. *Mycologia* 20:18-21.
- Dodge, B. O., 1928 Unisexual conidia from bi-sexual mycelia. *Mycologia* 20:226-234.
- Dodge, B. O., 1929 Nature of giant spores and segregation of sex factors in *Neurospora*. *Mycologia* 21:222-231.
- Dodge, B. O., 1931 Inheritance of the albinistic nonconidial character in interspecific hybrids in *Neurospora*. *Mycologia* 23:1-50.
- Dodge, B. O., 1932 Crossing hermaphroditic races of *Neurospora*. *Mycologia* 24:7-13.
- Dodge, B. O., 1934 A lethal for ascus abortion in *Neurospora*. *Mycologia* 26:360-376.

- Dodge, B. O., 1935 The mechanics of sexual reproduction in *Neurospora*. *Mycologia* 27:418-438.
- Dodge, B. O., 1935 A recessive factor lethal for ascospore formation in *Neurospora*. *Bull. Torrey Botan. Club* 62:117-128.
- Dodge, B. O., 1936 Interspecific hybrids involving factors for ascus abortion in *Neurospora*. *Am. J. Bot.* 23:555-561.
- Dodge, B. O., 1938 The combined effects of the dominant and the recessive lethals for ascus abortion in *Neurospora*. *Am. J. Bot.* 25:156-166.
- Dodge, B. O., 1939 The life cycle of *Neurospora tetrasperma*. *J. Hered.* 30:474, 495.
- Dodge, B. O., 1939 A new dominant lethal in *Neurospora*. The E locus in *N. tetrasperma*. *J. Hered.* 30:467-474.
- Dodge, B. O., 1942 Heterokaryotic vigor in *Neurospora*. *Bull. Torrey Botan. Club* 69:75-91.
- Dodge, B. O., 1943 A study of the inheritance of the factors for heterocaryotic vigor in *Neurospora tetrasperma*. *Yrbk. Am. Phil. Soc.* 1942:148-150.
- Dodge, B. O., 1946 Self-sterility in "bisexual" heterocaryons of *Neurospora*. *Bull. Torrey Botan. Club* 73:410-416.
- Dodge, B. O., 1949 Taxonomic and genetic features bearing on the origin of *Neurospora tetrasperma*. (Abstr.) *Bull. Torrey Botan. Club* 76:364-365.
- Dodge, B. O., 1955 Phenocopies in *Neurospora*. *J. Hered.* 46:2-8.
- Dodge, B. O., 1955 Further studies relating to dominance and ascus abortion in *Neurospora tetrasperma*. *Mycologia* 47:494-505.
- Dodge, B. O., 1956 New hybrid asci obtained by intercrossing lethal mutant races of *Neurospora tetrasperma*. *Compt. Rend. Trav. Lab. Carlsberg, Ser. Physiol.* 26:51-69.
- Dodge, B. O., 1957 Rib formation in ascospores of *Neurospora* and questions of terminology. *Bull. Torrey Botan. Club* 84:182-188.
- Dodge, B. O., 1957 Oil drops and de Bary "bubbles" in ascospores. *Bull. Torrey Botan. Club* 84:431-441.
- Dodge, B. O., and A. Appel, 1944 Breeding *Neurospora* from aborted asci. *Bull. Torrey Botan. Club* 71:199-206.

Dodge, B. O., M. B. Schmitt, and A. Appel, 1945 Inheritance of factors involved in one type of heterokaryotic vigor. *Proc. Am. Phil. Soc.* 89:575-589.

Dodge, B. O., and B. Seaver, 1937 The combined effects of the dominant and recessive lethals for ascus abortion in *Neurospora*. (Abstr.). *Am. J. Bot.* 24:731.

Dodge, B. O., J. R. Singleton, and A. Rolnick, 1950 Studies on lethal E gene in *Neurospora tetrasperma*, including chromosome counts also in races of *N. sitophila*. *Proc. Am. Philos. Soc.* 94:38-52.

Dowding, E. S., and E. H. Gowan, 1942 The migration of fungal nuclei in an electric field. *Can. J. Res.* 20:92-100.

Eilers, F. I., 1969 Studies on furfural activation of *Neurospora tetrasperma* ascospores. Ph.D. thesis, University of Michigan. 110 p. Diss. Abstr. 30:80-81-B.

Eilers, F. I., and A. S. Sussman, 1970 Furfural uptake by *Neurospora* ascospores. *Planta* 94:265-272.

Eilers, E.I., and A. S. Sussman, 1970 Conversion of furfural to furoic acid and furfuryl alcohol by *Neurospora* ascospores. *Planta* 94:253-264.

Eilers, E.I., H. Ikuma, and A. S. Sussman, 1970 Changes in metabolic intermediates during activation of *Neurospora* ascospores. *Can. J. Microbiol.* 16:1351-1356.

Eilers, F. I., J. Allen, E. P. Hill, and A. S. Sussman, 1964 Localization of disaccharidases in extracts of *Neurospora* after electrophoresis in polyacrylamide gels. *J. Histochem. Cytochem.* 12:448-450.

Elliot, T. J., and M. P. Challen, 1983 Genetic ratios in secondarily homothallic basidiomycetes. *Exp. Mycol.* 7:170-174.

Fincham, J. R. S., 1949 Chromosome numbers in species of *Neurospora*. *Ann. Bot.* 13:23-28.

Geng, A. M., and A. M. Srb, 1976 Phenocopies of *Neurospora* mutants induced by biotin deficiency. *Neurospora Newsl.* 23:25-26.

Gilles, A., 1950 Evolution nucléaire chez *Neurospora tetrasperma*. *La Cellule* 53:395-415 (plus 3 plates).

Girbardt, M., 1952 Zur Frage der Fertilität bei *Neurospora crassa* und *Neurospora tetrasperma* in Abhängigkeit von Aussenfaktoren. *Flora* 139:477-525.

Goddard, D. R., 1935 The reversible heat activation inducing germination and increased respiration in the ascospores of *Neurospora tetrasperma*. *J. Gen. Physiol.* 19:4560.

- Goddard, D. R., 1939 The reversible heat activation of respiration in *Neurospora*. Cold Spring Harbor Symp. Quant. Biol. 7:362-376.
- Goddard, D. R., 1939 Reversible heat activation of respiration, fermentation and germination in the spores of the fungus, *Neurospora*. (Abstr.) Proc. 3rd Intern. Cong. Microbiol. 229-230 (1940).
- Goddard, D. R., and P. E. Smith, 1938 Respiratory block in the dormant spores of *Neurospora tetrasperma*. Plant Physiol. 13:241-264.
- Goodspeed, T. H., 1942 Experimental induction of heritable and other alterations in the fungus *Neurospora tetrasperma*. Proc. Am. Sci. Cong., 8th, Washington, D.C., 1940, 3:223-229.
- Goodspeed, T. H., and W. S. Malloch, 1937 Temperature, X-ray, and neutron studies on *Neurospora*. (Abstr.) Genetics 23:148 (1938).
- Goodspeed, T. H., and W. S. Malloch, 1939 The effects of heat and irradiation upon *Neurospora tetrasperma*. (Abstr.) 3rd Intern. Cong. Microbiol., 1939, Abstr. Commun.: 224-225; and Rept. Proc.: 538-539 (1940).
- Haysman, P., 1966 Linkage groups and centromere distances in *Neurospora tetrasperma*. M.S. thesis. University of Georgia, Athens. 68 p.
- Hill, E. P., V. N. Plesofsky, A. Paulson, and R. Bramble, 1992 Respiration and gene expression in germinating ascospores of *Neurospora tetrasperma*. FEMS Microbiol. Lett. 69:111-115.
- Holton, R. W., 1958 Pyruvate metabolism and electron transport in *Neurospora tetrasperma*. Ph.D. thesis, University of Michigan, Ann Arbor. 124 pp., Diss. Abstr. 19:1182-1183 (1959).
- Holton, R. W., 1960 Studies on pyruvate metabolism and cytochrome system in *Neurospora tetrasperma*. Plant Physiol. 35:757-766.
- Howe, H. B., Jr., 1961 Biochemical mutants of *Neurospora tetrasperma*. (Abstr.). Genetics 46:871-872.
- Howe, H. B., Jr., 1962 A gene decreasing ascospore yield in *Neurospora tetrasperma*. (Abstr.). Genetics 47:960-961.
- Howe, H. B., Jr., 1963 Markers and centromere distances in *Neurospora tetrasperma*. Genetics 48:121-131.
- Howe, H. B., Jr., 1963 Measuring fertility by genetically controlled ascospore yield in *Neurospora tetrasperma*. Can. J. Genet. Cytol. 5:180-188.
- Howe, H. B., Jr., 1964 Sources of error in genetic analysis in *Neurospora tetrasperma*. Genetics 50:181-189.

Howe, H. B., Jr., 1964 Vegetative traits associated with mating type in *Neurospora tetrasperma*. *Mycologia* 56:519-525.

Howe, H. B., Jr., and P. Haysman, 1966 Linkage group establishment in *Neurospora tetrasperma* by interspecific hybridization with *N. crassa*. *Genetics* 54:293-302.

Howe, H. B., Jr., and V. Prakash, 1969 A regulatory system controlling inhibition in the sexual cycle of *Neurospora*. *Can. J. Genet. Cytol.* 11:689-705.

Howe, H. B., Jr., and V. Prakash, 1969 Translocation of regulatory activity controlling fertility in *Neurospora*. (Abstr.). *Genetics* 61:s28.

Howe, H. B., Jr., M. Viswanath-Reddy, and S. N. Bennett, 1974 Protoperithecial and polyol mutants of *Neurospora tetrasperma*. (Abstr.). *Genetics* 77:s32.

Howe, H. B., Jr., M. Viswanath-Reddy, and S. N. Bennett, 1975 Polyol non-utilizing mutants of *Neurospora tetrasperma*. (Abstr.). *Genetics* 80:s43.

Hung, C.-Y., 1972 Notes on meiosis in *Neurospora tetrasperma*. *Mycologia* 64:631-634.

Jacobson, D. J., 1992 Control of mating type heterokaryon incompatibility by the *tol* gene in *Neurospora crassa* and *Neurospora tetrasperma*. *Genome* 35:347-353.

Johnson, J. W., and A. M. Srb, 1962 The genetic production of small, homokaryotic spores in *Neurospora tetrasperma*. *Neurospora Newsl.* 2:7-8.

Kirby, G. C., 1984 Breeding systems and heterozygosity in populations of tetrad-forming fungi. *Heredity* 52:35-41.

Langton, F. A., and T. J. Elliot, 1980 Genetics of secondarily homothallic basidiomycetes. *Heredity* 45:99-106.

Lee, S. B., and J. W. Taylor, 1993 Uniparental inheritance and replacement of mitochondrial DNA in *Neurospora tetrasperma*. *Genetics* 134:1063-1075.

Lindegren, C. C., 1932 The genetics of *Neurospora*. II. Segregation of the sex factors in asci of *N. crassa*, *N. sitophila*, and *N. tetrasperma*. *Bull. Torrey Botan. Club* 59:119-138.

Lowry, R. J., and A. S. Sussman, 1956 Physiology of the cell surface of *Neurospora* ascospores. II. Interference with dye adsorption by polymyxin. *Arch. Biochem. Biophys.* 62:113-124.

Lowry, R. J., and A. S. Sussman, 1958 Wall structure of ascospores of *Neurospora tetrasperma*. *Am. J. Bot.* 45:397-403.

Lowry, R. J., A. S. Sussman, and B. von B"vener, 1957 Physiology of the cell surface of *Neurospora* ascospores. III. Distinction between the adsorptive and entrance phases of cation uptake. *Mycologia* 49:609-622.

Mahoney, D. P., L. H. Huang, and M. P. Backus, 1969 New homothallic *Neurosporas* from tropical soils. *Mycologia* 61:264-272.

Malloch, W. S., 1940 The artificial induction of mutations in *Neurospora tetrasperma*. Ph.D. thesis, University of California, Berkeley. 412 pp.

Malloch, W. S., 1941 The association of different alterations in self-fertile X-rayed derivatives of *Neurospora tetrasperma*. *Mycologia* 33:540-554.

Malloch, W. S., 1942 The inheritance of induced mutations in *Neurospora tetrasperma*. *Mycologia* 34:325-347.

Martens, P., 1946 Cycle de d,veloppement et sexualit, des ascomycŠtes. *Cellule* 50:123-310.

Martens, P., and A. Gilles, 1949 La r,partition nucl,aire dans le myc,lium de *Neurospora tetrasperma* et l'interpr,tation clausenienne. *Botaniste* 34:309-314.

Metzenberg, R. L., 1993 Do perithecia smell perithecia? *Fungal Genet. Newsl.* 40:83.

Metzenberg, R. L., and S. K. Ahlgren, 1969 Hybrid strains useful in transferring genes from one species of *Neurospora* to another. *Neurospora Newsl.* 15:9-10.

Metzenberg, R. L., and S. K. Ahlgren, 1969 Variation in the genus *Neurospora* of the properties and control of aryl sulfatase. *Neurospora Newsl.* 15:6.

Metzenberg, R. L., and S. K. Ahlgren, 1971 Structural and regulatory control of aryl sulfatase in *Neurospora*: The use of interspecific differences in structural genes. *Genetics* 68:369-381.

Metzenberg, R. L., and S. K. Ahlgren, 1973 Behaviour of *Neurospora tetrasperma* mating type genes introgressed into *N. crassa*. *Can. J. Genet. Cytol.* 15:571-567.

Metzenberg, R. L., and N. L. Glass, 1990 Mating type and mating strategies in *Neurospora*. *BioEssays* 12:53-59.

M"ller, A., 1901 *Phycomyceten und Ascomyceten. Untersuchungen aus Brasilien.* 319 pp. (Vol. 9 of *Botanische Mittheilungen aus den Tropen*, edited by A. F. W. Schimper.) Fischer, Jena.

Moreau, F., 1938 Nouvelles observations sur la formation hormonale des p,rithŠces chez les *Neurospora*. *Compt. Rend. Acad. Sci. Paris* 206:1315-1316.

Moreau, F., and Mme. Moreau, 1930 Le d,veloppement du p,rithŠce chez quelques *AscomycŠtes*. *Rev. G,n. Botan.* 42:65-98.

Moreau, F., and Mme. Moreau, 1938 Existe-t-il des p₁ rith²ŝces hybrides chez les Ascomyc²ŝtes? Bull. Soc. Bot. France 85:316-328.

Moreau, F., and C. Moruzi, 1934 Sur les r₁ actions sexuelles entre ascomyc²ŝtes d'esp²ŝces diff₁rentes. Comp. Rend. Acad. Sci. Paris 198::1533-1535.

Natvig, D. O., D. A. Jackson, and J. W. Taylor, 1987 Random-fragment hybridization analysis of evolution in the genus *Neurospora*: The status of four-spored strains. *Evolution* 41:1003-1021.

Natvig, D. O., G. May, and J. W. Taylor, 1984 Distribution and evolutionary significance of mitochondrial plasmids in *Neurospora* spp. *J. Bacteriol.* 159:288-293.

Novak, D. R., and A. M. Srb, 1969 A high fertility factor in *Neurospora tetrasperma*. (Abstr.). *Genetics* 61:s44.

Novak, D. R., and A. M. Srb, 1969 Spore and ascus mutants in *N. tetrasperma*. *Neurospora Newsl.* 15:23.

Novak, D. R., and A. M. Srb, 1971 Genetic alterations of ascus development in *Neurospora tetrasperma*. *Genetics* 67:189-199.

Novak, D. R., and A. M. Srb, 1971 Means for the recovery of homokaryotic segregants following sexual crosses in *Neurospora tetrasperma*. *Genetics* 67:201-208.

Novak, D. R., and A. M. Srb, 1971 A developmental mutant that affects ascospore delimitation in *Neurospora tetrasperma*. *Can. J. Genet. Cytol.* 13:1-8.

Novak, D. R., and A. M. Srb, 1973 A dominant round spore mutant in *Neurospora tetrasperma* and its implications for ascospore development. *Can. J. Genet. Cytol.* 15:685-693.

Nysterakis, F., S. Jerebzoŝ, and S. Jerebzoŝ-Quintin, 1968 Rhythms de quelques souches de *Neurospora tetrasperma* Shear et Dodge. *Comp. Rend. Acad. Sci. S₁r, D* 266:788-791.

Pateman, J. A., 1962 Evolution in the genus *Neurospora*. pp. 203-213 in *The Evolution of Living Organisms*, edited by G. W. Leeper). Melbourne University Press.

Perkins, D. D., 1991 Transfer of genes and translocations from *Neurospora crassa* to *N. tetrasperma*. *Fungal Genet. Newsl.* 38:84.

Perkins, D. D., 1994 *Neurospora tetrasperma* helper strains using the E gene. *Fungal Genet. Newsl.* 41:

Perkins, D. D., and V. C. Pollard, 1986 Linear growth rates of strains representing ten *Neurospora* species. *Fungal Genet. Newsl.* 33:41-43.

- Perkins, D. D., and B. C. Turner, 1988 *Neurospora* from natural populations: Toward the population biology of a haploid eukaryote. *Exp. Mycol.* 12:91-131.
- Perkins, D. D., B. C. Turner, and E. G. Barry, 1976 Strains of *Neurospora* collected from nature. *Evolution* 30:281-313.
- Pincheira, G., 1963 Normal and abnormal spindle behavior in *Neurospora tetrasperma*. M.S. thesis, Cornell University, Ithaca, N.Y. 62 p.
- Pincheira, G., 1967 Studies of ascus differentiation in wild types and mutants of *Neurospora*. Ph.D. thesis, Cornell University, Ithaca, N.Y. 258 p.
- Pincheira, G., and A. M. Srb, 1969 Genetic variation in the orientation of nuclear spindles during development of asci in *Neurospora*. *Am. J. Bot.* 56:846-852.
- Plesofsky, V. N., A. Paulson, E. P. Hill, L. Glasser, and R. Brambl, 1992 Heat shock gene expression in germinating ascospores of *Neurospora tetrasperma*. *FEMS Microbiol. Lett.* 69:117-122.
- Raju, N. B., 1992 Functional heterothallism resulting from homokaryotic conidia and ascospores in *Neurospora tetrasperma*. *Mycol. Res.* 96:103-116.
- Raju, N. B., and D. D. Perkins, 1991 Expression of meiotic drive elements Spore killer-2 and Spore killer-3 in asci of *Neurospora tetrasperma*. *Genetics* 129:25-37.
- 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.
- Ramsbottom, J., and F. L. Stephens, 1935 *Neurospora* in Britain. *Trans. Brit. Mycol. Soc.* 19:215-220.
- Sansome, E. R., 1946 Maintenance of heterozygosity in a homothallic species of the *Neurospora tetrasperma* type. *Nature* 157:484.
- Schnefeldt, M., 1935 Entwicklungsgeschichtliche Untersuchungen bei *Neurospora tetrasperma* und *Neurospora sitophila*. *Zeits. Induktive Abstammungs-Vererbungslehre* 69:193-209.
- Seaver, B., 1937 Additional data on sex reactions in monospore races of *Neurospora tetrasperma*. *Mycologia* 29:258-265.
- Shear, G. L., and B. O. Dodge, 1927 Life histories and heterothallism of the red bread-mold fungi of the *Monilia sitophila* group. *J. Agr. Res.* 34:1019-1041.
- Srb, A. M., M. Basl, M. Bobst, and J. Leary, 1973 Mutations in *Neurospora crassa* affecting ascus and ascospore development. *J. Hered.* 64:242-246.

Srb, A. M., J. B. Nasrallah, and M. Basl, 1974 Genetic control of the development of the sexual reproductive apparatus of *Neurospora*. *Brookhaven Symp. Biol.* 25:40-50.

Sussman, A. S., 1953. The effect of furfural upon the germination and respiration of ascospores of *Neurospora tetrasperma*. *Am. J. Bot.* 40:401-404.

Sussman, A. S., 1953. The effect of heterocyclic and other compounds upon the germination of ascospores of *Neurospora tetrasperma*. *J. Gen. Microbiol.* 8:211-216.

Sussman, A. S., 1954 Changes in the permeability of ascospores of *Neurospora tetrasperma*. *J. Gen. Physiol.* 38:59-77.

Sussman, A. S., 1954 The sensitisation of ascospores to chemical activators by heat treatment. *Mycologia* 46:143-150.

Sussman, A. S., 1957 Physiological and genetic adaptability in the fungi. *Mycologia* 49:29-43.

Sussman, A. S., 1961. The role of trehalose in the activation of dormant ascospores of *Neurospora*. *Quart. Rev. Biol.* 36:109-116.

Sussman, A. S., 1966 Types of dormancy as represented by conidia and ascospores of *Neurospora*. *Proc. Symp. Colston Res. Soc.* 18:235-257.

Sussman, A. S., 1966 Dormancy and spore germination. pp. 733-764 in *The Fungi: An Advanced Treatise*, Vol. 2, edited by G. C. Ainsworth and A. S. Sussman. Academic Press, New York.

Sussman, A. S., 1976 Activators of fungal spore germination. pp. 101-139, in *The Fungal Spore: Form and Function*, edited by D. J. Weber and W. M. Hess. Wiley, New York.

Sussman, A. S., 1992 Procedure for mass-production of *Neurospora tetrasperma* ascospores. *Fungal Genet. Newsl.* 39:84-85.

Sussman, A. S., and B. T. Lingappa, 1959 Role of trehalase in ascospores of *Neurospora tetrasperma*. *Science* 130:1343.

Sussman, A. S., and R. J. Lowry, 1955 Physiology of the cell surface of *Neurospora* ascospores I. Cation binding properties of the cell surface. *J. Bacteriol.* 70:675-635.

Sussman, A., and C. Sun, 1960 Reversible deactivation of *Neurospora* ascospores by low temperature. *Am. J. Bot.* 47:589-593.

Sussman, A. S., J. R. Distler, and J. S. Krakow, 1956 Metabolic aspects of *Neurospora* activation and germination. *Plant Physiol.* 31:126-135.

- Sussman, A. S., R. J. Lowry, and E. Tyrrell, 1959 Activation of *Neurospora* ascospores by organic solvents and furans. *Mycologia* 51:237-247.
- Tai, F. L., 1935 Two new species of *Neurospora*. *Mycologia* 27:328-330.
- Taylor, J. W., and D. O. Natvig, 1989 Mitochondrial DNA and evolution of heterothallic and pseudohomothallic *Neurospora* species. *Mycol. Res.* 93:257-272.
- Taylor J. W., B. D. Smolich, and G. May, 1985 An evolutionary comparison of homologous mitochondrial plasmid DNAs from three *Neurospora* species. *Mol. Gen. Genet.* 201:161-167.
- Topper, V. M., 1972 A cytological study of the sexual cycle of *Neurospora tetrasperma*. M.S. thesis, Cornell University, Ithaca, N.Y.
- Totten, R. E., 1967 Nuclear orientation in the ascospores of *Neurospora tetrasperma*. M.S. thesis, University of Georgia, Athens. 43p. Totten, R. E., and H. B. Howe, Jr., 1967 Nuclear orientation in the ascospores of *Neurospora tetrasperma*. *Genetics* 57:53-63.
- Tresner, H. D., 1949 Conidial fertilization and associated phenomena in *Neurospora tetrasperma*. M.S. thesis, University of Wisconsin, Madison. 43 pp.
- Turian, G., 1966 The genesis of macroconidia of *Neurospora*. *Colston Papers* 18:61-66.
- Turian, G., 1966 Quelques facteurs externes controlant la morphogenèse peritheciale et la porphyrie du *Neurospora tetrasperma*. *Rev. Roum. Biol. Botan.* 11:235-241.
- Turian, G., J. Seydoux, and D. Volkmann, 1962 Activité isocitratase et type de sporulation chez *Neurospora tetrasperma* et *N. sitophila*, souche normale et mutant microconidien. *Pathol. Microbiol.* 25:737-751.
- Uber, F. M., and D. R. Goddard, 1934 Influence of death criteria on the X-ray survival curves of the fungus, *Neurospora*. *J. Gen. Physiol.* 17:577-590. Viswanath-Reddy, M., S. N. Bennett, and H. B. Howe, 1977 Characterization of glycerol non-utilizing and protoperithecial mutants of *Neurospora*. *Mol. Gen. Genet.* 153:29-38.
- Viswanath-Reddy, M., and G. Turian, 1975 Physiological changes during protoperithecial differentiation in *Neurospora tetrasperma*. *Physiologia Plantarum* 35:166-174.
- Whitehouse, H. L. K., 1949 Heterothallism and sex in the fungi. *Biol. Rev.* 24:411-447.
- Zakharov, I. A., 1968 [Homozygosity in intratetrad and intraoctad fertilization in fungi] (in Russian). *Genetika* 4:98-105. (English translation in *Soviet Genet.* 4:636-642.)
- Zakharov, I. A., 1986 [Some principles of the gene localization in eukaryotic chromosomes. Formulation of the problem and analysis of nonrandom localization of the mating-type loci in

some fungi.] (in Russian). Genetika 22:2620-2624. (English translation in Soviet Genet. 22:1415- 1419.)