

Emerson, S. Genetic nature of the slime variant of Neurospora crassa.

At the time cultures of slime were supplied to the Fungal Genetics Stock Center (see Neurospora Information Conference, NAS-NRC Pub. 950, 1962) little was known of the

genetic basis of the slime phenotype except that it separated cleanly together with parental genes in isolations from heterocaryons with hyphal phenotypes. It is now known that three independently inherited characters are essential to, yet insufficient for, the persistent expression of the slime phenotype. The characters involved are: osmotic (os, linkage group IR, which was present in the irradiated parent of slime), fuzzy (fz, linkage group unknown, a morphological mutant), and spontaneous germination (sg, linkage group unknown, germinates without heat activation, has extremely poor surface growth habit). Ascospore isolates carrying os, fz, and sg usually germinate by slime flows instead of germ tubes but eventually change to a miserable hyphal growth. From some os fz sg isolates it has been possible by vegetative selection to recover strains with persistent slime phenotypes. No genetic difference has yet been established between the hyphal and plasmodioid forms of such os fz sg isolates. A fuller account with descriptions of the unit characters is scheduled for publication in No. 3, Vol. 34 (1963/64) of Genetica. (Supported in part by an

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