

## Genetic nature of the slime variant of *Neurospora crassa*

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### Abstract

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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 Con-  
ference, 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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