

Further notes on nomenclature: Extrachromosomal mutants.

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Abstract

Nomenclature of extrachromosomal mutants

Barratt, R. W. Further notes on nomenclature:

Extrachromosomal mutants.

In *Neurospora* Newsletter #8 (p. 23-24) Barratt and Perkins summarized the terminology and nomenclature used by most *Neurospora* workers. Mutants not considered were those which exhibit extrachromosomal inheritance.

At the recent meeting of the Genetics Society of America at Stanford, a group of us (Dow Woodward, Morris Grindle, Thad Pittenger, James Wilson and myself) met informally to discuss problems of terminology for such mutant strains. Extrachromosomal strains are characterized by 1) differences in progeny from reciprocal crosses with normal strains with respect to the inheritance of a particular trait (the trait is maternally inherited and rarely, if ever, appears among the progeny from a cross in which the extrachromosomal mutant was the paternal parent) and 2) by transmission of the trait to other strains via heterocaryons. To date they have been named by various symbols such as mi for maternal inheritance, SG for initial slow growth of cultures derived from ascospores or conidia, abn and stp.

Since rigorous tests for establishing the identity of such strains are lacking, it was agreed that in future stock lists published by the Fungal Genetics Stock Center these mutants should be separated from those of nuclear gene mutations and listed under a new category. Further, it was agreed that, for the present, the extrachromosomal mutants determined by each research group should continue to be listed with a distinctive symbol such as mi (Mitchell), SG (Srb), etc., recognizing that some of these strains may ultimately be proven to carry identical extrachromosomal mutations. Experience of all workers is that such strains are markedly influenced by the genetic background. Further, when maintained over long periods of time by vegetative transfer, there tends to be selection for nuclear mutations which suppress or modify the extrachromosomal trait. The Fungal Genetics Stock Center will accept cultures of extrachromosomal mutants for deposition and preservation on silica gel, and will endeavor to preserve them for distribution in the original form.

It is further suggested that in designating the genotype of extrachromosomal mutants the symbol be enclosed in brackets. Thus al-2 [SG] would refer to the nuclear gene marker albina-2 and the extrachromosomal marker slow growth. * * * Department of Biological Sciences, Dartmouth College, Hanover, New Hampshire 03755.