

Use of a helper strain in *Neurospora crassa* to maintain stocks of *uvs-4* and *uvs-5*, which deteriorate unless sheltered in heterokaryons.

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Strains of the mutagen sensitive mutants *uvs-4* and *uvs-5* that originate from ascospores may initially grow at wild type rate. However, growth becomes slower and progressively more abnormal following vegetative growth (Schroeder 1970 *Mol. Gen. Genet.* 107:291-304; Newmeyer 1984 *Curr. Genet.* 9:65-74 and personal communication). This makes experimentation difficult, and the illness may be terminal. Deterioration and loss of stocks can be avoided by sheltering in a heterokaryon. Both mutations are recessive. To ensure that the heterokaryotic condition is maintained, a recessive marker should be present in the mutagen-sensitive component of the heterokaryon.

The inactive mating-type helper strain *am1 ad-3B cyh-1* (FGSC 4564; Griffiths and DeLange 1978 *Genetics* 88:239-254) is recommended as a second component of the heterokaryons. This *am1* helper has been used for maintaining stocks of poorly viable, unstable, infertile, or otherwise disadvantaged strains in which the genetic defect is recessive. (For examples, see Perkins 1984 *Neurospora Newsl.* 31:41-42; Barry 1992 *Genetics* 132:403-412; FGSC *Neurospora Stock List*). The tester is fully compatible with both mating types, but the heterokaryon-incompatibility genotype of the sheltered strain must be that of Oak Ridge wild types (*het-C het-d; het-e*).

FGSC now carries stocks of *uvs-4* and *uvs-5* that are sheltered in heterokaryons with the *am1* helper:

Heterokaryon	FGSC No.
(<i>acr-2 uvs-4 leu-1 A + am1 ad-3B cyh-1</i>)	7445
(<i>acr-2 uvs-4 leu-1 a + am1 ad-3B cyh-1</i>)	7446
(<i>uvs-5 al-3 inl A + am1 ad-3B cyh-1</i>)	7316
(<i>uvs-5 al-3 inl a + am1 ad-3B cyh-1</i>)	7317