Perkins, D. D. Experience using alcoy multiple translocation tester strains to assign genes and chromosome rearrangements to linkage groups.

In alcoy strains, six linkage groups ore marked by means of three independent reciprocal translocations togged with the markers albino (IR; IIR), colonial temperature-sensitive (IVR; VR), and yellow (IIIR; VIL) (1964 Neurospora Newsl. 6: 22). Forty-eight out of 65 new mutants crossed by alcoy hove shown linkage to one or another of the three markers. Exceptions include four genes later located in VII (as expected), three in I L, one in II L, one in III near centromere, and two in V near centromere. Six markers that showed no alcoy linkage are still not located. Seven translocations having recognizable phenotypes hove also been identified as to linkage groups in crosses by alcoy; translocations having no phenotype manifestations con supposedly also be mapped if they involve chromosomes such that alcoy markers show linkage to each other.

Follow-up testers for alcoy: Linkage to on alcoy marker indicates that the gene tested is in either of two linkage groups. The following standard-sequence stocks serve to distinguish between alternatives for each of the three alcoy markers. (Fungal Genetics Stock Center stock numbers are in parentheses.)

I vs. II :	aur; pe A	(FGSC # 1203);
	aur; pe a	(FGSC # 1204) (for use with auxotrophs)
	aur; arg-5 A	(FGSC # 1205);
	aur; arg-5 a	(FGSC # 1206) (for use with visible,)
IV vs. V :	cot; inos A	(FGSC # 1243);
	cot; inos a	(FGSC # 1244) (test for inos only if no linkage to cot)
III vs. VI :	tryp-1; ylo A	(FGSC # 1207);
	try(F1; ylo a	GSC # 1208) (isolate to minimal + indole, and score tryp by ultraviolet fluorescence at 3 days)

For markers not showing linkage to alcoy, mating-type tests will check I L, and a cross to nit-3 me-7 A (FGSC # 152) or a (# 153) has served for VII. acr-2 is useful and convenient for III L. - - - Deportment of Biological Sciences, Stanford University, Stanford, California. 94305.