

Smith, B. R. Linkage data for
group IV

In the course of locating the hist-5 gene,
further linkage data between group four
markers have been obtained. The loci used in
these studies with the standard alleles are as follows: arg-2 (33442), col-4 (70007), fld
(P628), hist-5 (K517, K534, K550), leu-2 (37501), me-1 (38706), pyr-3 (1298) and tryp-4
(A11). The results of three point crosses are listed in Table 1. The order of genes shown
by the three point crosses together with the approximate map distance between them is:
(centromere) me-1 4.5 col-4 1.5 arg-2 0.8 pyr-3 1.0 hist-5 4.3 tryp-4 1.6 leu.
In addition pyr-1 is proximal to arg-2 and probably is proximal to me-1. The morphological
mutant fld is proximal to hist-5 and is probably closely linked with arg-2.

TABLE 1

Crosses with group IV markers

Zygote genotype and recombination per cent	Parental combinations	Recombinations						Total	Hist-5 allele used
		Singles region 1		Singles region 2		Doubles regions 1 and 2			
A B C a b c	ABC abc	Abc	aBC	ABc	abC	AbC	aBc		
+ arg-2 hist-5 pyr-1 + + 4.9 3.4	90 97	7	3	3	4	0	0	204	K517
+ col-4 + me-1 + hist-5 4.5 2.0	53 134	8	1	0	4	0	0	200	K517
+ arg-2 hist-5 col-4 + + 1.5 1.5	186 136	5	0	4	1	0	0	332	K517
+ pyr-3 + arg-2 + hist-5 0.8 0.8	228 138	0	3	1	2	0	0	372	K517
+ hist-5 leu fld + + 2.0 6.0	112 116	3	2	7	8	0	0	248	K534
+ + tryp-4 pyr-3 hist-5 + 1.1 2.7	372 594	4	6	9	17	0	1	1003	K517
+ + leu hist-5 tryp-4 + 7.4 1.6	234 222	22	14	5	2	0	1	501	K550