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S. D. Haedo

Universidad Nacional de Córdoba

M. R. Mautino

Universidad Nacional de Córdoba

A. L. Rosa

Universidad Nacional de Córdoba

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Non-Oak Ridge RFLP patterns in the *Neurospora crassa multident-2* strains

Abstract

The *N. crassa* strain *multident-2* (FGSC 4488) is widely used for RFLP mapping (Metzenberg et al. 1984 *Neurospora Newsl.* 31:35-39). The genetic background of *multident-2* is considered as being largely "Oak Ridge". However, by studying RFLP patterns, we have recently found that a region in the *multident-2* linkage group VII differs considerably from that of the standard wild type "Oak Ridge" 74-OR23-1A (FGSC 987) (Haedo et al. 1992 *Genetics*, in press). We extend here this observation to a 40 kb region on the left arm of linkage group I. Table I shows that the analyzed region on chromosome I is largely "Oak Ridge" both in *multident-2* and, as expected, the Mauriceville-1c genome.

Non-Oak Ridge RFLP patterns in the *Neurospora crassa multident-2* strains

S.D. Haedo, M.R. Mautino and A.L. Rosa - Dept. Química Biológica (CIQUIBIC- CONICET), Fac. Ciencias Químicas, Universidad Nacional de Córdoba, 5016 Córdoba, Argentina.

The *N. crassa* strain *multident-2* (FGSC 4488) is widely used for RFLP mapping (Metzenberg et al. 1984 *Neurospora Newsl.* 31:35-39). The genetic background of *multident-2* is considered as being largely "Oak Ridge". However, by studying RFLP patterns, we have recently found that a region in the *multident-2* linkage group VII differs considerably from that of the standard wild type "Oak Ridge" 74-OR23-1A (FGSC 987) (Haedo et al. 1992 *Genetics*, in press). We extend here this observation to a 40 kb region on the left arm of linkage group I. Table I shows that the analyzed region on chromosome I is largely "Oak Ridge" both in *multident-2* and, as expected, the Mauriceville-1c genome.

Table I RFLP types found in different *N. crassa* strains*

RFLP type	Strain		
	Oak Ridge FGSC 987	<i>multident-2</i> FGSC 4488	Mauriceville-1c FGSC 4416
ClaI	a	I	III
	b	I	I
EcoRI	a	I	III
	b	I	I
EcoRV	a	I	III
	b	I	I
	c	I	I
XbaI	a	I	III

* - For simplicity the length of restriction fragments is not indicated. RFLPs are arbitrarily defined as I (Oak Ridge), II (Non-Oak Ridge) and III (Mauriceville-1c). a, b and c indicate different RFLPs for the corresponding enzyme.

Although this finding does not modify any conclusion based on the use of *multident-2* in RFLP mapping experiments, it indicates that a *multident-2* RFLP or, in general, the length of a *multident-2* restriction fragment is not necessarily "Oak Ridge", and would not be expected in either Southern blots or DNA clones originating from the current standard wild type "Oak Ridge" strains or libraries, respectively.

METHODS: *N. crassa* DNA was purified, restricted and subjected to Southern blot analysis as described (Haedo et al. 1992 *Genetics*, in press). A pMOcosX cosmid clone containing a 40 kb insert closely linked to the *arg-3* locus (M. Mautino, S. Haedo and A.L. Rosa, unpublished), on

the left arm of linkage group I, was ³²P-dATP-labelled and used as a probe. The *N. crassa* wild-type pMOcosX library was constructed by Drs. M. Sachs and M. Orbach and is distributed by FGSC.

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