

## A-42: Complete sequence of a highly repeated DNA fragment in *Setaria digitata*

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*Setaria digitata* is a filarial parasite of cattle and buffaloes. The transmission of infective larvae to unnatural hosts such as sheep, goats and horses can result in a serious nervous disease commonly known as cerebrospinal nematodiasis.

We have previously described the development of a repetitive DNA probe (EMBL 3Sd 41) for the detection of this parasite. Here we report the complete characterisation of the repetitive elements in this probe.

The 16.1 kb insert of EMBL 3Sd41 was cleaved with *Sau* 3AI and subcloned in pUC 18. A strongly hybridizing clone pSd 7 was isolated by screening with <sup>32</sup>P-labelled total parasite DNA. When a Southern blot of genomic DNA cleaved with various restriction enzymes were probed with pSd 7, strongly hybridizing bands were seen around 750 bp with DNA cleaved with *Msp*I. These fragments were cloned in pBS. Two strongly hybridizing clones pSd M1 and pSd M2 were isolated by screening with total parasite DNA. Clones pSd 7 pSd M2 were completely sequenced while pSd M1 was partially sequenced.

Dot matrix analysis of the sequences revealed a 205 bp repetitive element arranged in direct tandem with individual repetitive elements displaying a high degree of homology. Southern blot analysis revealed that these tandem repeats were clustered within the genome. The repetitive element constitutes approximately 3% of the genome and the copy number is approximately 10,000 per haploid genome.