

phoresed on polyacrylamide or agarose gels; enzymes with cleavage sites in the insert sequence showed at least one more band in the pCR1-κ40 digests than in the pCR1 digest. These results were confirmed by blotting the fragments onto nitrocellulose paper and hybridising to ³²P-labelled MOPC-149 cDNA as described by Southern²⁷. If an enzyme cleaved the insert sequence then label would hybridise to two bands rather than just a single band. In this way the restriction enzymes *Mbo*II, *Alu*I, *Hae*III, *Hpa*I, *Hinc*II, and *Pst*I were each shown to cleave the inserted sequence at least once, while the enzymes *Bam*HI, *Hind*III, *Hha*I, *Sst*I, *Hinf*I, *Hae*II, *Hpa*II, *Kpn*I and *Bgl*II do not seem to cleave the inserted sequence.

The nucleotide sequence of a small portion of the inserted sequence in pCR1-κ40 was determined in order to demonstrate conclusively that the inserted sequence could encode for a portion of light-chain amino acid sequence. An 850-base pair fragment from a *Hae*III digest of pCR1-κ40 DNA was isolated, labelled at its 5' ends with ³²P, cleaved into two pieces (a 525-base pair fragment and a 325-base pair fragment) with *Pst*I (see Fig. 3), and finally the 325-base pair fragment was subjected to the standard reactions for sequencing DNA fragments of Maxam and Gilbert³⁰ (Fig. 2). The nucleotide sequence determined from this procedure is shown in Fig. 3. This nucleotide sequence when read in the correct frame correlates perfectly with a 23-amino acid sequence from the immunoglobulin kappa-type constant region, and with the RNA sequence predicted by Milstein *et al.*²⁸. Thus, we conclude that an immunoglobulin sequence has been inserted into pCR1-κ40. Using this nucleotide sequence to orientate the map we were able to determine the arrangement of immunoglobulin sequences in pCR1-κ40 (Fig. 3). Further, the plasmid pCR1-κ40 contains about 700 base pairs of the immunoglobulin gene sequence, spanning a portion of the 3' untranslated region, the entire constant region and over 150 base pairs of MOPC-149 variable region gene sequence.

This hybrid molecule will be of great value for nucleotide sequence analysis, identification and cloning of genomic DNA segments containing actual immunoglobulin genes and the unambiguous determination of their arrangement in chromosomal DNA. Indeed, we have already used pCR1-κ40 to obtain two interesting chromosomal DNA fragments containing immunoglobulin variable region sequences (J.G.S., M.H.E., D. Tiemeier, S. Tilghman, F. Polsky, A. Leder, P.L., unpublished).

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Corrigendum

In the letter 'Detection of casein messenger RNA in hormone-dependent mammary cancer by molecular hybridisation' by J. M. Rosen & S. H. Socher, *Nature* **269**, 83-86, the legend to Fig. 4 should start 'Measurement of casein mRNA in hormone-independent mouse mammary tumours. . . .' (not hormone-dependent). Similarly, line 2 on page 86 should read '. . . in the hormone-independent mouse mammary carcinomas . . .'.

Errata

In the letter 'Birefringence signals and calcium transients in skeletal muscle' by G. Suarez-Kurtz & I. Parker, *Nature* **270**, page 748, the horizontal calibration in Fig. 3a should read 50 ms, not 10 ms.

In the letter 'Circular structures of large scale and great age on the Earth's surface' by J. M. Saul, *Nature* **271**, 345-349, Figs 1 and 2 were reproduced to the wrong scale so that the transposition marks do not correspond. The scale reduction of 1 : 1,000,000 in Fig. 1 legend is also incorrect. The correct versions of these figures can be obtained in reprints of the letter.

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