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(tRNA/rRNA/RNA-RNA crosslink/rRNA function/cyclobutane dimer)

zyme-to-substrate ratio of 1:2 (wt/wt) for 1 hr at 37°C, and dried under reduced pressure. When the oligonucleotides were to be end-labeled, bacterial alkaline phosphatase was also added to the incubation mixture at a final concentration of 5 units/ml and RNA was recovered by extraction with phenol and precipitation with ethanol. The dephosphorylated oligonucleotides were is U-A-C-A-C-A-C-C-G_{1401} (6). By contrast, a comparable digest of the crosslinked adduct, 1_U, yielded just three products, U and A-C in a molar ratio of 1:3, and a component designated P1 that remained close to the origin (Fig. 2*a*, lane 1). The lack of free C and G in this instance indicates that either C_{1400} or G_{1401} is the site of tRNA attachment. Although the low mobility of spot P1 suggested that it alone contained the crosslinked material, all three products were eluted from the electropho-

cleotides were then labeled with [5′-^{32}P]pCp at the 3′ end by using RNA ligase and fractionated by gel electrophoresis. In this case, two crosslinked T1 products, bands 1_F and $1'_F$, were iden-

tified by

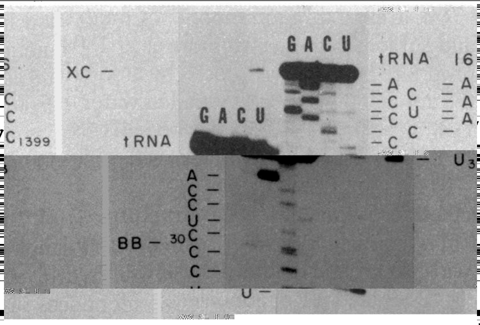

Fig. 1*c*;

compare

NA from

band 1_F

ctropho-

resis alongside the unirradiated portion (Fig. 1*d*). Here again photoreversal released only one major radioactive component, a UUCCCGGGCCUU GUACACACCGm^4C CCGUm^5C ACACCAUGGGAGU