

These results support the view that the non-CPD ultraviolet damage modified by the factor 1 fraction are (6-4)photoproducts. Because the ultraviolet-irradiated DNA probe pretreated with light (Fig. 2a lanes 6 and 11, Fig. 2b lane 5) or factor 1 in dark (Fig. 2a lanes 5 and 10, Fig. 2b lane 4) had no effect on the binding of factor 1 or 64M-2 antibody and on the disappearance of PALS, we conclude that (6-4)photoproducts were not removed by direct photolysis or an enzymatic dark reaction.

To determine whether the light-dependent alteration of (6-4)photoproduct is associated with biological activity, photoreactivation of transforming activity of ultraviolet-irradiated plasmid pZ189 treated with the factor 1 fraction was assayed using repairless *E. coli* CSR603 (ref. 9) as the host. As seen in Fig. 3a, the factor 1 fraction restored the transforming activity of ultraviolet-irradiated pZ189 DNA in a light-dependent reaction. In these DNA samples, binding sites for the 64M-2 antibody decreased with increasing time of light exposure, whereas those for the TDM-2 antibody did not change (Fig. 3b). Fractions eluted from the DNA affinity column were assayed for the band 1 forming activity and the activity to photoreactivate the transforming activity of ultraviolet-irradiated plasmid. As seen in Fig. 3c, both activities eluted as a broad but single, symmetrical peak, suggesting that factor 1 itself or co-eluting protein(s) have photoreactivating activity.

The structure of (6-4)photoproduct has already been determined^{10,11}. In TC(6-4)photoproduct, the amino group of the 3' cytosine has been transferred to the 5 carbon of the 5' thymine. Thus, in contrast to the case of photo-reversal of CPD, (6-4)photoproducts may not be reversed to the original configuration. It will, therefore, be of great interest to see whether (6-4)photoproducts retain some alterations after photoreactivation treatment. Analysis of induced mutations in the plasmid photoreactivated with the factor 1 fraction should give an important clue to the answer.

In various organisms, DNA binding proteins that have high affinity for ultraviolet-irradiated DNA have been detected^{12,13}. We searched for protein having specific affinity for (6-4)photoproduct among *E. coli*, silkworm (*Bombyx mori*), African green monkey cells (CV-1) and human cells (Hela) (Fig. 4). (6-4)Photoproduct-binding activities were detected in all of the extracts from *E. coli*, silkworm, monkey cells and Hela cells. When assayed for their photoreactivation-mediated activity, however, only the factor from silkworm showed positive results (data not shown). Biological functions of these (6-4)-photoproduct-binding factors, and the degree of amino-acid sequence homology between these factors remain to be determined. □

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ERRATA

Addition and subtraction by human infants

Karen Wynn

Nature **358**, 749–750 (1992)

THERE is an error in Table 1 of this Letter. The looking times for experiment 2, test trials of group 1–2 are reversed. As printed, the table indicates that infants' looking time LT(1) is 10.98 seconds and their LT(2) is 8.05 seconds. They should read LT(1) = 8.05 and LT(2) = 10.98. This error does not affect the conclusions of the paper, which were based on the correct looking times, not on the transposed ones.

IPCC strategies unfair to the South

J. K. Parikh

Nature **360**, 507–508 (1992)

IN this Commentary article, the figures in the two left-hand columns of Table 2 were inadvertently transposed. The correct figures are 1.43 (North America); 3.05 (centrally planned Asia); 4.46 (south and east Asia) for the period 1985 to 2025 (IPCC annual growth rate). The equivalent figures for 1979–1988 (past trends) are 0.11, 4.22 and 6.77.

Arsenical-resistant trypanosomes lack an unusual adenosine transporter

Nicola S. Carter & Alan H. Fairlamb

Nature **361**, 173–175 (1993)

IN some copies of the 14 January issue Fig. 3 of this Letter was poorly reproduced. It is shown here in its correct form.

