

reaction 2 appears to be the likely mechanism for the formation of the Thy-Tyr cross-link in nucleohistone identified in this work.

When oxygen is present in the system, the Thy-Tyr cross-link in nucleohistone is not expected to be formed because diffusion-controlled reactions of oxygen with pyrimidine (or amino acid) radicals convert them into peroxy radicals inhibiting combination or addition reactions of radicals [for a review see von Sonntag (1987)].

In conclusion, the OH radical induced formation of a DNA-protein cross-link between the methyl group of a Thy moiety and the C-3 position of a Tyr moiety in calf thymus nucleohistone in aqueous solution was described. The methodology used here might permit the study of the DNA-protein cross-links induced by ionizing radiation or other free radical processes in living cells.

Registry No. Hydroxyl, 3352-57-6; thymine, 65-71-4; tyrosine, 60-18-4; 3-[(1,3-dihydro-2,4-dioxypyrimidin-5-yl)methyl]-L-tyrosine, 118949-95-4.

REFERENCES

- Böhm, E. L., Strickland, W. N., Strickland, M., Thwaites, B. H., van der Westhuizen, D. R., & von Holt, C. (1973) *FEBS Lett.* **34**, 217-221.
- Cress, A. E., & Bowden, G. T. (1983) *Radiat. Res.* **95**, 610-618.
- Dorfman, L. M., Taub, I. A., & Bühler, R. E. (1962) *J. Chem. Phys.* **36**, 3051-3061.
- Fornace, A. J., Jr., & Little, J. B. (1979) *Cancer Res.* **39**, 704-710.
- Fricke, H., & Hart, E. J. (1966) in *Radiation Dosimetry* (Attix, F. H., & Roesch, W. C., Eds.) Vol. II, pp 167-239, Academic Press, New York.
- Fujita, S., & Steenken, S. (1981) *J. Am. Chem. Soc.* **103**, 2540-2545.
- Hendry, L. B., Bransome, E. D., Jr., Hutson, M. S., & Campbell, L. K. (1981) *Proc. Natl. Acad. Sci. U.S.A.* **78**, 7440-7444.
- Krutzsch, H. C. (1983) *Methods Enzymol.* **91**, 511-524.
- Laemmli, U. K. (1970) *Nature (London)* **227**, 680-685.
- Land, E. J., & Ebert, M. (1967) *Trans. Faraday Soc.* **63**, 1181-1190.
- Margolis, S. A., Coxon, B., Gajewski, E., & Dizdaroglu, M. (1988) *Biochemistry* **27**, 6353-6359.
- Marmur, J., & Doty, P. (1962) *J. Mol. Biol.* **5**, 109-118.
- Mee, L. K., & Adelstein, S. J. (1981) *Proc. Natl. Acad. Sci. U.S.A.* **78**, 2194-2198.
- Oleinick, N. L., Chiu, S., Friedman, L. R., Xue, L., & Ramakrishnan, N. (1986) in *Mechanisms of DNA Damage and Repair, Implications for Carcinogenesis and Risk Assessment* (Simic, M. G., Grossman, L., & Upton, A. C., Eds.) pp 181-192, Plenum, New York.
- Olinski, R., Briggs, R. C., Hnilica, L. S., Stein, J., & Stein, G. (1981) *Radiat. Res.* **86**, 102-114.
- Panyim, S., & Chalkley, R. (1969) *Arch. Biochem. Biophys.* **130**, 337-346.
- Peterson, G. L. (1977) *Anal. Biochem.* **83**, 346-356.
- Smith, K. C. (1976) in *Aging, Carcinogenesis and Radiation Biology* (Smith, K. C., Ed.) pp 67-91, Plenum, New York.
- von Sonntag, C. (1987) *The Chemical Basis of Radiation Biology*, Taylor & Francis, London.
- Watson, J. T. (1985) *Introduction to Mass Spectrometry*, pp 59-74, Raven Press, New York.
- Yamamoto, O. (1976) in *Aging, Carcinogenesis and Radiation Biology* (Smith, K. C., Ed.) pp 165-192, Plenum, New York.

CORRECTIONS

Interactions of Oleic Acid with Liver Fatty Acid Binding Protein: A Carbon-13 NMR Study, by David P. Cistola,* Mary T. Walsh, Ronald P. Corey, James A. Hamilton, and Peter Brecher, Volume 27, Number 2, January 26, 1988, pages 711-717.

Page 716. In column 2, the last two sentences beginning on line 8 should read as follows: Results obtained with fluorescence spectroscopy indicated that anthroyloxy-labeled FA analogues have an affinity for liver FABP molecules an order of magnitude greater than that for phosphatidylcholine molecules (Storch et al., 1986). When the NMR-derived partition coefficients shown in Table I (moles of 18:1 bound per gram of PC) are expressed as moles of 18:1 bound per mole of PC, the results obtained with ¹³C-enriched FA agreed with those obtained with fluorescent FA analogues.

Stabilization of Microtubules by Inorganic Phosphate and Its Structural Analogues, the Fluoride Complexes of Aluminum and Beryllium, by M. F. Carlier,* D. Didry, R. Melki, M. Chabre, and D. Pantaloni, Volume 27, Number 10, May 17, 1988, pages 3555-3559.

Page 3556. Under Materials and Methods, paragraph 3, lines 7-9 should read as follows: ...diluted 50-fold at time 0 into PG buffers containing 50% sucrose in the place of glycerol, 10 mM MES, and increasing concentrations, in the range

0-150 mM, of inorganic phosphate.... We acknowledge the help of Dr. Michaël Caplow in bringing this correction to our attention.

Antithrombin III Utah: Proline-407 to Leucine Mutation in a Highly Conserved Region near the Inhibitor Reactive Site, by Susan Clark Bock,* Jean A. Marrinan, and Elzbieta Radziejewska, Volume 27, Number 16, August 9, 1988, pages 6171-6178.

Page 6175. Several C's and T's are reversed at the bottom of Table I where sequence differences for exon 6, position 105, are reported. The antithrombin III (ATIII) Utah allele contains a T at this position, as do the normal ATIII genes referenced in footnotes *b*, *i*, *f*, and *j*. The normal ATIII gene referenced in footnote *h* also contains a T at position 105, although the original report listed a C. Thus, footnote *c* should read as follows: reanalysis of original clone indicates that this nucleotide is a T.

Hydrogen-1 NMR Evidence for Three Interconverting Forms of Staphylococcal Nuclease: Effects of Mutations and Solution Conditions on Their Distribution, by Andrei T. Alexandrescu, Eldon L. Ulrich, and John L. Markley*, Volume 28, Number 1, January 10, 1989, pages 204-211.

Page 205. In column 1, line 6, KO₂H should read KO²H.

Page 209. In Table I, row 9, N'' (%) should read 0.