

the native DNA structure is imperceptible at room temperature. Moreover, when the structure is attacked at higher temperatures or lower pH, it does not appear that conditions have yet been found which will simultaneously break all the hydrogen bonds (or other interchain bonds) thereby permitting separation of the undegraded polynucleotide strands.

We wish to thank Dr. NORMAN SIMMONS (University of California, Los Angeles) for the samples used in this work and for the support given by the Public Health Service Grant C-2170.

Gibbs Laboratory, Department of Chemistry, Harvard University,
Cambridge, Mass. (U.S.A.)

PAUL DOTY
STUART A. RICE*

- ¹ S. ZAMENHOFF, H. ALEXANDER AND G. LEIDY, *J. Exptl. Med.*, 98 (1954) 373.
- ² G. GOLDSTEIN AND K. G. STERN, *J. Polymer Sci.*, 5 (1950) 687.
- ³ R. THOMAS, *Biochim. Biophys. Acta*, 14 (1954) 231.
- ⁴ B. E. CONWAY AND J. A. V. BUTLER, *J. Chem. Soc.*, (1952) 3075.
- ⁵ D. O. JORDAN, *Progress in Biophysics*, Academic Press, (1951), p. 51.
- ⁶ M. E. REICHMANN, B. H. BUNCE AND P. DOTY, *J. Polymer Sci.*, 10 (1953) 109.
- ⁷ C. A. DEKKER AND H. K. SCHACHMAN, *Proc. Natl. Acad. Sci.*, 40 (1954) 894.
- ⁸ F. H. C. CRICK AND J. D. WATSON, *Proc. Roy. Soc. (London)*, A223 (1954) 80.
- ⁹ W. A. LEE AND A. R. PEACOCKE, *J. Chem. Soc.*, (1951) 3361.
- ¹⁰ W. A. LEE AND A. R. PEACOCKE, *Research*, Suppl., 6 (1953) 155.
- ¹¹ K. A. STACEY AND P. ALEXANDER, *Trans. Faraday Soc.*, 50 (1954) 303.
- ¹² W. H. STOCKMAYER, *J. Chem. Phys.*, 18 (1950) 58.

Received January 5th, 1955

* Charles A. Coffin Fellow 1954-1955.

BOOK REVIEW

Histochemical Methods, WALTHER LIPP, Oldenburg Verlag, Munich, 1954. Six issues annually, 24 pages each. D.M. 30.— (for six issues).

The title of this collected work is wider in scope than is in keeping with the content of these three issues. Frequently in the literature the chemical analysis of cell fragments obtained by differential centrifugation and the ultra micro-analysis of very small tissue areas or large cells (Linderstrom-Lang) are both considered as belonging to Histochemistry or Cytochemistry. In order to differentiate between these two fields Gomori gave the name *microscopic histochemistry* to the field dealt with in this work. A generally recognized nomenclature will perhaps be necessary fairly soon in order to avoid misunderstandings. (In the German literature Voss suggests the use of *Topochemie* instead of *Histochemie*.)

Dr. Lipp's collection consists of single leaflets, already perforated for insertion, which are received in six yearly issues and which the reader can assemble in the prescribed manner. The three issues which have appeared contain leaflets for various parts of the complete collected work. In this way the volume can be continually added to when all the earlier literature has been incorporated. This original method fits in well with the way in which, in general, the research worker assembles and keeps his own literature.

In the first three issues one finds, amongst other things, critical reports on Schiff's Reagent for aldehyde groups, on methods of detection of arginine and sulph hydryl groups, and on impregnation of radioactive tissue sections with silver salts.

The present issues give a comprehensive survey of international literature and the reviewer found many references valuable for histochemical research.

Whether this collected work, as is stated in the Introduction, will help the research worker who is unfamiliar with Chemistry, but occasionally makes use of histochemical methods, to achieve good results, will be seen from experience. In this connection the reviewer would like to emphasize that the development of Histology in the direction of Histochemistry not only means that procedures for empirical colouring methods with a morphological objective are replaced by histochemical procedures, but also that one accordingly tends to interpret the histochemical findings within the bounds of general biochemical research.

If this objective is not put too much into the background, one can expect an invasion of the literature with descriptions of results obtained with the help of histochemical methods in all kinds of tissues and cells, and also the promotion of the development of general Biochemistry.

P. VAN DUIJN (Leyden)