Exhibitors

M.R.C. Biophysics Units at the Cavendish Laboratory, Cambridge, and at Kings College, London.

~~a substance which occurs in the chromosomes of living cells.~~

A proposed

The structure for DNA (desoxyribonucleic acid). The structure has been derived from x-ray data and from stereochemical considerations. It suggests a possible way in which the DNA molecule might duplicate itself.

DNA is a very long thin molecule, which is believed to carry at least ~~a carrier of a part of (if not all)~~ part of ~~[illegible]~~ the generic specificity of the chromosomes in living cells.

~~Nucleic acid is of considerable biological importance. The main reasons~~

~~for this are~~ There are only two fundamental problems in molecular biophysics. They are

① the molecular basis for the ~~duplication~~ replication of ~~the~~ genes.

② the molecular basis for the process, or processes by which the genes control the synthesis of proteins.

~~It is~~ There is much evidence to suggest that nucleic acid is associated with both these processes. It is for this reason that it is important to solve ~~the~~ its structure. ~~of nucleic acid~~.

By solving the structure we mean ~~that~~ here that the ~~we~~ we should discover the broad plan underlying the detailed arrangement of chemical and physical bonds. ~~which is necessary during the~~

~~It is~~ The problem usually falls into two parts. It is first necessary for the organic chemist to discover the general plan of the chemical bonds making up the structure. ~~This has been done for deoxyribose nucleic acid (D.N.A.); and it is likely to do~~

For ribonucleic acid (R.N.A.) this is still being actively investigated, but for deoxyribose nucleic acid (D.N.A.) the problem has been solved. It is believed that D.N.A. ~~is~~ consists of long unbranched phosphor-ester