weight. This gives unique dimensions for models (a) and (b), but for the Y-shapes several varieties of arm lengths and interarm angles must be considered.

$P(\theta)^{-1}$ was calculated from the formula (Guiduschek & Holtzer, 1958):

$$P(\theta) = \frac{1}{N^2} \sum_n \sum_m^N (\sin hr_{nm}/hr_{nm})$$

where r_{nm} is the absolute value of the vector between the n th and m th scattering points. This was evaluated on a digital computer, and the results were plotted as $P(\theta)^{-1}$ against $\sin^2(\theta/2)$ for comparison with the experimental points.

Our conclusion was that, although the fit was not total, the experimental data corresponded best to a Y-shape molecule of equal arm lengths of four supercoils (185.6 nm), cross-sectional arm radii of 15.05 nm and an angle of 120° between each arm.

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as a measure of the number of cells present. The method depends on the enhancement of the fluorescence of ethidium bromide (2,7-diamino-10-ethyl-9-phenylphenanthridinium bromide) that occurs when the dye binds to double-stranded nucleic acids (Le Pecq *et al.*, 1964; Le Pecq & Paoletti, 1966, 1967). We measure the fluorescence intensity before and after treatment with deoxyribonuclease; this makes the method specific for DNA.

The procedure is more economical in terms of the starting material (i.e. the granulocytes) used than methods (Burton, 1956; Giles & Myers, 1965) that employ the diphenylamine reaction.

The values obtained for the DNA content of human granulocytes by the present method is 6–7 pg/cell. This agrees with the values reported by previous workers, who have used less sensitive methods and larger numbers of cells (Mandel *et al.*, 1950; Metais *et al.*, 1951; Davidson *et al.*, 1951).

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The Measurement of the Deoxyribonucleic Acid Content of Human Granulocytes

By MARY J. BLACKBURN, T. M. ANDREWS and R. W. E. WATTS (*Medical Research Council Clinical Research Centre, Watford Road, Harrow, Middx. HA1 3UJ, U.K.*)

We are currently studying some aspects of protein synthesis in human granulocytes (Andrews *et al.*, 1971). These cells have a strong tendency to form clumps when they are resuspended for biochemical studies, having been previously separated from heparinized whole blood by dextran sedimentation and differential centrifugation through an albumin solution. This makes their enumeration with either a haemocytometer or the Coulter counter unreliable, so that a cell count is a poor parameter against which to express the results of relatively more precise biochemical investigations.

We have developed a method of measuring the DNA content of as few as 1×10^6 human granulocytes with a coefficient of variation of about $\pm 3\%$. This enables the amount of DNA present to be used

Metabolism of Prostaglandin E_1 by Human Plasma

By WENDY J. McDONALD-GIBSON,* R. G. McDONALD-GIBSON† and M. W. GREAVES* (**University Department of Dermatology, Royal Victoria Infirmary, Newcastle upon Tyne NE1 4IP*, and †*Medical Research Council Reproduction and Growth Research Unit, Princess Mary Maternity Hospital, Newcastle upon Tyne NE2 3BD, U.K.*)

Prostaglandins have been found in human blood in certain pathological conditions (see, e.g., Williams *et al.*, 1968) and during labour (Karim, 1968), but there has been a lack of evidence for their presence in normal human blood. We have, however, now demonstrated the presence of prostaglandins in normal human blood (Greaves & McDonald-Gibson, 1972). During this study an enzymic prostaglandin E_1 -metabolizing system in human plasma became apparent.

[5,6- 3H]Prostaglandin E_1 was added to fresh blood (final concn. 10 ng/ml). Plasma was separated and prostaglandins and metabolites were extracted and