matrix. In the matrix the granules aggregate to form small rosettes which later contract to give rise to spherical virus particles. Although further on infective hepatitis is required before the true nature of the spherical bodies is elucidated, it is considered on the basis of present evidence that they may possibly represent the causative virus.

More detailed reports on the liver in infective hepatitis are to be published later.

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Precipitation Reaction between Serum and Lysed Erythrocytes

Human serum reacts with hæmolysates of human erythrocytes to form a precipitate; this occurs even with the isologous hæmolysate. When the hæmolysate is added to serum in tubes at 37° C., precipitation continues for several days. In agar-gel, using a double diffusion technique, a well-marked precipitate band is formed (Fig. 1). Peetoom *et al.*[1] described a precipitate of this type in agar-gel, but only minimal precipitation in fluid media. In spite of antigenic differences between adult and fœtal hæmoglobins[2], serum and hæmolysate from adult and umbilical cord blood form precipitates in agar-gel, which are qualitatively the same. Cross-precipitation also occurs between human and some animal sera and hæmolysates. As the reaction is of general occurrence, it causes false positive results in tests for auto-antibodies when the tissue extract used as antigen contains sufficient lysed erythrocytes.

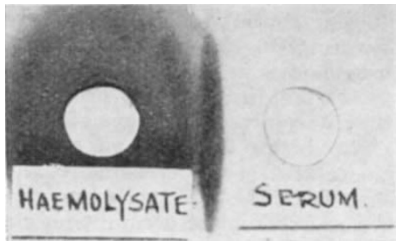

Fig. 1. Precipitate band formed by double diffusion of serum and hæmolysate in agar-gel

The precipitate forms with serum and hæmolysate from blood of the same or different *ABO* blood-groups. After absorption of the α- and β-antibodies with intact erythrocytes, serum continues to form the precipitate. The cell envelope is not involved, as precipitation occurs with Seitz-filtered hæmolysates. Thus, the reaction is independent of the *ABO* groups.

Although haptoglobins were not detected by Tuttle[3] in cord blood, serum from cord blood gives a precipitate with adult and cord hæmolysates. Also adult serum, after absorption for 3 days at 37° C. with hæmolysate containing 8–12 mgm. hæmoglobin per ml., loses its ability to precipitate with hæmolysate in agar-gel; but Allison *et al.*[4] found that the haptoglobins in 1 ml. of serum could react with only 1·35 mgm. of hæmoglobin. Therefore, serum factors other than haptoglobins must be involved.

The reaction titres of sera from normal adult and cord blood, tested in agar-gel, are similar; but some sera from cases of hæmolytic disease of the new-born and of acute hæmolytic anæmia have reduced titres. Thus, this precipitation reaction may be part of the physiological mechanism for the removal of products of erythrocyte lysis.

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Antigenicity of Deoxyribonucleic Acids from Mouse Liver and from the Ehrlich Ascites Tumour

In recent years, a number of reports have appeared concerning the antigenicity of mammalian and bacterial deoxyribonucleic acid. Evidence has been presented indicating that complement-fixing[1] and precipitating[2] antibodies may be produced by the injection of such preparations into experimental animals. In addition, serum from patients with systemic lupus erythematosus has been shown to react immunologically with highly purified deoxyribonucleic acid from a variety of sources[3]. The present communication concerns the production of antisera by the immunization of rabbits with deoxyribonucleic acid preparations isolated from mouse liver and from cells of the Ehrlich ascites tumour. The results obtained indicate that anti-tumour cell deoxyribonucleic acid serum has an inhibitory effect on the growth of the tumour *in vivo*.

Mouse liver and Ehrlich tumour cell deoxyribonucleic acids were isolated by the detergent method of Kay, Simmons and Dounce[4]. The preparations had nitrogen/phosphorus ratios of 1·65–1·68. In the analytical ultracentrifuge (Spinco, model *E*) equipped with an ultra-violet optical system, solutions containing 25–30γ DNA/ml. in 0·2 *M* potassium chloride – 0·01 *M* phosphate buffer, *p*H 7·0, were found to contain components having sedimentation velocities ranging from 20 to 40 Svedberg units, with mean sedimentation velocities of 24–25 *S*. Contamination with polypeptide material was minimal. One-dimensional paper chromatography of hydrochloric acid hydrolysates of the deoxyribonucleic acid (using methyl ethyl ketone/glacial acetic acid/water, 2:1:1, as solvent) revealed the presence of amino-acids with the R_F values of leucine (0·04–0·08 per cent), methionine (0·02–0·04 per cent), glutamic acid (0·008–0·016 per cent), arginine (0·01–0·02 per cent) and

possibility that the phospholipins as extracted above

were incubated at 37° C. for 1 hr.