morphs in the *Y*-chromosome, are the mutant 'bobbed' described by Mohr[8] in *Drosophila melanogaster* in 1923 and the 'lethal' described by Schubel[9] in 1934 in the same species.

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Action of Heating on *Rh*-Positive Human Red Cells

Lubinski and Portnuff[1] have demonstrated that heating at 56° reduces or destroys the agglutinability of *Rh*-positive cells by anti-*Rh* sera. They have studied also the action of diluted formalin, which seems to be somewhat similar. Many workers have observed that preservation in saline affects the *Rh*-positive cells in the same way and recommend the use of fresh suspensions when performing *Rh*-testing.

These facts lead to the idea that the *Rh* receptor is probably more superficial or fragile than the *A* and *B* receptors, for example. We have tested this idea by the following experiment: 1 ml. of *O Rh*+ (*CDe*, *cDE*) cells are washed three times and suspended in an equal volume of saline adjusted to *p*H 7·2. The mixture is heated for fifteen to twenty minutes in a water-bath at 56° C., and the cells separated from the medium by centrifuging. The cells are washed three times and distributed in a series of titrations with a powerful anti-*Rh* (anti-*D*) serum. Controls are made with unheated *Rh*+ and *Rh*− (*cde*, *cde*) cells and with heated *Rh*− cells. It is easily verified that heating abolishes the agglutinability of the *Rh*-positive cells. The supernatant fluid to both *Rh*+ and *Rh*− heated cells is mixed with an equal volume of anti-*Rh* serum and allowed to stand at room temperature for half an hour. The two mixtures are then titrated in saline with fresh *Rh*-positive cells. In these conditions, a marked inhibition effect takes place in the first series (supernatant fluid of *Rh*+ cells), while the second shows no evident change in the anti-*Rh* titre.

This experiment was performed with several anti-*Rh* sera, and the same results were obtained.

It appears that heating at 56° C. affects the agglutinability of *Rh*-positive cells by splitting off from the surface of the cell a substance which diffuses in the medium; this may prove to be the *Rh*-receptor.

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A Method for Estimating Percentage Germination of Fungal Spores

METHODS previously used for estimating the percentage germination of fungal spores have involved hanging-drop or slide cultures. The environmental conditions, when using these methods, have always been difficult to standardize, though it may be argued that for pathological work they simulate those existing on the surface of fruits and leaves.

We have evolved, during fermentation studies, a method which could be applied to fundamental investigation of the physiology and biochemistry of spore-germination. This method possesses the following advantages: (*a*) conditions are readily standardized; (*b*) it is rapid and easily operated; (*c*) large serial samples can be taken from the same population; (*d*) the samples can be kept for further reference.

The technique involves addition of spores to a liquid nutrient medium contained in a plugged vessel so that the final concentration is not less than 1×10^6 spores per ml. of medium. The vessel is shaken on a rotary or reciprocal shaking machine at a known temperature, and samples are taken at intervals. The spores in the samples are fixed and afterwards examined as convenient.

The degree of accuracy of this method is illustrated by the results of the following typical experiment. Conidia of *Penicillium chrysogenum Q* 176 were used. Each of eight 750-ml. conical flasks containing 100 ml. of a nutrient medium was inoculated with 1×10^8 conidia. The flasks were maintained at 24° C., on a rotary shaker. Later, when germination was about 50 per cent, three samples were taken from each flask and fixed in 10 per cent formalin. Three counts per sample, each of about 500 spores, were made.

A statistical analysis of the results showed that no significant variation existed between the repeat samples from the flasks, the repeat counts per sample and the mean count from flask to flask. The variation between the nine counts within each flask was not greater than the theoretical error of counting[1]. The conidial suspension was thus uniform, was capable of accurate sampling and remained stable. The theoretical standard error of percentage germination is $100\sqrt{n(N-n)/N^3}$, where N is the total number of spores counted and n is the number germinated. For the results of this series, this was approximately 2·2 per cent actual.

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A Rare Cœlom-Dwelling Trematode

CŒLOM-dwelling trematodes are very rare. The only monogenetic form ever found in the cœlom of a vertebrate is *Dictyocotyle cœliaca* Nybelin, 1941. A solitary specimen was found at Göteborg on April 1, 1940, attached to the surface of the liver in a ray (*Raja lintea* Fries) caught the previous day near Skagen. At first sight the trematode was mistaken for the well-known cloacal parasite *Calicotyle kroyeri*, but closer inspection revealed several distinctive characters, notably the irregular arrangement of numerous