of the nucleic acid from irradiated yeast was slightly higher than that from non-irradiated yeast, despite the greater yield of the former.

The third preparation was tested for growth-stimulating activity on cultures of yeast grown in rocker tubes in Reader's medium according to the usual techniques[4]. Both the preparation from irradiated yeast and that from non-irradiated yeast showed growth-stimulating activity, contrary to our previous findings for purified nucleic acid[5]. The activity per unit weight of the preparation from irradiated yeast was about twice as great as that from non-irradiated yeast, from which one may deduce that the proliferation-promoting activity was not due to nucleic acid as such but to contaminants (possibly closely related chemically) in the crude preparations.

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Distribution of the Double Linkings in Irone

THE formulation of irene as 1 : 1 : 2 : 6-tetramethyltetralin[1] has recently been established synthetically by Bogert and Apfelbaum[2]. On the basis of this formulation of irene and the production of ββγ-trimethyl pimelic acid by ozonization of irone, structural formulæ have been postulated for this ketone by Ruzicka and his co-workers[3]. Two of the postulated structures contain the chromophoric system C = C − C = C − C = O which should therefore give rise to a characteristic absorption spectrum.

We have recently prepared a specimen of irone from oil of orris and having ascertained that it had the appropriate constants and yielded the characteristic *p*-bromophenyl-hydrazone, we examined its absorption spectrum. This was found to exhibit an intense band at 2280 A. (log ε = 4·08) and an inflexion near 3080 A. (log ε = 2·03), the two together being characteristic of an αβ-unsaturated ketone. The location of the intense band indicates the presence of a monosubstituted αβ-unsaturated ketone[4] (probably R.CH = CH − C(R) = O) and clearly shows the C = C − C = C − C = O structure to be absent. This inference is supported by the fact that the absorption spectrum of α-ionone (λ max. 2285 A.) is almost identical with that of irone (λ max. 2280 A.).

A full account of these results will be published elsewhere.

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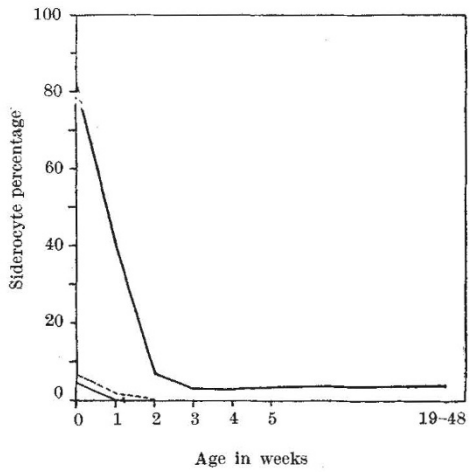
Siderocytes: a New Kind of Erythrocytes

IT is generally known that the presence of iron in the hæmoglobin molecule cannot be detected by the usual histochemical tests, such as the Prussian blue reaction with potassium ferrocyanide. As a consequence, tests for the presence of 'free' or easily detachable iron have scarcely been used in hæmatology.

I have recently investigated the anæmia associated with the recessive gene for flexed-tail and belly-spot in the mouse (*Mus musculus* L.)[1]. The anæmia is of a normocytic hypochromic type; it is severe at birth, but disappears more or less completely during the first few weeks of life; it can be shown that this improvement is inextricably linked up with the transition from the megaloblastic erythropoiesis of



PERCENTAGE OF SIDEROCYTES IN FLEXED-TAILED MICE (HEAVY LINE), NORMAL MICE (THIN LINE) AND NORMAL RATS (DOTTED LINE).

the fœtus to the normoblastic erythropoiesis of the adult, a process which in the mouse, as in the rat, largely takes place after birth.

It has recently been found that newborn flexed-tailed mice have numerous red cells which give the Prussian blue reaction for iron. (Blood films fixed in absolute methyl alcohol were treated with a freshly prepared solution of 1 per cent potassium ferrocyanide in 1 per cent hydrochloric acid at room temperature for 3–5 minutes and counterstained with Biebrich scarlet; the iron reaction is complete after one minute; identical results are obtained with hydrochloric acid concentrations down to 0·05 per cent; with 0·02 and 0·01 per cent hydrochloric acid, only a fraction of the cells will stain.) The 'iron cells' or 'siderocytes' do not stain diffusely, but show blue granules which vary in number from one to a dozen or more and in size from fairly large blobs down to the finest dust-like stipples; no such structures are visible in cells stained with Biebrich scarlet alone or with one of the ordinary hæmatological stains. As shown in the accompanying graph, the percentage of siderocytes diminishes rapidly with age; their reduction in numbers takes place at about the same rate at which the anæmia improves.

It was afterwards discovered that the presence of siderocytes is a normal feature in the embryonic life of the mouse; about 4 per cent are still present