present we have no concrete results of the action and the destiny of ribosomes when the incorporation of amino-acids in them is activated by adenosine triphosphate[5,6]. If it were possible to demonstrate that in any event the formation of determined protein substances is realized by aggregation of more or less transformed ribosomes, a new direction would be offered for work on the synthesis of proteins.

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GENETICS

Pre-albumin Variations in Primates

The pre-albumin of the monkey, *Macaca rhesus* (*Macaca mulatta*), has been examined electrophoretically by Blumberg and a possible polymorphism is described. Three types of pre-albumin were evident. In each instance the pre-albumin was presented as a single band.

In an investigation of various primate serum albumins, it was observed on starch-gel electrophoresis, using the lithium–borate discontinuous buffer system of Ashton, that the pre-albumins of higher primates could be distinguished from those of lower primates as shown in Fig. 1. The pre-albumins of man, gorilla, and chimpanzee were each composed of two bands. These three species could not be distinguished by their pre-albumin, as the two bands had a common electrophoretic mobility respectively among the three species. However, in three species of macaques, *irus*, *rhesus*, and *radiata*, pre-albumin variations were evident. *M. irus* and *M. radiata* each presented with a single electrophoretic band which is similar in mobility to the first pre-albumin of the higher primates. *M. rhesus* revealed two pre-albumin bands, neither of which corresponded to either of the two bands of the higher primates. The second band of this monkey may correspond to the single band of monkey type 3 of Blumberg.

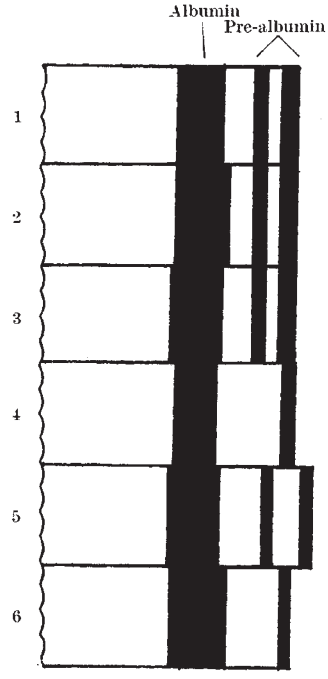

Fig. 1. Diagrammatic representation of the pre-albumins of the following primate serum: (1) human, (2) gorilla, (3) chimpanzee, (4) *Macaca irus*, (5) *Macaca rhesus*, (6) *Macaca radiata*

Thus in the pre-albumin region there appears to be a phylogenetic distinction between higher and lower primates, as has been observed in the transferrins. The higher primates, though separated by greater species barriers, appear to have a common pre-albumin pattern, whereas the lower species, all of the same genus, have a polymorphic pre-albumin pattern.

All sera used in this work were supplied by Lars Beckman. I was a trainee of the U.S. National Institutes of Health, at the Institute for Medical Genetics, Uppsala, during the period of this investigation.

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Frequencies of Teratologies among Homozygous Normal Mice compared with those Heterozygous for Anophthalmia

Trypan blue has long been known to possess teratogenic properties[1]. Several years ago Barber[2] reported being able to distinguish mouse fœtuses heterozygous for anophthalmia from those which were homozygous normals by the higher incidence among the former of eye defects in response to trypan blue administered to their dams as a teratogenic agent. All cases of defective eye development were unilateral anophthalmia; the expectation, in the absence of the teratogen, was complete bilateral normality. The anophthalmic mutant has been described in detail elsewhere[3,4].

The significance of Barber's findings prompted me to repeat and elaborate on her work. This communication confirms the observation that under appropriate conditions the anophthalmic mutant (*ey*) in a single dose appears to be able to act to bring an animal closer to a threshold for abnormal development than is the case in a homozygous normal individual. That the entire genotype may be involved in the demonstration has been suggested elsewhere[5], and is still being investigated[6]. Another phenomenon described in this communication is the ability of an animal to respond to the treatment with varying degrees of eye reduction on one or both sides; the extreme is complete bilateral anophthalmia. Both eyes are affected, and marked asymmetries in the same individual are not uncommon.

The animals used in this investigation were *ZRDCT-N* and *ZRDCT-An*; the former is normal-eyed, the latter an anophthalmic line. Both were derived by selection from a common stock, differ principally at the *ey* locus, and have been described in detail elsewhere[3]. The *ZRDCT-N* females were mated to their brothers or to *ZRDCT-An* males. Inseminations were detected by the copulation plug method[7]. Counting the day of insemination as day zero, females were injected intraperitoneally with 0·25 c.c. of a 0·3 per cent solution of trypan blue in 0·9 per cent sodium chloride during the seventh, eighth and ninth days *post coitus* (DPC). This was the régime found by Barber[2] to yield the highest frequency of eye defects, a low frequency of skeletal defects and low mortality. Mortality in the present material was very high; skeletal defects did not occur in the series reported here. There is some evidence (unpublished) that the