

The MNS Blood Groups of Australian Aborigines and New Guinea Natives

THE antigen *S* is part of the *MN* system of blood groups; it bears the same relation to *M* and *N* as does *C* to *D* and *d* in the *Rh* system of groups. In England, 54.69 per cent of people have the antigen *S*; and the gene frequencies are¹: *MS*, 0.2472; *Ms*, 0.2831; *NS*, 0.0802; and *Ns*, 0.3895.

The antigen *S* is absent from the blood of Australian aborigines. The following are the groups of 178 unrelated and allegedly full-blooded aborigines from Bathurst Island in Northern Territory and from Cherbourg and Woorabinda in Queensland:

<i>M#Ms</i>	<i>M#Ns</i>	<i>N#Ns</i>	Total
14	63	101	178
7.87	35.39	56.74	100.00

The gene frequencies are: *Ms*, 0.2556; and *Ns*, 0.7444.

In the blood of New Guinea natives, however, the antigen *S* is present. It was found in 22.7 per cent of 141 samples which had the following distribution:

<i>MM.S</i>	<i>M#Ms</i>	<i>MN.S</i>	<i>M#Ns</i>	<i>NN.S</i>	<i>N#Ns</i>	Total
1	7	13	30	18	72	141
0.71	4.96	9.22	21.28	12.77	51.06	100.00

The gene frequencies are approximately *MS*, 0.0522; *Ms*, 0.1489; *NS*, 0.0843; and *Ns*, 0.7146. It can be calculated that 26 per cent of the *M* genes are *MS*, and 10.5 per cent of the *N* genes are *NS*. This ratio of 2.5 to 1 is close to that found in England, namely, 2.8 to 1.

It is of interest to note that the anti-*S* serum makes such a sharp distinction between Australian aborigines and New Guinea natives, while anti-*M* and anti-*N* alone show but little difference between these two anthropologically distinct groups.

A fuller account of this work will be published elsewhere, together with the results of tests for *ABO*, *Rh*, *P*, *Lewis*, *Kell* and *Lutheran* groups.

RUTH SANGER

Red Cross Blood Transfusion Service,
374 George Street,
Sydney.

¹ Race, R. R., and Sanger, Ruth, "Blood Groups in Man" (Blackwell Scientific Publications, Oxford; in the press).

Soviet Genetics: the Real Issue

PROF. NUZHDI¹ states that in the U.S.S.R., "Morganism [neo-Mendelian genetics] is being routed as a reactionary trend in science", that it is "against the people", and more to the same effect. This appears to be a complete admission of the truth of my general thesis, namely, that in the U.S.S.R. Mendelian genetics has been officially repudiated and declared untrue not on scientific but on political or ideological grounds.

It is difficult to discuss the matter with someone who believes that "capitalist science" is something different in its nature and methods from Soviet (communist) science, and "cannot be objective"; or indeed that any branch of natural science can be "reactionary". A reactionary use may be made of its facts or principles; but the facts and principles are ethically and politically neutral, while if we believe

that the discovery of new material knowledge is in itself a good, and an indispensable tool for possible human progress, then any branch of science which adds to knowledge must *per se* be progressive.

One of the most remarkable scientific achievements of this century has been the discovery that the main (and probably almost the sole) organ of heredity throughout living organisms is the gene-complex in the chromosomes, capable of self-copying but also of the occasional variation known as mutation; the variants are therefore subject to differential reproduction as an automatic result of natural selection; and this in turn is the main (and probably almost the sole) agent of evolutionary change.

This was made possible by the combined efforts of biologists in every scientifically advanced country, including the U.S.S.R., and of every class and political persuasion, including Communism. It is now established scientific knowledge, and will remain so whether heritable variations can sometimes be directly induced, whether they can be induced by "graft-hybridization", what the precise chemical composition and structure of the genes may be, etc. It is just as well established as the fact that the organ of vision in vertebrates is the eye, with its main receptor system composed of rods and/or cones in the retina. The fact that the organ of heredity is the gene-complex and the organ of vision is the eye are facts of Nature, and cannot be either reactionary or progressive. "The interests of the people" cannot alter the fact of the existence of gene-complexes in the people's chromosomes, any more than they can alter the fact that the earth is spheroidal and follows an elliptical path round the sun. And yet Lysenko, in his 1948 Report, actually referred to "Morganism" as "a pseudo-science".

If racists and anti-democratic eugenicists have endeavoured to bolster up their views with the aid of Mendelism, this again does not prevent the facts of Mendelism from being true, or prove Mendelian genetics to be reactionary. Propagandists will use what material they can find: the late Prof. MacBride justified his very reactionary eugenic views not on Mendelian but on Lamarckian grounds.

Prof. Nuzhdin says that Morganism is being attacked in the U.S.S.R. as reactionary because "its theoretical postulates lead to [certain] conclusions", for example, that "in man the bad genes are spread among the broad masses of working people, also among Negroes, Jews, Malaysians, etc.", and that accordingly "Morganism recommends . . . sterilization".

This is, to start with, untrue. Mendelism does not start from any theoretical postulates: it has built up certain theoretical principles inductively on the basis of a large number of experimentally ascertained facts. Secondly, it has never asserted that working people, Jews, etc., necessarily contain an undue proportion of "bad genes". Thirdly, Morganism "recommends" nothing, any more than does the atomic theory of matter. Further, the existence of inequality of genetic endowment among human individuals is a fact; but neither this, nor the genetic inequality of human groups if it were ever proved, can prevent the existence of chromosomal gene-complexes as a fact of Nature.

It is quite possible that we shall discover how to produce directed variation experimentally, as we have already produced undirected mutation, and that treatments such as grafting may exert a permanent genetic effect (though so far all attempts to