

17th February 1954.

Sir Ronald Fisher, F.R.S.,
44 Storey's Way,
Cambridge.

My dear Ron,

I am, as you know, at work upon the chapter on polymorphisms in my book on medical genetics and this, of course, mainly involves the blood-groups. There is one point upon which I personally feel strongly, and it may be that I am alone in doing so. This is the question of the genetic nomenclature involved. I hold that the genes, the antigens (with their antibodies) and the groups themselves ought to be distinguished in the nomenclature. The failure to do this is at present most flagrant in the O, A, B series. Race and Sanger use A, B and O not only for the antigens but also for the genes producing them and so, I think, does everyone else, except myself. I am, of course, well aware that the excuse for doing so is the exceedingly close chemical connection between gene and antigen, but that is, in my opinion, no excuse at all for the muddle introduced in this way, and there is a severe muddle as shown up in three respects. (1) We have here a flagrant exception to the accepted nomenclature for multiple allelomorphism in the whole of genetics (it is, of course, a possibility that we are really dealing with closely-linked genes, not allelomorphs, but we are at present working on the assumption that these are allelomorphic). (2) This system as at present used *fails* in the fundamental of genetic nomenclature: that is to say, there is nothing in the gene-symbol to show that we are dealing with the same series, e.g. O and A are meant to be allelomorphic. Such a thing would never be allowed elsewhere in genetics. (3) This leads to a very real practical difficulty. Over and over again in reading about blood-groups it is simply not clear whether the author is talking about the gene or the antigen it produces. Now, I think you and I, knowing the subject as we do, may hardly realise how real is the confusion introduced thereby. I have several times had intelligent students point to O or A in Race and Sanger's book and say, "What does this refer to, a gene or an antigen?" You and I read in automatically the correct interpretation; but it just is not clear in the writings of Race, and students realise that.

I took up this matter in my book on medical genetics twelve years ago, and adopted for the O, A, B and MN series a correct nomenclature on the accepted basis of multiple allelomorphs everywhere in genetics.

P.T.O.

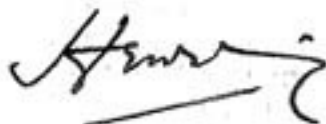
or study
That has never been adopted: partly, I suspect, because many who work on blood-groups do not work on anything else in genetics, and some of those who do, like you and I, are so familiar with what is going on that there is no confusion in our own minds. I wish you would read through my own nomenclature again on pages 108 - 111 in my little book, of which I know you have a copy. My difficulties are, to some extent, set out at the bottom of page 110 and continuing on 111.

You will realise my difficulty, my dear Ron. I want to go on with this type of distinction which I have already introduced, because I feel, as it were, morally bound to do so; but if you can produce good arguments to the contrary I should accept them. You will notice that Race and others make distinctions of gene symbols elsewhere, e.g. Duffy group, antigen Duffy+ or Duffy-, gene-symbol F_y : why then do they tolerate the far worse muddle involved in their handling of the O, A, B series?

I am sorry to bother you with this, but you know that I will never pass unchallenged a failure in what I (though perhaps mistakenly) believe to be right.

With best wishes.

Yours always,



In short: If you are happy about the present system, I am content - but I do want to know your feelings about it.