Letter to the Editor Simian Rotavirus SA11 Strains

Several years ago we reported the nucleotide sequence of the gene 4 (which codes for VP4) of simian rotavirus SA11 (4), which at that time was the reference strain in many laboratories. In that paper, we also described that the gene 4 of our SA11 strain had a faster electrophoretic mobility than the gene 4 of the SA11 strain used in the laboratories of Dr. M. K. Estes and Dr. I. H. Holmes (4). We thought then that the original SA11 stock that Dr. Malherbe had distributed to several laboratories consisted of two viral subpopulations, which differed in the mobility of, at least, their RNA segment 4 and which probably were differentially selected. Similar observations were made by Dr. H. Pereira and colleagues in Brazil, where they cloned two viral subpopulations from the SA11 stock obtained from Dr. Malherbe; the clones were named 4S and 4F, for slow- and fast-moving segment 4, respectively (7).

In a later work, comparing the amino acid sequences of the trypsin-susceptible region of the VP4 protein of several rotavirus strains, we found that the gene 4 of the SA11 rotavirus used in our laboratory was different from that of the SA11 used in Dr. Estes' laboratory (5). Our strain was then named SA114fM, 4f for fast-moving segment 4, and M for Mexico, to differentiate it from Dr. Pereira's SA114F strain

In the September 1990 issue of the Journal of Virology, Gorziglia et al. (2) reported the sequence characterization of rotavirus mutants that escaped neutralization by an antirotavirus hyperimmune serum. The rotavirus strain they used was called SA114fM (2). To our knowledge, this strain is not the SA114fM strain reported by us (5), because the authors refer the origin of their strain to Dr. Richard Ward (2), who in turn received it from Dr. Estes in 1984 (3). In addition, as the source of the sequence data for their "SA114fM" gene 4 (Fig. 3 legend of ref. 2), they refer to a previous work in which they characterized an SA11 strain with a fast-moving segment 4 named SA114FEM (6). The VP4 protein of the SA114FEM strain differs by one amino acid from the VP4 protein encoded by our SA114fM gene 4 (6).

It is now clear that the same VP4 gene can express different phenotypes depending on the genetic background it is immersed in; the protease-associated phenotype of rotavirus SA114F gene 4 is expressed in a similar but not in a bovine rotavirus genetic background (1).

Since the strain used in Dr. Gorziglia's work and the SA114fM strain used in our laboratory have not been compared directly, we consider that it is not appropriate to assume they represent the same strain, because although they have almost identical VP4 genes, they could differ in other genes.

We would like to stress that to avoid discrepancies in the conclusions reached with the SA11 strains used in different laboratories, the SA11 strain employed in each work should be carefully identified.

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Editor's Note

The authors of reference 2 declined to comment.