likely was the antigen to be absent or masked. Further studies along these lines should be most interesting.

As yet, we have not ourselves studied malignant cells freshly isolated from the body. What we have made objects of testing are HeLa cells, and here the "species" antigens appear to be well developed and of the "blood cell iso-antigens," H, and MN-type antigen and Tja are present (13). These cells, as expected, do not possess the Fossman antigen but will acquire it if grown in serum from a Fossman-positive animal. As mentioned in the previous section, "leukocyte iso-antigens" are also to be found on the membrane of HeLa cells (see Figs. 2A and B), although whether they contain their full quota cannot be told with our present poor knowledge of this group of antigens.

"L" cells also react powerfully with antisera to the "species antigens" of mouse red cells, but they appear to have dropped the Fossman antigen (7), which is present on recently isolated mouse tissue cells.

To conclude this section, it would seem that the mixed agglutination and mixed antiglobulin reactions could profitably be used, along with the other existing immunological methods, to map, as completely as possible, the antigenic structure of normal cells of an inbred animal line. A similar examination of the cells of a spontaneous or induced tumor might well afford further evidence on this question of antigen loss during malignant transformation.

REFERENCES


