# Implications of Polyoma Virus

The important work of Stewart, Eddy, and their collaborators (J. Natl. Ca. Inst. 20, 747, 1223, 1958; 22, 161, 1959; Nature 183, 766, 1959) has shown that a mouse tumor virus (originally causing leukemia and parotid gland tumors in mice) can, on cultivation in tissue culture, turn into a pluripotent tumor virus able not only to infect random bred and inbred mice but also to cross the species barrier and infect hamsters, rats, and rabbits. Sachs and his coworkers (Brit. J. Cancer 13, 251, 452, 1959) have shown that this virus can infect mice from the same cage, can spread to adult animals, and can be transmitted to rats and rabbits.

Such a transformation in a tumor virus may come about through mutation, through removal, via the expedient of tissue culture, of inhibitors of tumor viruses normally present in animal tissue, or through activation of a provirus.

It occurs to the writers that these data contain the seed of a potentially very dangerous situation. It seems to be possible that, in the course of work similar to that described above, a mutant tumor virus might be formed, or a virus released from inhibition, which would cross genetic barriers to such an extent as to be infective for humans. Also, the large amount of experimentation now started all over the world on the search for viruses in human tumors might result, on cultivation of such viruses in tissue culture, in the production of variants with the potential of spreading to susceptible individuals or populations. Such a possibility should certainly be seriously considered. It might be worthwhile to think of establishing a committee, national or international in scope, dealing with such eventualities, and designed to consider the public health aspects of this problem.