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USE OF EGG WHITE IN MAINTENANCE MEDIUM FOR FL CELL CULTURES *

SOPHIA M. COHEN AND H. MIRCHAMSY**

Egg white was compared with calf serum in maintenance medium for FL cell cultures, following the recent report of its use in the maintenance of various cell cultures and the propagation of enteric viruses (Guerin and Kitchen, Proc. Soc. Exper. Biol. and Med., 1960, 104, 496). Medium 199, which contained 15-per-cent tryptose phosphate broth, was supplemented with egg white or calf serum in a final concentration of 10 to 12 per cent. Comparative titrations were made of several viruses in FL cell cultures maintained with the two media.

In cultures infected with the Edmonston strain of measles virus, the MacIntyre strain of herpes, and a variant of the latter that regularly induces the formation of giant cells, cytopathic effects tended to develop earlier in cultures maintained with egg-white medium but the virus titer was the same as that in cultures with calf-serum medium. A para-influenza 1 (HA2) virus, whether cultivated in monkey kidney cell cultures or adapted to FL cells, gave higher titers of infectivity or hemagglutination in the FL cell cultures with calf-serum medium. Results varied with a para-influenza 2 strain; egg-white medium was more favorable for virus from the first or second passage in FL cells but there was no difference with the 8th FL passage virus. With para-influenza 3 virus adapted to FL cells, egg-white medium proved to be particularly advantageous. The mean 50-per-cent tissue culture infective dose per ml. in four titrations was $10^{7.67}$ with egg-white medium and $10^{6.86}$ with calf-serum medium. Four comparative plaque assays of the para-influenza 3 virus made with agar overlays containing a final concentration of 2.5 per cent of egg white or calf serum gave mean titres of $10^{6.92}$ and $10^{6.56}$ plaque-forming units per ml. respectively. One-per-cent egg white was sufficient for maintenance of cell cultures and virus titres were as high as in medium with 10-per-cent calf serum. The calf serum had shown no complement-fixing activity with para-influenza 3 virus antigen in a 1 :4 dilution.

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** *Post-doctoral Research Fellow, U.S. Public Health Service, National Institute of Health on leave from the Razi Institute Tehran Iran.*