

other characteristics of long-cultured infectious mononucleosis leucocytes are thought to be attributable to the presence of EB virus; they do not, on their own, indicate that infectious mononucleosis is a disease with an inherent neoplastic potential.

EB Virus and Other Diseases

B. G. ACHONG (*University of Bristol, Bristol*) EB virus is very closely associated with two human neoplasms—Burkitt's lymphoma and nasopharyngeal carcinoma—and a very large body of evidence has accumulated supporting the view that the virus does indeed play a

causative role in these two malignancies.

Thus 100% of patients with Burkitt's lymphoma or nasopharyngeal cancer have antibodies to EB virus VCA; the EB viral genome is present in all Burkitt tumours and in the malignant epithelial cells of nasopharyngeal carcinoma, and in the case of Burkitt's lymphoma is expressed *in vivo* by the production of viral-determined membrane antigen in the tumour cells; the virus confers the power of unlimited proliferation in culture on normal human peripheral lymphocytes and satisfies the criteria established for transformation of normal cells *in vitro* by known oncogenic animal viruses including induction of cellular DNA

synthesis, production of neo-antigens analogous to membrane transplantation antigens and nuclear T antigens, and the ability of the transformed cells to grow on heterotransplantation to laboratory animals to form invasive, metastasizing fatal tumours; the ability of the viral genome to be activated by BUDR; the extremely close parallels between the biological behaviour of EB virus and that of known oncogenic animal herpes viruses and finally recent experiments describing the development of malignant lymphomas in South American primates following inoculation of the virus have demonstrated the oncogenic capacity of EB virus *in vivo*.