## The mitogenic response of cryopreserved human lymphocytes in a microculture system Abstract:

Fresh blood lymphocytes from nine health donors have been compared with samples from the same donors, recovered after period of 2 to 21 months storage in liquid nitrogen, for the capacity to respond to a range of mitogens in vitro. A microculture assay was used, requireing aliquots of only 25,000 cells. The mean levels of 14C-thymidine uptake for fresh and frozen samples were closely comparable when the cells had been stimulated by PHA, Pokeweed or mitomycin-C-treated allogeneic lymphoblastoid cells. Lymphocytes from six East African donors, frozen by a very simple technique, were recovered after 3 or more years storage in liquid nitrogen. Five of the samples were in good condition as judged by cell viability and the capacity to form spontaneous 'E' rosettes with sheep erythrocytes. These five samples also responded extremely well to PHA, PWM and mitomycin-C-treated allogeneic lymphoblastoid cells using the microculture assay. This study extends the range of applications of cell banks in which small aliquots of blood lymphocytes are stored in liquid nitrogen for periods of several years.