AIMS AND OBJECTIVES
Cancer is a leading cause of mortality and morbidity and the notion exists that early detection through screening may lead to a cure or prolongation of life of patients (Diamandis, 1992). In theory at least, a very small tumor might be able to stimulate detectable level of antibodies well before the tumor associated antigens released from it reaches levels of detection (Sulitzeanu, 1985). Since expression of new antigens is a property associated with neoplastic transformation an approach to develop an in vitro neoplastically transformed human cell model expressing cancer associated antigens, detectable by screening with sera samples from cancer patients, could be used to monitor the malignant disease. Generating specific cell line(s) with newly appeared cancer associated antigen(s) could in turn prove useful for exploring the possibilities of early detection and diagnosis of different cancers in future. This assumption was made as the basis of the present study and the following aims and objectives were undertaken:


2. (i) Detection of proteins (antigens) associated with neoplastically transformed (MNNG exposed) BS cells (BS-MNNG)

(ii) Enrichment of BS-MNNG cells by panning against antibodies from Hodgkin's lymphoma sera samples.

(iii) Comparative analysis of SDS-PAGE and 2-D gel electrophoresis separated proteins derived from MNNG exposed/unexposed Bloom syndrome (BS) and normal (GA₃) B-lymphoblastoid cells followed by Western analysis, using sera samples from cancer patients.
and normal individuals to determine if any newly synthesized protein(s) are associated specifically with the enriched (panned) BS-MNNG cells.

3. Molecular characterization of Bloom syndrome (BS), enriched BS-MNNG and normal (PBLs and GA3) cells to determine genomic variations if any, in T-cell receptor γ gene; the tumor suppressor gene, p53; and cellular oncogenes c-myc and c-myb.