OBJECTIVE
2. OBJECTIVE

In view of the increased incidence of breast cancer in Indian women in recent times, there is a need for local availability of specific markers with potential clinical application in early diagnosis as well as in prognosis of the disease. The classical tumor markers, such as carcinoembryonic antigen (CEA) and tissue polypeptide antigen are neither sensitive nor specific enough to indicate the early stage or metastatic spread of the malignant breast disease and hence not considered as useful diagnostic or prognostic agents for breast cancer. Using monoclonal antibodies, a family of related but not identical high molecular weight tumor associated glycoprotein antigens have been detected in breast tumors. The specificity of a number of these antigens are in question. Some of the breast tumor markers are overexpressed normal protein constituents while others are associated with malignancy of various organs. Regarding male breast cancer, though some etiological factors of it have been reported, not much is known about the immunological aspect of the disease.

The present work was undertaken with the following objectives:

a) To purify and characterize a tumor associated antigen (TAA) from breast tumors of female patients.

b) To explore the immunological relevance of the breast tumor associated antigen (BTAA) with a special reference to the antibody production by the breast cancer patients.

c) To explore the possibility of using the BTAA as a diagnostic and prognostic agent of breast cancer.

d) To study the immunological relatedness of the female BTAA with a TAA purified from MuMTV induced murine mammary tumor.

e) To explore any possible association of MuMTV or a related virus with human breast cancer.

f) To explore the presence of a TAA in male breast cancer.

g) To study the immunological relevance of female BTAA and murine mammary tumor associated antigen (MTAA) in male breast cancer.

h) To assess association of MuMTV or a related virus in male breast cancer.