The EDTA extracts of the cuticular antigens of bovine filarial parasite *Seteria digitata* were affinity purified using sepharose bound filarial (*Wuchereria bancrofti*) antibodies obtained from chronic human filarial sera. Selective extraction of the cuticular antigen at high EDTA concentration was successful in isolating a low molecular weight (15 kDa) peptide showing specificity in recognizing antibodies from human filarial subjects but was non-reactive or weakly reactive with other parasitic infection sera. The filarial specific antibodies (from Mf +ve individuals) bound to 15 kDa peptide in preparative western blots were eluted and employed in the screening of candidate antigens expressed in the genomic library of *W.bancrofti* at the IgG4 subclass antibody level. A recombinant clone (λWbG7) reacting strongly and specifically only with the filarial sera was selected for further studies. The 2 kb DNA insert of λWbG7 was recloned in pMAL vector for over expression and purification of the filarial specific parasite antigen. The resultant recombinant clone pGT7 expressed a fusion protein of 105 kDa. At the IgG4 level only the Mf positive and tropical pulmonary eosinophilia (TPE) patients sera exhibited strong recognition for this antigen. It was unrecognized by the chronic filarial patients sera. Interestingly, some of the sera of the endemic individuals, classified as "normal" nevertheless showed strong recognition for this antigen again at the IgG4 level. In subsequent vigorous screening of night blood samples 14% of these seropositive individuals were demonstrated to be Mf +ve. These observations combined with the specific recognition of the antigen by mf+ ve patients sera, strongly indicated the
possibility of using this recombinant antigen as a diagnostic agent for the detection of the early state of the disease. In addition, the filarial specific TPE status can also be diagnosed by the use of this antigen. Murine polyclonal or monoclonal antibodies raised against the recombinant antigen pGT7 was employed as revealing antibodies in the detection of circulating antigens in bancroftian filarial patients. All (100%) the asymptomatic and the symptomatic Mf positives (100%) showed antigenemia in the test. Among 28% of the asymptomatic, amicrofilaraemic, endemic normals that were antigen positive in our assays, 43% of them showed Mf +ve by the routine night blood examinations. A significant correlation between quantitative antigen values and the microfilarial counts in night blood smears were obtained which is an ideal scale to measure and monitor active filarial infections in endemic population.