CONCLUSIONS

The following conclusions were `drawn from the present study:-

- The Polyclonal antibody, anti-OP-1 produced from the mouse ascitic fluid against purified antigenic fraction OP-1 (f) from the synovial fluid of osteoarthritic patients was useful in detecting the presence of OP-1 in the synovial fluid of other OA patients which can be used in the immunodiagnosis of osteoarthritis. OP-1 might serve as a biochemical parameter for determining disease severity in primary knee OA, further work including comparison with normal synovial fluid in different age and sexes and longitudinal study with follow up after treatment would be required, before OP-1 can be used as a marker of disease status and prognosis in osteoarthritis. Synovial fluid can be used for the isolation of OP-1.

- The significant decrease of antioxidant enzymes in the blood and HA level and increase of KS level in the synovial fluid supports the plausible role of oxidative stress in OA and may pave way for developing different preventive and therapeutic strategies.

- The findings of negative correlation between OP-1 and age suggest an age related decline in the anabolic activity of OP-1, showing an increase in the catabolism of articular cartilage which may help us in understanding the potential for the therapeutic interventions in the treatment and monitoring of OA.
The significant positive correlation between OP-1 and UA suggest that there may be a relationship between them which might be useful for the prognosis or diagnosis of inflammatory processes in articular joints. Further studies on the relationship between OP-1 and UA may provide a pathological insight in the disease process of OA which may be useful for designing therapeutic strategies.

From the demographic characteristics (age, gender and ethnicity), it can be concluded that OA develops with increasing age indicating destruction of the articular cartilage. Highest number of females suffering from OA shows some role of estrogen in progression of the disease. Bhutia community had the maximum patients suffering from knee OA and this may explain that dietary and genetic factor may have a role in progression and development of OA. Further, studies on genetic environment interactions will be required to substantiate the cause of increase incidence of knee OA in certain ethnic groups of Sikkim.