Chapter V

Conclusion

Monoclonal antibody offers great promise as a immunochemical tool, especially as reagents in immunoassay, but such antibody has not yet been widely used in assays of substances of clinical interest. The fact that they react with a single antigenic determinant in the corresponding antigen brings up the possibility that unexpected cross reactivities could appear.

In this study two hybridoma cell lines have been established and propagated in pristane primed mice where milligram per milliliter quantities of monoclonal antibodies to AFP can be obtained from ascites fluid. They can be utilized to establish highly sensitive IRMA for AFP.

The results indicate that a sensitive, precise and accurate IRMA for the measurement of AFP levels in normal serum samples was achieved in one step incubation using monoclonal anti AFP I coated on solid phase cellulose together with I^{125} monoclonal anti AFP II as a tracer and purified AFP as a standard. This assay has a wide working range from 0-1000 ng/ml and yields good correlation with commercial Amerlex-M AFP RIA kit.

A sensitivity to detect 0.63ng/ml of AFP has been obtained. Since two monoclonal antibodies bind to different site of AFP, they do not compete for binding. Use of the monoclonal antibody on both sites of the sandwich also makes this assay highly specific. This rapid, simple, specific and sensitive assay is useful in diagnosis and follow up of liver cancer and teratocarcinoma as well as in prenatal diagnosis of a number of fetal malformations.