PART I. A NEW COMPETITIVE INHIBITION TECHNIQUE FOR DETERMINATION OF PLASMA FIBRONECTIN ACTIVITY AND PLASMA FIBRONECTIN IN \( \beta \)-THALASSEMIAS/\( \beta \)E

PART II. THE ROLE OF PLASMA FIBRONECTIN AS A NON-IMMUNOLOGICAL OPSONIN TO PROMOTE MONOCYTE PHAGOCYTIC FUNCTION IN \( \beta \)-THALASSEMIAS/\( \beta \)E

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A competitive inhibition assay for plasma FN concentration, based upon its ability to bind gelatin specifically, had been developed. This method was a modification of the one described by Duran et al [42]. Affinity-purified FN inhibited binding of alkaline phosphatase conjugated FN to gelatin-coated wells of microtiter plate in a concentration-dependent manner. The standard curve was best for the assay ranging from 25-300 μG FN/ml. It was thus suitable for both the measurement of plasma FN in normal and opsonin deficient individuals. This quantitative method was found to be accurate, reproducible and less time consuming.

Plasma FN concentration of normals (males and females) and β-thalassemia/Hb E patients (non-splenectomized and splenectomized) were measured by the developed method. The normal plasma FN levels were found to be 378.0 ± 87.7 μg/ml and there were no significant difference between males and females. The plasma FN levels of β-thalassemia/Hb E patients were lower than normals (p-value < 0.05), but there were significant differences between non-splenectomized and splenectomized patients. The decrease levels of FN in all thalassemias suggested that there might be a reduction in synthesis within the affected liver due to iron accumulation.