centration order of ng/m*l* , a valid calibration curve was obtained by using 1/15 M phosphate buffer of pH 6.4 containing 2.5% protein, 1: 4000 antiserum added with trasylol and two-step method.

For those assay samples of a secretin concentration order of pg/m*l*, a nearly satisfactory calibration curve could be obtained by using two-step method with 1/15 M phosphate buffer of pH 6.4 containing 1.5% protein and 0.2 m*l* of 1: 5000 antiserum added with trasylol. Since, however, this assay method still presents difficulties to be overcome especially regarding reproducibility and recovery test and is not sensitive enough to permit correct measurement of secretin in the blood, further studies along these lines are needed to improve the assay procedure.

Fundamental and Clinical Studies on an Anti DNA Radioassay Kit

Yoshito MORIMOTO*, Norishige OSHIRO*, Wataru MIZUTA*, Toru MORI**,
Kenzo UENO** and Hideo TAKAYAMA**
**Central Clinical Laboratory, and **Department of Internal Medicine*
Kobe Central Municipal Hospital

A sensitive and quantitative test for anti-double strang DNA antibody is quite desirable.

This paper reports fundamental and clinical studies of a new anti DNA radioassay Kit from Radiochemical center. This is an immuno-radio metric method, and 125-I labeled double strang DNA and heat treated serum were incubated, and formed immune complex was precipitated by 50% Ammonium salfate. Antibody titer was expressed as unit by comparison to the provided standard serum. Heparinized or citrated plasma showed lower result than serum sample, and storage at 4 C was found good only for 1 week, but 50 day strage at −20 C resulted in 107±38% (inter assay variability) When pretreatment of serum at 56 C for 30 min was omitted or pretreated at 37 C, nonspecific binding of 125-DNA was found. Intraassay variability at low and higt anti DNA levels were 23% and 14%, respectively. Dilution curve of potent serum paralleled to the standard curve. These reuslts were considered to show some possible non specificity of the assay, however, under careful control of the assay, a reliable and quantitative assay could be achieved.

Clinically 109 samples were tested, and 25 normal subjects of the third and forth decade ranged from −10 to 5 units/m*l*. Some patients with SLE showed extremely high values (max 860 u/m*l*, n=25, mean 107.3±188.4), but most patients with RA, other autoimmune disease and miscellaneous disease had values less than 25 u/m*l*. The results appeared to correlate with NBA tests, ESR, LE cell, LE test and hypergammaglobulinemia, but anti-DNA antibody by this method was found most specific to SLE.

Chronological observations of anti-DNA antibody titer also gave useful clinical information in indivisual cases.

Fundamental Studies and Establishment of the Double Antibody Radioimmunoassay Method for Human Ferritin

Isao NAKAMURA, Mikiyo KOJIMA, Takahiro NAKAJI and Shigeaki BABA
Second Department of the Internal Medicine, Kobe University School of Medicine, Kobe

The double antibody radioimmunoassay method for human liver ferritin was studied to establish a microassay. We purified serum protein-free ferritin from human livers, and made anti-human liver ferritin rabbit serum by immunizing with the purified ferritin. For iodination of the ferritin, we used a modified method of Hunter and Greenwood, and ^{125}I-labeled ferritin was