THE MEASUREMENT OF SERUM THYROGLOBULIN (Tg) USING ANTIBODY TO Tg MONOCLONAL ANTIBODY (MoAb). T. Tobinaga, T. Sakamoto, I. Kubo, S. Ohtaka, K. Kerita, N. Yokoyama, K. Kakezono, U. Nagayama, T. Kiriyama, S. Okamoto, I. Morimoto, M. Izumi, S. Nagataki. The First Department of Internal Medicine, Nagasaki University School of Medicine.

The serum Tg concentrations cannot be measured in the majority of patients with thyroid disorders, because of the presence of anti Tg autoantibodies (Auto Ab) in their serum, which cross-react with polyclonal anti Tg Ab used in the assays. This study was, therefore, undertaken to develop a new Tg assay method using MoAb which does not cross-react with Auto Ab and has a high affinity for Tg and is specific for human Tg. Two kind assay methods have been tried using sandwich technique, MoAb-MoAb and polyclonal Ab (poly Ab)-MoAb. The both assay methods showed good standard curves whose sensitivity to detect serum Tg concentrations was as low as 4ng/ml in both. However Auto Ab interfered with a standard curve in the poly Ab-MoAb sandwich method but not in the MoAb-MoAb sandwich method. In summary, the serum Tg concentration can be measured in the presence of Auto Ab using a MoAb-MoAb sandwich method.

EVIDENCE THAT THYROID BLOCKING TYPE ANTIBODY (B-IgG) FROM A PATIENT WITH PRIMARY MYXEDEMA INHIBITS TSH- OR THYROID STIMULATING IgG(TSI) -INDUCED THYROGLOBULIN (Tg) RELEASE IN VITRO. Y. Fukue, H. Uchimura, S. Okano*, Y. Kanaji*, and F. Takaku. Third Department of Medicine, Faculty of Medicine, University of Tokyo; and Kanaji Hospital*, Tokyo, Japan.

In our previous report, TSH and TSI have been demonstrated to stimulate Tg release in human thyroid monolayer cells in a dose- and time-dependent fashion. The present study was performed to see whether B-IgG from a patient with myxedema affects Tg release induced by TSH, TSI, PGE2, Forskolin (FSL) or dibutyryl cAMP (DBC) in human thyroid cells. Cells were prepared by enzymatic dispersion of thyroid tissues obtained from Graves' patients. Day 9 to 15 cultures were used in the experiments. All IgG's were prepared by Protein A Sepharose affinity chromatography. Tg concentration was measured by RIA. Results

1)When effects of graded doses of B-IgG on Tg release induced by TSH were tested, Tg release was inhibited in a dose- and time-dependent manner. TSI-induced Tg release was also inhibited in a dose- and time-related fashion. 2)When effects of B-IgG on Tg release by such thyroid stimulators as PGE2, FSL, and DBC were examined, no inhibitory effects were observed. Conclusion. These results indicate that B-IgG affects post receptor processes specific for the TSH action.