〔Igakunoayumi, **139**, 529 (1986)〕

Anti-Striational Muscle Antibodies in Myasthenia Gravis—— Especially in Myasthenia Gravis with Thymoma——

MITSUHIRO OHTA, KIYOE OHTA, FUMIYO MORI, MAKIE ITAGAKI, KYOZO HAYASHI* and HIROSHI NISHITANI

In order to investigate the antibodies directed against skeletal muscle, we developed a solid-phase radioimmunoassay using a PBS extract of human skeletal muscle as an antigen sourse. Forty-one out of 44 myasthenia gravis (MG) patients with hymoma had antibodies to muscle PBS extract, while 14 out of 48 MG patients without thymoma did. There was a significant difference in positive percentages of the antibodies between MG patients with and without thymoma. There was no correlation between titers of anti-skeletal muscle antibodies and anti-acetylcholine receptor antibodies. This serologic test may be useful for the evidence of presence of thymoma in patients with MG, in addition to the measurement of anti-AChR antibody.

〔Anal. Biochem., **154**, 624 (1986)〕

A Highly Sensitive Assay Method for Human Placental Alkaline Phosphatase Involving a Monoclonal Antibody Bound to a Paper Disk.

KAZUYUKI HIRANO*, YUICHI IIIZUMI, YUJI HAYASHI, TSUYOSHI TANAKA, MAMORU SUGIURA, KYOZO HAYASHI, ZHEN-DA LU, SHIRO IINO

A monoclonal antibody which is specific for human placental alkaline phosphatase (PALP) and does not cross-react at all with intestinal alkaline phosphatase was prepared, and a procedure for the determination of PALP activity in serum was developed involving this monoclonal antibody bound to a paper disk. The minimum amount of PALP detectable by this method is 0.0025 King-Armstrong unit. Good correlation with the heat-treatment method was obtained. Therefore this proposed method can be used as a routine clinical test for the determiantion of serum PALP.

〔Clin. Chim. Acta, **155**, 251 (1986)〕

Determination of Mitochondrial Aspartate Aminotransferase in Serum.

KAZUYUKI HIRANO*, KAZUKO MATSUDA, TETSUO ADACHI, YOSHIMASA ITO, KYOZO HAYASHI, FUMITAKA OKUNO, YASUTOSHI MUTO

Two specific and sensitive immunoassay methods for the determination of mitochondrial aspartate aminotransferase (m-AST) are described. One is a sandwich enzyme immunoassay which measures immunologically active m-AST. The other is a paper disk method which measures catalytically active enzyme bound to anti m-AST antibody-conjugate paper disk. These assay methods were used to monitor the level of m-AST in serum. From measurements obtained by both methods, the correlation between the concentration of m-AST protein and its activity was poor confirming that an inactive form of m-AST exists in serum, and that the specific activity of serum m-AST differs in individual diseases.