centration of thiamine were more promoted the growth of axons and hyperplasy of neurons than the thiamine only.

These promoting phenomena are also help to the accelerated power of the satellite cells (Schwann cell, oligodendrocyte and others).

The neuron under these condition are demonstrated the increasing DNA and RNA contents by the microspectrophotometry.

It is presumed that the thiamine requirement of neuron is more promoted by the added the co-enzyme, and this is probably concerned with the glucose metabolism.

82. Adenosine Triphosphatase Activity of Subcellular Units of Guinea Pig Cerebral Cortex

MITSUO EBARA, KEIICHI UEMURA, and KATSUYOSHI AKASHI
the 2nd Department of Surgery, Toho University School of Medicine

The adenosine triphosphatase (ATP-ase) of neural tissues, like those of muscle, may participate in the tissue's utilization of metabolically derived energy.

We studied the ATP-ase activity on subcellular units of guinea pig cerebral cortex.

Guinea bip cerebral cortex disintegrated in 0.32M-sucrose solution was differentially centrifuged to yield four fractions. Nuclei, Mitochondria, Microsome and supernatant.

The activities of the fractions in catalysing liberation of inorganic phosphate from ATP was measured in the presence of Mg, Ca, Na, K ions and Ouabain.

The greatest activity was found in the mitochondrial fraction and a large acceleration of ATP-ase activity in cerebral tissue was effected by Mg salts.

The 10^{-5} M-Ouabain and 5mM-Desoxycholate was found inhibitory to the ATP-ase of both mitochondrial and microsomal fractions.