

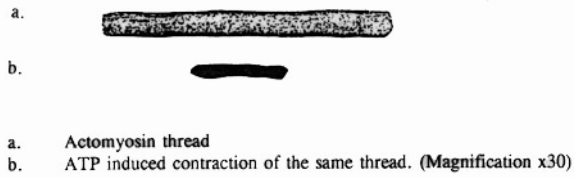
## INTRODUCTION

Motion is one of the basic phenomenon of life. About 40% of the animal body consist of muscle, producing fast and slow movements, pumping the blood, or delivering the fetus.

The mechanism of muscle contraction has been extensively studied in the 20<sup>th</sup> century. At the beginning, physiologists looked on muscle as a machine that can generate power, heat, and has electrical properties. Later, the question was raised what is the composition of the machine and what is the energy it utilizes. The central role of proteins in contraction has been recognized when Albert Szent-Györgyi (Fig. Albert) demonstrated that muscle contraction could be reproduced in vitro by adding ATP to actomyosin threads (Fig. AM). This put muscle research into a high gear. The book of Szent-Györgyi (1951) describes the classical experiments carried out in his laboratory, in Hungary, during the Second World War.



**Fig. Albert.** Professor Albert Szent-Györgyi, 1893 – 1986.



**Fig. AM.** Contraction of actomyosin thread (From Szent-Györgyi, 1944).

In this home page, originally we presented a few topics from our lectures on Skeletal and Smooth Muscle Contraction. In a subsequent edition, we added Heart Muscle and Cell Motility. Now, we expand the home page with Nuclear Magnetic Spectroscopy of Muscle. We hope it will help undergraduate and graduate students in life sciences, biologists, physicians, and researchers of various fields to learn more about muscle.

## References

- Szent-Györgyi, A. (1944) Studies on Muscle, *Institute of Medical Chemistry, University of Szeged*. Hungary
- Szent-Györgyi, A. (1951). Chemistry of muscular contraction. Academic Press.