

BIOPHYSICS OF SHORT SYSTEMS

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ABSTRACT

This article discusses the molecular mechanisms of contraction, muscle mechanics, muscle mechanics, and the theoretical aspects of cell mobility. The sarcomere is the main motor structure of the muscle and comprises thick and thin fibers. Fine fibers comprise actin protein and thick fibers of myosin protein. The myosin molecule has functional parts - "hinges". The heads of the transverse bridges move like a paddle, moving the actin filaments into the myosin space. The amplitude of the bridge movements is 20 nm, the frequency is 5-50 oscillations per second. The diameter of the transverse tube is 50 nm. In the muscle fibers of vertebrates, these tubes approach the myofibrils in the area of the discs.

KEYWORDS: Cell, Organism, Mechanical, Energy, Pigment, Muscle, Contraction, Animal, Actin, Myosin.

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