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Ca²⁺ Permeable Canonical TRP Channels in Mouse *m. LAL* Fibers

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It was shown by fluorescence microscopy that the membranes of mouse skeletal muscle fibers include canonical TRP channels (TRPC) of four subfamilies, including 7 known classified subtypes. In the area of neuromuscular junction, the TRPC5 channels have the largest representation, and TRPC2 the smallest. Some subtypes of TRPC channels (1, 3, 4, and 5) are closely associated with membranes of sarcoplasmic reticulum of muscle fibers, with TRPC5 channels having greatest representation in these structures. The local concentration of TRPC channels of all subtypes (1–7) exclusively in neuromuscular contact zone is absent, which does not confirm the hypothesis of possible neurotrophic control over distribution of channels of this family in muscle fiber.

Keywords: Ca²⁺-permeable TRPC channels, neuromuscular junction, sarcoplasmic reticulum, mouse skeletal muscle fibers