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IMMUNOFLUORESCENT IDENTIFICATION OF ISOFORMS SUBUNIT α1 VOLTAGE-GATED Ca^{2+} CHANNELS Ca_V1, Ca_V2 AND Ca_V3 IN CHOLINERGIC SYNAPSES ZONES OF SOMATIC MUSCLES EARTHWORM *LUMBRICUS TERRESTRIS*

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Using fluorescence and confocal microscopy, in somatic muscle of the earthworm Lumbricus terrestris identified α1S, α1C, α1D, α1F subunits of $Ca_V1.1$-1.4 types, α1A subunit of $Ca_V2.1$ type, α1E subunit of $Ca_V2.3$ type and α1G, α1I, α1H subunits of $Ca_V3.1$-3.3 types, as well as protein of exo-endocytotic cycle of synaptic vesicles, synaptophysin. The presynaptic membrane of cholinergic synapses contains voltage-gated Ca^{2+} channels of $Ca_V1.1$ and $Ca_V1.2$ types, which include subunits α1S, α1C, $Ca_V2.1$ type (α1A subunit), $Ca_V2.3$ type (α1E) and $Ca_V3.2$, $Ca_V3.3$ types (α1H, α1I), while Ca^{2+} channels $Ca_V1.3$ and $Ca_V1.4$ types having subunits α1D, α1F and $Ca_V3.1$ type (α1G) are predominantly part of muscle membranes.

Keywords: voltage-gated Ca^{2+}-channels, isoforms of subunit α1, somatic muscle, cholinergic synapses, annelids