

Список основных публикаций работников ведущей организации Федеральное государственное бюджетное учреждение науки Институт цитологии Российской Академии наук по теме диссертации в рецензируемых научных изданиях за 2015–2019 гг.

1. Borovikov Y.S., Karpicheva O.E., Avrova S.V., Simonyan A.O., Sirenko V.V., Redwood C.S. The molecular mechanism of muscle dysfunction associated with the R133W mutation in Tpm2.2 // *Biochem. Biophys. Res. Comm.* 2020. Vol. 523, № 1. P. 258–262.
2. Bildyug N.B., Khaitlina S.Yu. Redistribution of sarcomeric myosin and  $\alpha$ -actinin in cardiomyocytes in culture upon the rearrangement of their contractile apparatus // *Cell and Tissue Biology.* 2019. Vol. 13, № 5. P. 360–365.
3. Borovikov Y.S., Karpicheva O.E., Simonyan A.O., Avrova S.V., Rogozovets E.A., Sirenko V.V., Redwood C.S. The primary causes of muscle dysfunction associated with the point mutations in Tpm3.12; conformational analysis of mutant proteins as a tool for classification of myopathies // *Int. J. Mol. Sci.* 2018. Vol. 19, № 12. Article number: E3975.
4. Avrova S.V., Karpicheva O.E., Rysev N.A., Simonyan A.O., Sirenko V.V., Redwood C.S., Borovikov Y.S. The reason for the low  $\text{Ca}^{2+}$ -sensitivity of thin filaments associated with the Glu41Lys mutation in the TPM2 gene is "freezing" of tropomyosin near the outer domain of actin and inhibition of actin monomer switching off during the ATPase cycle // *Biochem. Biophys. Res. Comm.* 2018. Vol. 502, № 2. P. 209–214.
5. Simonyan A.O., Sirenko V.V., Karpicheva O.E., Robaszkiewicz K., Śliwiska M., Moraczewska J., Krutetskaya Z.I., Borovikov Y.S. The primary cause of muscle dysfunction associated with substitutions E240K and R244G in tropomyosin is aberrant behavior of tropomyosin and response of actin and myosin during ATPase cycle // *Arch Biochem Biophys.* 2018. Vol. 644. P. 17–28.
6. Khaitlina S., Tsaplina O., Hinssen H. Cooperative effects of tropomyosin on the dynamics of the actin filament // *FEBS Lett.* 2017. Vol. 591, № 13. P. 1884–1891.
7. Borovikov Y.S., Rysev N.A., Avrova S.V., Karpicheva O.E., Borys D., Moraczewska J. Molecular mechanisms of deregulation of the thin filament associated with the R167H and K168E substitutions in tropomyosin Tpm1.1 // *Arch. Biochem. Biophys.* 2017. Vol. 614. P. 28–40.
8. Borovikov Y.S., Rysev N.A., Karpicheva O.E., Sirenko V.V., Avrova S.V., Piers A., Redwood C.S. Molecular mechanisms of dysfunction of muscle fibres associated with Glu139 deletion in TPM2 gene // *Sci. Rep.* 2017. Vol. 7, № 1. Article number: 16797.
9. Karpicheva O.E., Sirenko V.V., Rysev N.A., Simonyan A.O., Borys D., Moraczewska J., Borovikov Y.S. Deviations in conformational rearrangements of thin filaments and myosin caused by the Ala155Thr substitution in hydrophobic core of tropomyosin // *Biochem. Biophys. Acta. Proteins Proteom.* 2017. Vol. 1865, № 12. P. 1790–1799.
10. Tsaplina O.A., Khaitlina S.Y. Sodium fluoride as a nucleating factor for Mg-actin polymerization // *Biochem. Biophys. Res. Commun.* 2016. Vol. 479, № 4. P. 741–746.
11. Bildyug N., Bozhokina E., Khaitlina S. Contribution of  $\alpha$ -smooth muscle actin and extracellular matrix to the *in vitro* reorganization of cardiomyocyte contractile system // *Cell Biol. Int.* 2016. Vol. 40, № 4. P. 472–477.
12. Borovikov Y.S., Rysev N.A., Chernev A.A., Avrova S.V., Karpicheva O.E., Borys D., Śliwińska M., Moraczewska J. Abnormal movement of tropomyosin and response of myosin heads and actin during the ATPase cycle caused by the Arg167His, Arg167Gly and Lys168Glu mutations in TPM1 gene // *Arch. Biochem. Biophys.* 2016. Vol. 606. P. 157–166.
13. Karpicheva O.E., Simonyan A.O., Kuleva N.V., Redwood C.S., Borovikov Y.S. Myopathy-causing Q147P TPM2 mutation shifts tropomyosin strands further towards the open position and increases the proportion of strong-binding cross-bridges during the ATPase cycle // *Biochem. Biophys. Acta.* 2016. Vol. 1864, № 3. P. 260–267.
14. Khaitlina SY. Tropomyosin as a regulator of actin dynamics // *Int. Rev. Cell Mol. Biol.* 2015. Vol. 318. P. 255–291.

15. Borovikov Y.S., Avrova S.V., Rysev N.A., Sirenko V.V., Simonyan A.O., Chernev A.A., Karpicheva O.E., Piers A., Redwood C.S. Aberrant movement of  $\beta$ -tropomyosin associated with congenital myopathy causes defective response of myosin heads and actin during the ATPase cycle // Arch. Biochem. Biophys. 2015. Vol. 577–578. P. 11–23.