

Сведения о научных руководителях диссертации

Бутовой Ксении Андреевны

«Механизмы сократительной дисфункции левого и правого предсердий крыс при пароксизмальной фибрилляции предсердий вегетативного генеза»

Научный руководитель: Проценко Юрий Леонидович

Ученая степень: доктор биологических наук

Ученое звание: доцент

Должность: главный научный сотрудник лаборатории биологической подвижности ИИФ УрО РАН

Место работы: ФБГУН Институт иммунологии и физиологии Уральского отделения Российской академии наук

Адрес места работы: 620049, Екатеринбург, ул. Первомайская, 106

Тел.:

E-mail:

Список основных научных публикаций по специальности 1.5.5 - «Физиология человека и животных» за последние 5 лет:

1. Lookin O., Protsenko Y. The lack of slow force response in failing rat myocardium: role of stretch-induced modulation of Ca-TnC kinetics // *The journal of physiological sciences*. — 2019. — V. 69. — P. 345–357.
2. Protsenko Y. L., Katsnelson B. A., Klinova S. V., Lookin O. N., Balakin A. A., Nikitina L. V., Gerzen O. P., Nabiev S. R., Minigalieva I. A., Privalova L. I., Gurchich V. B., Sutunkova M. P., Katsnelson L. B. Further analysis of rat myocardium contractility changes associated with a subchronic lead intoxication // *Food and Chemical Toxicology*. — 2019. — V. 125. — P. 233–241.
3. Protsenko Y. L., Klinova S. V., Gerzen O. P., Privalova L. I., Minigalieva I. A., Balakin A. A., Lookin O. N., Lisin R. V., Butova K. A., Nabiev S. R., Katsnelson L. B., Nikitina L. V., Katsnelson B. A. Changes in rat myocardium contractility under subchronic intoxication with lead and cadmium salts administered alone or in combination // *Toxicology reports*. — 2020. — V. 7. — P. 433–442.
4. Katsnelson B. A., Katsnelson B. A., Klinova S. V., Gerzen O. P., Balakin A. A., Lookin O. N., Lisin R. V., Nabiev S. R., Privalova L. I., Minigalieva I. A., Panov V. G., Katsnelson L. B., Nikitina L. V., Kuznetsov D. A., Protsenko Y. L. Force-velocity characteristics of isolated myocardium preparations from rats exposed to subchronic intoxication with lead and cadmium acting separately or in combination // *Food and Chemical Toxicology*. — 2020. — V. 144. — P. 111641.
5. Klinova S. V., Katsnelson B. A., Minigalieva I. A., Gerzen O. P., Balakin A. A., Lisin R. V., Butova K. A., Nabiev S. R., Lookin O. N., Katsnelson L. B., Privalova L. I., Kuznetsov D. A., Shur V. Ya., Shishkina E. V., Makeev O. H., Valamina I. E., Panov V. G., Sutunkova M. P., Nikitina L. V., Protsenko Y. L. Cardiotropic effects in subchronic intoxication of rats with lead and/or cadmium oxide nanoparticles // *International Journal of Molecular Sciences*. — 2021. — V. 22, №. 7. — P. 3466.
6. Lookin O., Butova X., Protsenko Y. The role of pacing rate in the modulation of mechano-induced immediate and delayed changes in the force and Ca-transient of cardiac muscle // *Progress in Biophysics and Molecular Biology*. — 2021. — V. 159. — P. 34–45.
7. Lookin O., Kuznetsov D., Protsenko Y. Omecamtiv mecarbil attenuates length-tension relationship in healthy rat myocardium and preserves it in monocrotaline-induced

- pulmonary heart failure // *Clinical and Experimental Pharmacology and Physiology*. — 2022. — V. 49, №. 1. — С. 84–93.
8. Lookin O., Mukhlynina E., Protsenko Y. Contractile behavior of right atrial myocardium of healthy rats and rats with the experimental model of pulmonary hypertension // *International Journal of Molecular Sciences*. — 2022. — V. 23, №. 8. — P. 4186.
 9. Klinova S. V., Minigalieva I. A., Protsenko Y. L., Sutunkova M. P., Gurvich V. B., Ryabova J. V., Valamina I. E., Gerzen O. P., Nabiev S. R., Balakin A. A., Lookin O. N., Lisin R. V., Kuznetsov D. A., Privalova L. I., Panov V. G., Katsnelson L. B., Nikitina L. V., Katsnelson B. A. Changes in the Cardiotoxic Effects of Lead Intoxication in Rats Induced by Muscular Exercise // *International Journal of Molecular Sciences*. — 2022. — V. 23, №. 8. — P. 4417.
 10. Lookin O., Balakin A., Protsenko Y. Differences in Effects of Length-Dependent Regulation of Force and Ca^{2+} Transient in the Myocardial Trabeculae of the Rat Right Atrium and Ventricle // *International Journal of Molecular Sciences*. — 2023. — V. 24, №. 10. — P. 8960.
 11. Lisin R., Balakin A., Mukhlynina E., Protsenko Y. Differences in Mechanical, Electrical and Calcium Transient Performance of the Isolated Right Atrial and Ventricular Myocardium of Guinea Pigs at Different Preloads (Lengths) // *International Journal of Molecular Sciences*. — 2023. — V. 24, №. 21. — P. 15524.
 12. Gerzen O. P., Lisin R. V., Balakin A. A., Mukhlynina E. A., Kuznetsov D. A., Nikitina L. V., Protsenko Y. L. Characteristics of the right atrial and right ventricular contractility in a model of monocrotaline-induced pulmonary arterial hypertension // *Journal of Muscle Research and Cell Motility*. — 2023. — V. 44. — P. 299–309.
 13. Minigaliyeva I. A., Klinova S. V., Sutunkova M. P., Ryabova Y. V., Valamina I. E., Shelomentsev I. G., Shtin T. N., Bushueva T. V., Protsenko Y. L., Balakin A. A., Lisin R. V., Kuznetsov D. A., Katsnelson B. A., Toropova L. V. On the Mechanisms of the Cardiotoxic Effect of Lead Oxide Nanoparticles // *Cardiovascular Toxicology*. — 2024. — V. 24, №. 1. — P. 49–61.

Научный руководитель: Хохлова Анастасия Дмитриевна

Ученая степень: кандидат физико-математических наук

Ученое звание: доцент

Должность: старший научный сотрудник лаборатории трансляционной медицины и биоинформатики ИИФ УрО РАН

Место работы: ФБГУН Институт иммунологии и физиологии Уральского отделения Российской академии наук

Адрес места работы: 620049, Екатеринбург, ул. Первомайская, 106

Тел.:

E-mail:

Список основных научных публикаций по специальности 1.5.5 - «Физиология человека и животных» за последние 5 лет:

1. Khokhlova A., Konovalov P., Iribe G., Solovyova O., Katsnelson L. The effects of mechanical preload on transmural differences in mechano-calcium-electric feedback in single cardiomyocytes: experiments and mathematical models // *Frontiers in Physiology*. — 2020. — V. 11. — P. 171.
2. Butova X. A., Myachina T. A., Khokhlova A. D. A combined Langendorff-injection technique for simultaneous isolation of single cardiomyocytes from atria and ventricles of the rat heart // *MethodsX*. — 2021. — V. 8. — P. 101189.

3. Myachina T., Butova X., Sokolova K., Gette I., Khokhlova A. Changes in Contractile Function of Single Cardiomyocytes from the Different Heart Chambers in Type 2 Diabetes Mellitus // *Biophysical Journal*. — 2021. — V. 120, №. 3. — P. 237a.
4. Khokhlova A., Myachina T., Butova X., Volzhaninov D., Berg V., Kochurova A., Kuznetsov D., Mukhlynina E., Kopylova G., Shchepkin D. Differing effects of estrogen deficiency on the contractile function of atrial and ventricular myocardium // *Biochemical and Biophysical Research Communications*. — 2021. — V. 541. — P. 30–35.
5. Lookin O., Khokhlova A., Myachina T., Butova X., Cazorla O., de Tombe P. Contractile state dependent sarcomere length variability in isolated guinea-pig cardiomyocytes // *Frontiers in Physiology*. — 2022. — V. 13. — P. 857471.
6. Khokhlova A., Solovyova O., Kohl P., Peyronnet R. Single cardiomyocytes from papillary muscles show lower preload-dependent activation of force compared to cardiomyocytes from the left ventricular free wall // *Journal of Molecular and Cellular Cardiology*. — 2022. — V. 166. — P. 127–136.
7. Khokhlova A., Myachina T., Volzhaninov D., Butova X., Kochurova A., Berg V., Gette I., Moroz G., Klinova S., Minigalieva I., Solovyova O., Danilova I., Sokolova K., Kopylova G., Shchepkin D. Type 1 diabetes impairs cardiomyocyte contractility in the left and right ventricular free walls but preserves it in the interventricular septum // *International Journal of Molecular Sciences*. — 2022. — V. 23, №. 3. — P. 1719.
8. Butova X., Myachina T., Simonova R., Kochurova A., Bozhko Y., Arkhipov M., Solovyova O., Kopylova G., Shchepkin D., Khokhlova A. Peculiarities of the Acetylcholine Action on the Contractile Function of Cardiomyocytes from the Left and Right Atria in Rats // *Cells*. — 2022. — V. 11, №. 23. — P. 3809.
9. Parikh J., Rumbell T., Butova X., Myachina T., Acero J. C., Khamzin S., Solovyova O., Kozloski J., Khokhlova A., Gurev V. Generative adversarial networks for construction of virtual populations of mechanistic models: simulations to study Omecamtiv Mecarbil action // *Journal of Pharmacokinetics and Pharmacodynamics*. — 2022. — V. 49. — P. 51–64.
10. Khokhlova A., Myachina T., Butova X., Kochurova A., Polyakova E., Galagudza M., Solovyova O., Kopylova G., Shchepkin, D. The acute effects of leptin on the contractility of isolated rat atrial and ventricular cardiomyocytes // *International Journal of Molecular Sciences*. — 2022. — V. 23, №. 15. — P. 8356.
11. Mikhryakova P. P., Butova X. A., Myachina T. A., Simonova R. A., Khokhlova A. D. A study of mechanical Alternans in single rat cardiomyocytes in acetylcholine-CaCl₂ induced atrial fibrillation // *Journal of Evolutionary Biochemistry and Physiology*. — 2022. — V. 58, №. Suppl 1. — P. S13–S21.
12. Butova X., Myachina T., Simonova R., Kochurova A., Mukhlynina E., Kopylova G., Shchepkin, D., Khokhlova A. The inter-chamber differences in the contractile function between left and right atrial cardiomyocytes in atrial fibrillation in rats // *Frontiers in Cardiovascular Medicine*. — 2023. — T. 10. — P. 1203093.

Главный специалист
по кадрам ИИФ УрО Р

Ученый секретарь д/д