

## **Сведения об официальном оппоненте**

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Список основных публикаций по теме диссертации за последние 5 лет:

1. Gladkikh O. L., Romanenko S. A., Lemskaya N. A., Serdyukova N.A., O'Brien P. C. M., Kovalskaya J. M., Smorkatcheva A. V., Golenishchev F. N., Perelman P. L., Trifonov V. A., Ferguson-Smith M. A., Yang F., Graphodatsky A. S. Rapid karyotype evolution in *Lasiopodomys* involved at least two autosome – sex chromosome translocations // PLoS ONE. – 2016. – V. 11. – e0167653.
2. Makunin A. I., Kichigin I. G., Larkin D. M., O'Brien P.C.M., Ferguson-Smith M. A., Yang F., Proskuryakova A. A., Vorobieva N. V., Chernyaeva E. N., O'Brien S. J., Graphodatsky A. S., Trifonov V. A. Contrasting origin of B chromosomes in two cervids (Siberian roe deer and grey brocket deer) unravelled by chromosomespecific DNA sequencing // BMC Genomics. – 2016. – V. 17. – 618.
3. Bian C,... Trifonov V,... Shi Q. The Asian arowana (*Scleropages formosus*) genome provides new insights into the evolution of an early lineage of teleosts // Scientific reports. – 2016. – V. 6. – P. 1-17.
4. Utsunomia R., Silva D. M., Ruiz-Ruano F. J., Araya-Jaime C., Pansonato-Alves J. C., Scacchetti P. C., Hashimoto D. T., Oliveira C., Trifonov V. A., Porto-Foresti F., Camacho J. P., Foresti F. Uncovering the ancestry of B chromosomes in *Moenkhausia sanctaefilomenae* (Teleostei, Characidae) // PLoS One. – 2016. – V. 11. – e0150573.
5. Rajićić M., Romanenko S. A., Karamysheva T. V., Blagojević J., Adnađević T., Budinski I., Bogdanov A. S., Trifonov V. A., Rubtsov N. B., Vujošević M. The origin of B chromosomes in yellow-necked mice (*Apodemus flavicollis*) - Break rules but keep playing the game // PLoS ONE. – 2017. – V. 12. – e0172704.
6. Poplavskaya N. S., Romanenko S. A., Serdyukova N. A., Trifonov V. A., Yang F., Nie W., Wang J., Bannikova A. A., Surov A. V., Lebedev V. S. Karyotype evolution and phylogenetic relationships of *Cricetulus sokolovi* Orlov et Malygin 1988 (Cricetidae, Rodentia) inferred from chromosomal painting and molecular data // Cytogenet Genome Res. – 2017. – V. 152. – P. 65-72.
7. Giovannotti M., Trifonov V. A., Paoletti A., Kichigin I. G., O'Brien P. C. M., Kasai F., Giovagnoli G., Ng B. L., Ruggeri P., Nisi Cerioni P., Splendiani A., Pereira J. C., Olmo

- E., Rens W., Caputo Barucchi V., Ferguson-Smith M. A. New insights into sex chromosome evolution in anole lizards (Reptilia, Dactyloidae) // Chromosoma. – 2017. – V. 126. – P. 245-260.
8. Lemskaya N. A., Kulemzina A. I., Beklemisheva V. R., Biltueva L. S., Proskuryakova A. A., Hallenbeck J. M., Perelman P. P., Graphodatsky A. S. A combined banding method that allows the reliable identification of chromosomes as well as differentiation of AT- and GC-rich heterochromatin // Chromosome Res. – 2018. – V. 26. – P. 307-315.
9. Romanenko S., Serdyukova N., Perelman P., Trifonov V., Golenishchev F., Bulatova N., Stanyon R., Graphodatsky A. Multiple intrasynthetic rearrangements and rapid speciation in voles // Scientific reports. – 2018. – V. 8. – P. 1-9.
10. Komissarov A., Vij S., Yurchenko A., Trifonov V., Thevasagayam N., Saju J., Sridatta P. S. R., Purushothaman K., Graphodatsky A., Orbán L., Kuznetsova I. B chromosomes of the Asian seabass (*Lates calcarifer*) contribute to genome variations at the level of individuals and populations // Genes. – 2018. – V. 9. – 464.
11. Beichman A. C., Koepfli K.-P., Li G., Murphy W., Dobrynin P., Kliver S., Tinker M. T., Murray M. J., Johnson J., Lindblad-Toh K., Karlsson E. K., Lohmueller K. E., Wayne R. K. Aquatic adaptation and depleted diversity: A deep dive into the genomes of the sea otter and giant otter // Mol Biol Evol. – 2019. – V. 36. – P. 2631-2655.
12. Lind AL,... Kichigin IG, Makunin AI,... Trifonov VA,... Bruneau BG. Genome of the Komodo dragon reveals adaptations in the cardiovascular and chemosensory systems of monitor lizards // Nature Ecol Evol. – 2019. – V. 3. – P. 1241-1252.
13. Barby F. F., Bertollo L. A. C., Oliveira E. A., Yano C. F., Hatanaka T., Rab P., Sember A., Ezaz T., Artoni R. F., Liehr T., Al-Rikabi A. B., Trifonov V. A., Oliveira E. H. C., Molina W. F., Jegede O. I., Tanomtong A., Cioffi M. B. Emerging patterns of genome organization in Notopteridae species (Teleostei, Osteoglossiformes) as revealed by Zoo-FISH and Comparative Genomic Hybridization (CGH) // Scientific reports. – 2019. – V. 9. – P. 1-11.
14. Chavez D. E., Gronau I., Hains T., Kliver S., Koepfli K.-P., Wayne R. K. Comparative genomics provides new insights into the remarkable adaptations of the African wild dog (*Lycaon pictus*) // Scientific reports. – 2019. – V. 9. – 8329.
15. Romanenko S. A., Smorkatcheva A. V., Kovalskaya Y. M., Prokopov D. Y., Lemskaya N. A., Gladkikh O. L., Polikarpov I. A., Serdyukova N. A., Trifonov V. A., Molodtseva A. S., O'Brien P. C. M., Golenishchev F. N., Ferguson-Smith M. A., Graphodatsky A. S. Complex structure of *Lasiopodomys mandarinus vinogradovi* sex chromosomes, sex

- determination, and intraspecific autosomal polymorphism // Genes. – 2020. – V. 11. – 374.
16. Vorobieva N. V., Makunin A. I., Druzhkova A. S., Kusliy M. A., Trifonov V. A., Popova K. O., Polosmak N. V., Molodin V. I., Vasiliev S. K., Shunkov M. V., Graphodatsky A. S. High genetic diversity of ancient horses from the Ukok Plateau // PLoS ONE. – 2020. – V. 15. – e0241997.
17. Karamysheva T., Romanenko S., Makunin A., Rajičić M., Bogdanov A., Trifonov V., Blagojević J., Vujošević M., Orishchenko K., Rubtsov N. New data on organization and spatial localization of B-chromosomes in cell nuclei of the yellow-necked mouse *Apodemus flavicollis* // Cells. – 2021. – V. 10. – 1819.
18. Buggiotti L., Yurchenko A. A., Yudin N. S., Vander Jagt C. J., Vorobieva N. V., Kusliy M. A., Vasiliev S. K., Rodionov A. N., Boronetskaya O. I., Zinovieva N. A., Graphodatsky A. S., Daetwyler H. D., Larkin D. M. Demographic history, adaptation, and NRAP convergent evolution at amino acid residue 100 in the world northernmost cattle from Siberia // Mol Biol Evol. – 2021. – V. 38 – P. 3093-3110.