KIRILL GRIGOREV / КИРИЛЛ ГРИГОРЬЕВ

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COMPUTATIONAL GENETICS, EPIGENOMICS, TRANSCRIPTOMICS, GENOME ASSEMBLY, GENOMICS ALGORITHMS, DATA SCIENCE

PHD CANDIDATE

Weill Cornell Medicine, New York, NY
Mason Lab, Institute for Computational Biomedicine

NASA GeneLab Multi-Omics Analysis Working Group and Visualization Working Group

M.S. in Biology, University of Puerto Rico
B.S. in Biotechnology, Saint Petersburg Chemical and Pharmaceutical Academy

PRINCIPAL AREAS OF ACADEMIC INTEREST

Genomics algorithms
Translational and personalized genomics
Epigenomics and epitranscriptomics
Space genetics

PRINCIPAL SKILLSET

Genomic data analysis
Graph and numerical algorithms
Advanced Python (SciPy stack, Numba, Dask)
Lua/LuaJIT, R, C/C++

RESEARCH SUMMARY

2017 – … **Weill Cornell Medicine, Institute for Computational Biomedicine, Mason Lab**
Assembly algorithms, telomere bioinformatics, nanopore sequencing data analysis, epigenetic evolution of cancers [1, 3, 4]

2018 – … **NASA GeneLab**. Development of a cross-species, cross-dataset data analysis and visualization platform for space flight biological data [2, 9]

2015 – 2017 **University of Puerto Rico, Caribbean Genome Center**
Methods of genome assembly, conservation genetics, Genome 10K [5, 6, 8]

2014 – 2017 **Dobzhansky Center for Genome Bioinformatics**
Methods of genome assembly, GWAS visualization tools, epigenomics of early childhood development [7]

2013 – 2014 **iBinom inc.** Medical genome analysis, cloud SaaS

PUBLIC SPEAKING & OTHER ACADEMIC EXPERIENCE

2019 *talk* **Comparative circadian transcriptomics: novel and conserved features of the mammalian pineal gland**. OU Genomics Symposium, Oakland University, MI

2019 *workshop* **GeneLab Visualization Working Group meeting**
35th Annual Meeting of ASGSR, Denver, CO

2019 *workshop* **GeneLab visualization workshop**
Broad Institute, Cambridge, MA

2017 *workshop* **Development of robust bioinformatics pipelines**
Fifth annual Bioinformatics Summer School, Moscow, Russia

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2017 **Genomics and conservation of the Hispaniolan Solenodon**
talk IX Caribbean Biodiversity Congress, Santo Domingo, Dominican Republic

2016 **Bioinformatics pipelines**
TA Recent Advances in Conservation Genetics, Tihany, Hungary

2015 **Linux toolset for bioinformatics**
workshop Third annual Bioinformatics Summer School, Moscow, Russia

2015 **Introduction to genetics**
instructor Biotechnology Stepik.org online course [10]

PUBLICATIONS

1. K Grigorev, J Foox *et al*. **Haplotype Diversity and Sequence Heterogeneity of Human Telomeres**. bioRxiv (2020). doi:10.1101/2020.01.31.929307
2. D Berrios *et al*. **Visualizing Omics Data from Spaceflight Samples using the NASA GeneLab Platform**. In Proceedings of the 12th International Conference on Bioinformatics and Computational Biology (Vol. 70, pp. 89-98). doi:10.29007/rh7n
3. F Gaiti, R Chaligne, H Gu *et al*. **Epigenetic evolution and lineage histories of chronic lymphocytic leukaemia**. Nature 569 (7757), 576. doi:10.1038/s41586-019-1198-z
4. ABR McIntyre *et al*. **Single-molecule sequencing detection of N6-methyladenine in microbial reference materials**. Nature Communications 10 (1), 579. doi:10.1038/s41467-019-08289-9
5. S Kolchanova, S Kliver *et al*. **Genomes of three closely related Caribbean amazons provide insight for species history and conservation**. Genes 10 (1), 54. doi:10.3390/genes10010054
6. K Grigorev, S Kliver *et al*. **Innovative assembly strategy contributes to understanding the evolution and conservation genetics of the endangered *Solenodon paradoxus* from the island of Hispaniola**. GigaScience 7 (6), giy025. doi:10.1093/gigascience/giy025
7. OY Naumova *et al*. **Developmental dynamics of the epigenome: a longitudinal study of three toddlers**. Neurotoxicology and teratology 66, 125-131. doi:10.1016/j.ntt.2017.12.006
8. AL Brandt, K Grigorev *et al*. **Mitogenomic sequences support a north–south subspecies subdivision within *Solenodon paradoxus***. Mitochondrial DNA Part A 28 (5), 662-670. doi:10.3109/24701394.2016.1167891

RESOURCES

9. GeneLab Data Visualization portal: genelab-visualization.usra.edu
10. Stepik Biotechnology: stepik.org/course/94