

## CURRICULUM VITAE

### Nikita Van Leiden

Date of Birth: 1992.12.26.

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### Higher Education

2021-2022 Immanuel Kant Baltic Federal University, Kaliningrad, Russia. Institute of Living Systems.

Biological Sciences, specialization: Ecology, postgraduate study.

Skills and methods: the same as during the Master's degree course (continued research).

2018-2021 Immanuel Kant Baltic Federal University, Kaliningrad, Russia. Institute of Living Systems.

Biology, specialization: Cellular and Molecular Technologies, Master of Science. Grade point average: 5.0/5.0

Skills and methods: Big Data analysis, processing of sequence analysis results, Python and R programming, chemical modeling.

Dissertation: Search for key mtDNA mutagens and their specific mutation signature: analysis of evolutionary and experimental data.

2014-2018 Immanuel Kant Baltic Federal University, Kaliningrad, Russia. Institute of Living Systems.

Biology, specialization: Physiology, Bachelor of Science.

Skills and methods: flow cytometry, magnetic cell separation, work in clean rooms, isolation of cells and cultivation, work with MMSC cells, microscopy.

Dissertation: Effects of interleukin-8 on the activation status of macrophages.

2011-2014 University of Chemistry and Technology, Prague, Czech Republic. Faculty of Food and Biochemical Technology.

Forensic analysis, Bachelor of Science.

Skills and methods: bioanalytical analysis methods, DNA and RNA analysis methods, chemical informatics, chemical modeling, forensic microscopy.

Dissertation: Immunochemical determination of 8-isoprostane in plasma samples.

### Work Experience

2021-2022 Center for Genomic Research at IKBFU, Kaliningrad, Russia.

Position: research assistant

Responsibilities: preparation of datasets for analysis, data structuring and processing, writing articles on the topic of laboratory research, organizing meetings of laboratory staff, reviewing articles, preparing grant reports, designing curricula and work plans for educational subjects and programs.

2020-2021 Private secondary school «Rostok», Kaliningrad, Russia.

Position: substitute teacher in biology and chemistry.

Responsibilities: giving lectures, practical classes and final tests, preparing documentation.

2019 Limited liability company «Goodvas», Moscow, Russia.

Position: mobile application developer and translator.

Responsibilities: layout in XHTML environment, translation of the application into Czech, adaptation of the translation according to the work task.

2016-2018 Research Center for Immunology and Cell Technologies of IKBFU, Kaliningrad, Russia.

Position: laboratory assistant (intern).

Responsibilities: isolation of cells for the preparation of cell cultures, preparation of research biomaterial (sheep, rats), preparation of laboratory equipment and tools, cleaning and decontamination activities in clean rooms, preparation for clean rooms commission, care and cleaning of laboratory animals (rats), designing curricula of educational programs.

2015-2022 Teaching as a tutor for middle and high school students (self-employed).

Subjects: biological and chemical sciences, Czech language.

## Courses and Practice

1. Title: course «Introduction to Bioinformatics». Saint Petersburg State University, Russia. 2019.  
Language of the course: Russian.  
Status: successfully passed.
2. Title: course «Introduction to Virology». Novosibirsk State University, Russia. 2019.  
Language of the course: Russian.  
Status: successfully passed.
3. Title: course «The cell cycle and cell death. Kinetics of Biological Reactions». Immanuel Kant Baltic Federal University, Russia. 2018.  
Language of the course: Russian.  
Status: successfully passed.
4. Title: course «GMO: Technology of creation and application». Novosibirsk State University, Russia. 2017.  
Language of the course: Russian.  
Status: successfully passed.
5. Title: course «Introduction to Biomedical Imaging». The University of Queensland, Australia. 2017.  
Language of the course: English.  
Status: successfully passed.
6. Title: field practice in vertebrate zoology and geoecology on the basis of IKBFU. Kaliningrad region, Russia. 2016.  
Acquired competencies and skills: definition and classification of vertebrates, ecological description of animals and plants, preparing and making stuffed animals, definition and description of biogeocenoses, definition of the soil horizons, definition and classification of higher plants, studying the Latin names of animals and plants, setting up and conducting an experiment based on the practice, defending the final research work.  
Status: successfully passed (with distinction).
7. Title: field practice in invertebrate zoology and higher plant botany on the basis of IKBFU. Kaliningrad region, Russia. 2015.  
Acquired competencies and skills: identification and classification of invertebrates, microscopy of invertebrates, identification and classification of higher plants, making herbaria, studying the Latin names of animals and plants, setting up and conducting an experiment based on the practice, defending the final research work.  
Status: successfully passed (with distinction).

## Publications

1. Van Leiden N. S., Popadin K. Ju. Identification of the mutational signature of the main mutagens of the mitochondrial genome: analysis of experimental data. ChemBioSeasons 2022: a collection of abstracts from the Forum of Young Researchers; Baltic Federal University. I. Kant. – 2022. – p. 8.  
doi: 10.21603/chembioseasons2022-1
2. Van Leyden N. S., Patlay N. I., Patlay I. I. Identification of the mutation signature of reactive oxygen species in mtDNA: analysis of experimental data / Medicine. Sociology. Philosophy. Applied research. – 2021. – №. 3. – p. 4-9.  
doi: 10.24411/2686-9365-2021-00006
3. Koptelov N. S., Popadin K. Ju. Effect of Chemical Factors on the Mutation Spectrum of mtDNA chordate animals (*Chordata*). ChemBioSeasons. Collection of abstracts of reports of the Forum of Young Researchers, dedicated to the 125th anniversary of the Nobel Prize winner Academician N.N. Semenov. – 2021. – p. 51-52.
4. Koptelov N. S., Popadin K. Ju. Research of chemical determinants of the mtDNA mutation spectrum of chordates animals (*Chordata*). International Youth Scientific Forum "Lomonosov-2021". ed. I.A. Aleshkovsky, A.V. Andriyanov, E.A. Antipov, E.I. Zimakova. MAX Press. – 2021.

## Grants

1. Research customer: Russian Federal Research Institute of Fisheries and Oceanography (VNIRO).  
Project topic: Creating genome markers panels of high productivity and disease resistance as a basis for genome selection and genome editing when creating new domestic breeds and lines of salmon, trout and carp.  
Position: grant executor, research team member.  
Grant execution period: 2022.01.01 – 2024.12.30
2. Research customer: Immanuel Kant Baltic Federal University.  
Project topic: Studying the senescence features of post-mitotic tissues: the mitochondrial component of aging.  
Position: grant executor, research assistant.  
Grant execution period: 2022.01.01 – 2023.12.31

## Conferences and Forums

1. Society for Molecular Biology & Evolution. Global Symposia #3: Mutational Biases and Adaptation. Online conference. 2022.  
Status: participant (poster presenter).  
Topic: Effects of 79 mutagens on the mutational spectrum of the human mitochondrial genome.
2. Forum of young researchers «ChemBioSeasons», Kaliningrad, Russia. 2022.  
Status: participant.  
Topic: Identification of the Mutation Signature of Major Mutagens of the Mitochondrial Genome: Analysis and Experimental Data.
3. XXVIII International Conference of Students, Postgraduates and Young Scientists «Lomonosov», Moscow, Russia. 2021.  
Status: participant.  
Topic: Research of chemical determinants of the mtDNA mutation spectrum of chordates animals (*Chordata*).
4. Forum of Young Researchers «ChemBioSeasons», dedicated to the 125th anniversary of the Nobel Prize winner Academician N.N. Semenov, Kaliningrad, Russia. 2021.  
Status: participant.  
Topic: Effect of Chemical Factors on the Mutation Spectrum of mtDNA chordate animals (*Chordata*).
5. Regional forum of young scientists «ChemBioSeasons», Kaliningrad, Russia. 2018.  
Status: participant.  
Topic: Activation status of macrophage and monocytes: the effect of interleukin-8 on them.
6. II Youth Scientific Forum «Hybrid Technologies and Biomedical Applications», Kaliningrad, Russia. 2016.  
Status: participant and organizer.  
Topic: Flow cytometry in medicine and biology.
7. Scientific and educational forum «ChemBioSeasons», Kaliningrad, Russia. 2016  
Status: participant and organizer.  
Topic: Flow cytometry as a modern method of analysis in biology and medicine.

## Technical Skills

1. Programming. I can program in Python and R. I have experience writing scripts for big data analysis. I know at a basic level SQL. I'm a confident GitHub user. I have excellent skills in using spreadsheets.
2. Equipment. I can work on a flow cytometer, a magnetic separator. I have experience working in cleanrooms. I can work with computing servers (clusters) through remote access (Bash). I'm well versed in computer technologies.
3. Software. I work with RStudio, PyCharm, Avogadro, GraphPad Prism, ImageJ. I am proficient in Unix.

## Language Skills

1. Russian – native;
2. English – level C1;
3. Czech – level C1-C2.

## Interests and Achievements

1. Travel and tourism. I like traveling to authentic countries. The most interesting countries I have been to are Iceland and Oman.
2. Computer technology. I am interested in computers and computer technology. I follow the news in this area. My hobbies are assembling computers, configuring and upgrading them.

## References

1. Ph.D. in Biology, Konstantin Popadin,  
Research professor, Immanuel Kant Baltic Federal University, ul. Aleksandra Nevskogo 14, 236041 Kaliningrad, Russia.  
Scientific collaborator, Swiss Federal Institute of Technology Lausanne, Rte Cantonale, 1015 Lausanne, Switzerland.  
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E-mail: konstantin.popadin@epfl.ch
2. Ph.D. in Medicine, immunologist, Goncharov Andrey,  
Immanuel Kant Baltic Federal University, ul. Aleksandra Nevskogo 14, 236041 Kaliningrad, Russia.  
Phone: +7 (911) 865-20-66.  
E-mail: agoncharov@kantiana.ru
3. Master in Bioengineering and Bioinformatics, research intern, Shebanova Regina,  
Skolkovo Institute of Science and Technology, ul. Nobelya 1, 121205, Moscow, Russia.  
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