Personal information:

Surname:	**Makarova**
Name:	**Nadezhda**
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Address:	119991 Faculty of bioengineering and bioinformatics, 1-73, MSU, Leninskiye gory, Moscow, Russia
Phone:	89151178317
Birth date:	28 May 1996
Nariority:	Russian National
Gender:	female

Education:

Lomonosov Moscow State University, Russia   Sep 2014 - present
The Faculty of Bioengineering and Bioinformatics
Major field of studies: Bioengineering and Bioinformatics
Degree: specialist

Participation in additional courses

Physiological and biochemical Winter School, Pushchino, Russia   2014

Research experience:

Laboratory of System Biology of Aging (master: professor,   Aug 2017 – present
V. Gladyshev), A.N.Belozersky Institute of Physico-Chemical
Biology, Lomonosov Moscow State University, Moscow, Russia
research project

Tutors: PhD, senior researcher Sergey E. Dmitriev; professor Vadim N. Gladyshev

Project Title: Molecular biomarkers of aging in primary skin fibroblasts isolated from mice of different age.

Techniques involved: cell culture, primary fibroblasts isolation, RNA and DNA transfection, luciferase assay, fluorescent microscopy, Beta-galactosidase assay, qPCR, RNA-seq analysis, work with databases, Western Blotting.

Laboratory of Molecular Biology of Viruses (master: Grand PhD (Biology), professor, Yuri L. Dorokhov), Department of Nucleoprotein Chemistry and Biochemistry, A.N.Belozersky Institute of Physico-Chemical Biology, Lomonosov Moscow State University, Moscow, Russia
research project

Sep 2016 – Jun 2017

Tutors: PhD student Anastasia V. Shindyapina; professor Yuri L. Dorokhov

Project Title: Role of alpha-lipoic acid in metabolism of endogenous methanol and formaldehyde

Techniques involved: Extraction of DNA and RNA, primers design, PCR, reverse transcription, restriction, ligation, competent cells preparing, transformation, gel electrophoresis of DNA, recombinant protein expression, batch cultivation and fermentation, SDS-polyacrylamide gel electrophoresis, Western Blotting, purification by affinity tag chromatography, spectrophotometry

Scientific group of Prof. Mulkidjanian A.Y., Department of bioenergetics, A.N.Belozersky Institute of Physico-Chemical Biology, Lomonosov Moscow State University, Moscow, Russia
research project

Mar 2015 – May 2016

Tutors: PhD, senior researcher Daria V. Dibrova; professor Armen Y. Mulkidjanian

Project Title: Phylogenetic analysis of sodium-dependent symporter of aspartate

Techniques involved: creation database of sequences, BLAST, PSI-BLAST, HMMer, analysis of multiple alignment, generation and analysis of phylogenetic trees

International experience

Department of Medical Statistics and Bioinformatics, Section Moleculair Epidemiology, Leiden University Medical Center (LUMC), Leiden, Netherlands
Summer Internship research project

July 2017

Tutors: PhD, senior researcher Maarten van Iterson

Project Title: Different approaches and arguments for filtering out lowly expressed genes in RNA-seq data

Techniques involved: RNA-seq experiment designs, work with annotation resources for gene quantification, independent filtering, R Bioconductor, creating simulation, statistical estimation.

Conferences

International Conference for Students and Young Scientists "Lomonosov", Moscow, Russia. "Role of alpha-lipoic acid in metabolism of endogenous methanol and formaldehyde"
Oral presentation

May 2017

Skills

Languages English (advanced); Russian (native)

Experimental

- Extraction of DNA and RNA, primers design, PCR, reverse transcription, restriction, ligation, competent cells preparing, transformation, gel electrophoresis of DNA, qRT-PCR, DNA sequence analysis

- Recombinant protein expression, SDS-polyacrylamide gel electrophoresis, Western Blotting, purification by affinity tag chromatography, spectrophotometry

- Confocal, fluorescence and light microscopy, immunohistochemistry, cell culture (Hela)

Computer skills

- programming languages: Python (very good); R (good); Html (good), bash (beginner)

- other software: Microsoft Office, RStudio, Adobe Photoshop, PyMOL, Swiss PDB Viewer, Mega, JalView, EMBOSS, RAST, Annovar, MEME Suite

- RNA-seq analysis

Scientific interests

Molecular biology, Systems biology, Bioinformatics, Evolutionary Biology, Aging, RNA Biology

Teaching Experience

Private tutor

2014 - present

- Designed individual study programs for school and undergraduate students in Chemistry and Biology.

- Prepared 8 students to successfully pass entrance exams to medical universities and helped the others to make progress in Chemistry and Biology.

Volunteer and work experience

Nurse's aid in operation block, Dmitry Rogachev National Research Center of Pediatric Hematology, Oncology and Immunology

2015

Hobbies

Playing the guitar and the piano, backpacking

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