Ekaterina DEYNEKA

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Date and place of birth: 17.02.1997, Moscow, Russia
Citizenship: Russian Federation

EDUCATION

UNIVERSITY

09/2014 –
Present

Moscow Institute of Physics and Technology (MIPT), State University
Bachelor's Program in Applied Mathematics and Physics
Department of Biological and Medical Physics
4th year undergraduate student
Average grade: 4.8/5.0; top 1% of the department

- **Mathematics:** calculus, linear algebra, differential equations, complex analysis
- **General physics:** (lectures, seminars, labs)
- **Department subjects:** biochemistry, molecular biology, chemoinformatics, bioinformatics, chemical physics, biophysics, genetic engineering, X-Ray analysis, cancer bioinformatics and system biology

SPECIAL COURSES (MOOCs)

2017 **Programming in Python** Stepik & Bioinformatics Institute
2017 **Introduction to molecular biology and biomedicine** Stepik & MIPT
2017 **Molecular biology and genetics** Stepik & Bioinformatics Institute

SCHOOLING

2012 – 2014 **Evening (external) secondary school №90, Moscow**
Accelerated program (two years instead of three)
Graduated with a certificate of merit and gold medal for excellent studies
Average grade – 5.0/5.0

2010 - 2012 **Lyceum with advanced studying of chemistry and biology №1574, Moscow**

RESEARCH EXPERIENCE

04/2016 –
Present

Laboratory of Medicinal Chemistry and Bioinformatics, MIPT
Junior researcher under the leadership of Dr. Yan A. Ivanenkov
Duties: managing project on developing of novel antibacterial molecules

Goals achieved:
- Virtual screening and SAR of novel scaffolds of molecules with antibacterial activity
- Molecular docking of new azoles with potent antifungal activity
- Molecular docking of novel small-molecule PSMA-targeted and ASGP-R-targeted drug-conjugates
- *In silico* designing and QSAR/QSPR analyzing of small-molecule PSMA inhibitors
- Investigating GLP-1 signaling pathway in regard to Alzheimer's disease, giving lecture on current methods of treatment of Alzheimer's disease
- Writing scientific reports and preparing oral speeches on obtained results

2013 **Laboratory of Genetics of Aging and Longevity, MIPT**
- Participating in the project for high-school students within the educational program of the Center of Technological Support of Education, Moscow "Determination of the effectiveness of geroprotectors"

INTERNATIONAL EXPERIENCE

2013 **Traineeship in XLAB, the Experimental Laboratory for Young People University of Göttingen, Germany**
Advanced training in biology, chemistry, physics, computer science

Publications & conferences

2017	**"Synthesis and biological evaluation of novel doxorubicin-containing ASGP-R-targeted drug-conjugates."**, *Bioorganic & medicinal chemistry letters.* doi: 10.1016/j.bmcl.2017.12.004.
2017	**"Synthesis and biological evaluation of novel mono- and bivalent ASGP-R-targeted drug-conjugates."**, *Bioorganic & medicinal chemistry letters.* doi: 10.1016/j.bmcl.2017.12.032.
2017	**Presentation at the 60th MIPT Scientific Conference.** Topic "Development of novel antibacterial molecules and studying mechanism of their action"

Certificates & awards

2017	MIPT Scholarship for outstanding students
2017	Scholarship of Charitable Foundation for Development of Innovation Education
2014	1st and 2nd places at "Phystech-2014" Physical and Mathematical Olympiad
2013	Prize-winner of the regional stage at Russian Chemical Olympiad
2013	First Certificate in English, Cambridge ESOL - Grade A, C1 level
2011	Advanced certificate at Padworth college, UK

Qualifications & skills

Laboratory skills

Genetic engineering: DNA purification from E.coli cells, PCR, gel electrophoresis, SDS PAGE

Lysozyme crystallization for X-ray crystallography using Rigaku (X-ray analytical instrument)

Computer skills

Programming languages	**Python, C, Matlab** (term papers)
Specialized programs	**MolSoft, MOE, Maestro Schrödinger, AutoDock Vina** – molecular docking **ChemoSoft** – managing large-compound libraries **KNIME** – virtual screening and generating diversified libraries **PyMOL** – molecular visualization **Jalview** – building phylogenetic trees **XDS** – X-ray results processing
Other	Thomson Reuters Integrity Microsoft Office software LaTeX Windows/Mac OS fluent user

Language skills

Russian: Native

English: Fluent (2017 IELTS certificate 8.0 band score)

Hobbies & extra-curricular activities

Other skills

Driving license

Hobbies

Swimming

Nutrition & Fitness

Volunteering (at university/school)

Travelling

Personal qualities

Decision- and action-minded

Good as a team player

Goal-oriented

Positive