

# Evgeniia Diatlova

ORCID: 0000-0001-5808-8568

Scopus Author ID: 57216586139

Web of Science ResearcherID: AAF-7949-2021

## EDUCATION & DEGREES

08/2023 Ph.D. degree in Biochemistry

2015 – 2019 Ph.D. student

Institution

Institute of Chemical Biology and Fundamental Medicine, SB RAS

Project title

Mechanisms of lesion search by “helix-two-turn-helix” and “ $\alpha/\beta$ -fold” DNA glycosylase superfamilies

PI/supervisor

Dr. Dmitry Zharkov

2010 – 2015 Master of Science in molecular biology

Institution

Novosibirsk State University

Project title

Processivity of base excision repair enzymes

PI/supervisor

Dr. Dmitry Zharkov

## Internships & Schools

12/2023

Professional development course

“Introduction to synchrotron and neutron research methods in biology”

Institution

Novosibirsk State University, Russia

22-27/02/2020

Winter school “Future Biotech Winter Retreat 2020”, Novosibirsk, Russia

20/11/2018 – 10/12/2018

Short term internship

Institution

Institute of Chemistry, Hebrew University of Jerusalem, Israel

Project

Crystallization of the base excision repair proteins

PI/supervisor

Prof. Dr. Gil Shoham

23 – 27/10/2015

Young scientist school “Computer modeling of biomolecule structure and dynamics”, Novosibirsk, Russia

## EMPLOYMENT HISTORY

### Institute of Chemical Biology and Fundamental Medicine, SB RAS, Novosibirsk, Russia

2023 – present Researcher

2020 – 2023 Junior researcher

2014 – 2020 Laboratory Assistant

2012 – 2014 Student

### Novosibirsk State University, Novosibirsk, Russia

2014 – present Research Project Assistant, Laboratory of Protein Engineering

2016 – 2017 Teaching Assistant, Department of natural science

## TEACHING/SUPERVISING EXPERIENCE

2021-2023	Give lectures on the topic "Protein engineering in biotechnologies" in the "Protein Engineering" course for bachelor and master students in Novosibirsk State University
2015-present	Guidance of bachelor, master and postgraduate students in the lab (including a student from France)
2016-2017	Gave a practical course of biochemistry for bachelor students in Novosibirsk State University

## PUBLICATIONS

### International refereed publications and reviews:

1. Savitskaya V. Y., Novoselov K. A., **Diatlova E. A.**, Snyga V. G., Monakhova M. V., Dolinnaya N. G., Golyshev V. M., Peskovatskova E. S., Kitaeva M. I., Eroshenko D. A., Arutyunyan A. M., Zvereva M. I., Zharkov D. O., Kubareva E. A. Position-dependent effect of AP sites within hTERT promoter G-quadruplex scaffold on the quadruplex stability and repair activity of the APE1 enzyme. *Front. Biosci., under revision.*
2. Eroshenko D. A., **Diatlova E. A.**, Golyshev V. M., Endutkin A. V., Zharkov D. O. (2024). Aberrant Repair of 8-Oxoguanine in Short DNA Bulges. *Doklady Biochemistry and Biophysics* (pp. 1-5). DOI: 10.1134/S1607672923600355
3. Yudkina A. V., Endutkin A. V., **Diatlova E. A.**, Zharkov D. O. (2024). A non-canonical nucleotide from viral genomes interferes with the oxidative DNA damage repair system. *DNA repair*, 133, 103605. DOI: 10.1016/j.dnarep.2023.103605
4. Kim D. V., **Diatlova E. A.**, Zharkov T. D., Melentyev V. S., Yudkina A. V., Endutkin A. V., Zharkov D. O. (2023). Back-Up Base Excision DNA Repair in Human Cells Deficient in the Major AP Endonuclease, APE1. *International Journal of Molecular Sciences*, 25(1), 64. DOI: 10.3390/ijms25010064
5. **Diatlova E. A.**, Mechetin G. V., Yudkina A. V., Zharkov V. D., Torgasheva N. A., Endutkin A. V., Shulenina O. V., Konevega A.L., Gileva I.P., Shchelkunov S.N., Zharkov D. O. (2023). Correlated Target Search by Vaccinia Virus Uracil–DNA Glycosylase, a DNA Repair Enzyme and a Processivity Factor of Viral Replication Machinery. *International Journal of Molecular Sciences*, 24(11), 9113. DOI: 10.3390/ijms24119113.
6. **Diatlova E. A.**, Mechetin G. V., Zharkov D. O. (2022). Distinct Mechanisms of Target Search by Endonuclease VIII-like DNA Glycosylases. *Cells*, 11(20), 3192. DOI: 10.3390/cells11203192
7. Torgasheva N. A., **Diatlova E. A.**, Grin I. R., Endutkin A. V., Mechetin G. V., Vokhtantsev I. P., Zharkov, D. O. (2022). Noncatalytic Domains in DNA Glycosylases. *International Journal of Molecular Sciences*, 23(13), 7286. DOI: 10.3390/ijms23137286
8. Grin I. R., Mechetin G. V., Kasymov R. D., **Diatlova E. A.**, Yudkina A. V., Shchelkunov S. N., Zharkov D. O. (2021). A New Class of Uracil–DNA Glycosylase Inhibitors Active against Human and Vaccinia Virus Enzyme. *Molecules*, 26(21), 6668. DOI: 10.3390/molecules26216668
9. Popov A. V., Endutkin A. V., Yatsenko D. D., Yudkina A. V., Barmatov A. E., Makasheva K. A., Raspopova D. Y., **Diatlova E. A.**, Zharkov D. O. (2021). Molecular dynamics approach to identification of new OGG1 cancer-associated somatic variants with impaired activity. *Journal of Biological Chemistry*, 296, 100229. DOI: 10.1074/jbc.RA120.014455
10. Yudkina A. V., Endutkin A. V., **Diatlova E. A.**, Moor N. A., Vokhtantsev I. P., Grin I. R., Zharkov D. O. (2020). Displacement of slow-turnover DNA glycosylases by molecular traffic on DNA. *Genes*, 11(8), 866. DOI: 10.3390/genes11080866
11. Mechetin G. V., Endutkin A. V., **Diatlova E. A.**, Zharkov D. O. (2020). Inhibitors of DNA glycosylases as prospective drugs. *International Journal of Molecular Sciences*, 21(9), 3118. DOI: 10.3390/ijms21093118
12. Mechetin G.V., **Dyatlova E.A.**, Sinyakov A.N., Ryabinin V.A., Vorobjev P.E., Zharkov D.O. (2017) Correlated target search by uracil-DNA glycosylase in the presence of bulky adducts and DNA-

binding ligands. Russian Journal of Bioorganic Chemistry 43(1), pp. 24–29. DOI: 10.1134/S106816201606008X

Book chapters:

1. Yudkina A. V., Petrova D. V., Torgasheva N. A., Vokhtancev I. P., **Dyatlova E. A.**, Endutkin A. V., Baikov I. K., Dvornikova A. P., Zharkov D. O. (2024) Fundamentals of Protein Engineering: a textbook, [in Russian] Novosibirsk: IPC NSU, 214 p. ISBN 978-5-4437-1602-2.
2. Mechetin G. V., **Lapteva E. A.**, Torgasheva N. A., Zharkov D. O. (2015) DNA repair enzymes as drug targets [in Russian]. NSU Bull. Biol. Clin. Med., 13, No. 1, p. 86–98.

**CONFERENCES PRESENTATIONS**

Oral communications:

- 2024 School-conference "Modern challenges of structural and synthetic biology" Sheregesh, Russia. [in Russian]
- 2023 The 13th International Conference "Biocatalysis: Fundamentals & Applications", Suzdal, Russia. [in Russian]
- 2022 The 13th International Multiconference "Bioinformatics of Genome Regulation and Structure/Systems Biology" (BGRS/SB), Novosibirsk, Russia. [in English]
- 2018 The 11th International Multiconference "Bioinformatics of Genome Regulation and Structure/Systems Biology" (BGRS/SB), Novosibirsk, Russia. [in English]
- 2012 The 50th International Students Scientific Conference "Students and Progress in Science and Technology", Novosibirsk, Russia. [in Russian]

Poster communications:

- 2024 The 48th FEBS Congress, Milan, Italy
- 2021 13th International Conference "Biocatalysis: Fundamentals & Applications", Pskov, Russia
- 2020 The 12th International Multiconference "Bioinformatics of Genome Regulation and Structure/Systems Biology" (BGRS/SB), Novosibirsk, Russia
- 2019 The 47th Meeting of the EEMGS, Rennes, France
- 2018 The 43rd FEBS Congress, Prague, Czech Republic
- 2017 The 6th US-EU Conference "Repair of Endogenous DNA Damage", Udine, Italy
- 2016 International Conference "Chemical Biology-2016", Novosibirsk, Russia
- 2015 VII Russian symposium "Proteins and Peptides", Novosibirsk, Russia

**SKILLS**

- Molecular biology and biochemistry: PCR, DNA extraction, cloning, protein overexpression in bacteria, protein purification chromatography, western blot, cell-free expression, steady-state and non-stationary kinetics, quench flow, gel shift assay, microscale thermophoresis, mass photometry.
- Basic protein crystallization skills
- Languages: English (B2), Italian (A2)

**AWARDS**

- 2023 Winner of the young scientist competition within the 13-th International Conference on Biocatalysis: Fundamentals & Applications, Suzdal, Russia
- 2020 Awarded the EEMGS travel bursary. Unable to honor it due to the cancellation of EEMGS 2020
- 2018 Awarded the FEBS Bursary for participation in the 43rd FEBS Congress, Prague, Czech Republic
- 2016 3rd prize of the competition "My first publication", ICBFM SB RAS, Novosibirsk, Russia

- 2015 The best MS thesis defense at the meeting of the State Attestation Commission, Novosibirsk State University
- 2012 3rd prize of the 50th International Scientific Students Conference "Students and Progress in Science and Technology", Novosibirsk, Russia

## REFERENCES

- Dmitry Zharkov, Corresponding member of RAS, Professor of RAS, Doctor of Sciences (Biology) Supervisor  
Novosibirsk State University, Head of the Section  
Institute of Chemical Biology and Fundamental Medicine SB RAS, Head of Laboratory  
8 Lavrentiev Avenue, Novosibirsk 630090 Russia  
Email: [oxoguanine@gmail.com](mailto:oxoguanine@gmail.com)  
Tel. +7 (383) 363-51-87
- Vladimir Koval, Associate Professor, Doctor of Sciences (Chemistry)  
Institute of Chemical Biology and Fundamental Medicine SB RAS  
Head of the Institute  
8 Lavrentiev Avenue, Novosibirsk 630090 Russia  
Email: [koval@niboch.nsc.ru](mailto:koval@niboch.nsc.ru)  
Tel. +7 (383) 363-51-50
- Grigory Mechetin, Ph.D.  
Ex-colleague  
Postdoctoral Associate  
Thomas Lord Department of Mechanical Engineering & Materials Science, Duke University  
Durham, NC 27708, USA  
Email: [grigory.mechetin@duke.edu](mailto:grigory.mechetin@duke.edu)  
Tel. +19196605474