



OLEG LUNOV, PHD

MOTIVATION

Most of the current studies show that changes in physical cues result in changes in cell behaviour and functionality. However, they do not provide a mechanistic explanation. Thus, understanding of how these factors influence the processes that drive cell behaviour and functionality represent both fundamental and practical interest.



CONTACT



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SKILLS

Molecular biology

Cell culture

Biochemistry

Microbiology

Microscopy

SOFTWARE

ImageJ

SigmaPlot

Statistica

Imaris

LANGUAGES

English (fluently), Russian (native),
Ukrainian (native),
German (limited writing & speaking),
Czech (limited writing & speaking)

PROFESSIONAL EXPERIENCE

- 2016-present **Head of the Laboratory of Biophysics**
Institute of Physics of the Czech Academy of Sciences, Czech Republic.
- 2014-2016 **Senior Scientist**
Institute of Physics of the Czech Academy of Sciences, Czech Republic.
- 2011-2013 **Post-doctoral Researcher**
Institute of Pharmacology, Ulm University, Germany.
- 2008-2011 **PhD student**
IGradU (International Graduate School in Molecular Medicine Ulm), Institute of Pharmacology, Ulm.
- 2007-2008 **Part-time Lecturer of biology and chemistry**
"Erudit" lyceum, Donetsk, Ukraine.

EDUCATION

- 2008-2011 **Ph.D Degree with highest honor (summa cum laude)**
International Graduate School in Molecular Medicine Ulm, Ulm University, Germany.
- 2006-2007 **Master Degree with Honor in Biophysics**
Donetsk National University, Department of Biophysics, Ukraine.
- 2002-2006 **Bachelor Degree with Honor in Biological Sciences**
Donetsk National University, Department of Biophysics, Donetsk, Ukraine.

CURRENT RESEARCH INTERESTS



How different external physical cues affect cell functionality



Biomedical applications of non-thermal plasmas



Interactions of nanoparticles with living cells and subcellular structures



in silico modelling



Fellowships, Honors, Awards (selected)

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|------|---|
| 2019 | <p>Otto Wichterle Award
received the Otto Wichterle Award of the Czech Academy of Sciences.</p> |
| 2014 | <p>the J.E. Purkune Fellowship
received the Fellowship and joined the Institute of Physics of the Czech Academy of Sciences.</p> |
| 2011 | <p>Graduate School's Doctoral Student Award for the dissertation
Modulation of immune cell signaling and function by functionalized nanosized particles, Ulm</p> |
| 2010 | <p>ASBMB 2010 Graduate/Postdoctoral travel fellowship
Experimental Biology 2010, in Anaheim, CA, April 24-28, 2010</p> |
| 2007 | <p>Honors for "Excellent Achievements in Sciences", Master Thesis in Biological Sciences
Donetsk National University, Ukraine.</p> |
| 2006 | <p>Travel grant for the 6th International Conference on the Scientific and Clinical Applications of Magnetic Carriers
Austria, Krems.</p> |

Memberships and Professional Service

Editorial Advisory Panel and Editorial Board

peer-reviewed journals Scientific Reports and PLoS ONE

Referee for peer-reviewed journals

Biomaterials • ACS Nano • Chem Eng J • Sci Rep • Int J Mol Sci • Food Res Int • Physica E • BMC Cancer • Brit J Dermatol • J Magn Magn Mater • Appl Phys Lett • PLoS One • Eur J Inflamm

Full Member of American Nano Society since 2011

Sigma-Aldrich Global Advisor

Scientific Publication Record

Web of Science publication record 93, citations 1763, h-index 23

Google Scholar publication record 101, citations 2465, h-index 25, i10-index 32

Research ID: H-1387-2014; ORCID: 0000-0003-2922-8896.

Patents

1. Patent Number: WO2014090311-A1. *Nanoparticle useful e.g. in an imaging method which is MRI or magnetic particle imaging and for the localized induction of hyperthermia, comprises a core containing iron oxide, and a graphene coating.*
2. Patent Number: WO2014090313-A1. *New structure, preferably nanoparticle, comprising core and coating imprinted with specific molecule, useful in magnetic resonance imaging, and for localized induction of hyperthermia and separating cells, protein and nucleic acids.*

Popularization of Science

1. Lunov O, A brief history of Biophysics laboratory in Prague. Potential Ch.B.M. 2014; 10: 42 (In Russian).
2. Zablotskii V, Lunov O, Polyakova T, Dejneka A. Biologie a magnetismus: vzájemná přitažlivost. ISBN 978-80-905962-6-9. 2017 (In Czech).

Publications (selected, Top 10)

1. Lunova M, et al. Sci Rep. 2017; 7: 16049.
2. Lunov O, et al. Biomaterials. 2016; 82: 71.
3. Tukmachev D, et al. Nanoscale. 2015; 7: 3954.
4. Yolamanova M, et al. Nature Nanotech. 2013; 8: 130.
5. Ziegler M, et al. Circulation. 2012; 125: 685.
6. Lunov O, et al. ACS Nano. 2011; 5: 9648.
7. Lunov O, et al. ACS Nano. 2011; 5: 1657.
8. Lunov O, et al. Biomaterials. 2011; 32: 547.
9. Lunov O, et al. Biomaterials. 2010; 31: 9015.
10. Lunov O, et al. Biomaterials. 2010; 31: 5063.