PhD Tamar Giorgadze

Research Scientist,
Ivane Javakhishvili Tbilisi State University Andronikashvili Institute of Physics.
Department of Physics of Biological systems

6 Tamarashvili str,
0177 Tbilisi,
Georgia
Tel: +(995 32) 2 398 783
Fax: +(995 32) 2 391 494
Web: www.aiphysics.ge
E-mail: tamari.giorgadze@tsu.ge; tamar.g.giorgadze@gmail.com;

Education

2002-2007 - Master Degree, Specialization - Bio-expertise.
Ivane Javakhishvili Tbilisi State University, Tbilisi Georgia

2009-2011 - Master Degree, Specialization - Biotechnology
Georgian University, Tbilisi Georgia.

2011-2015 - PhD. Specialization - Biotechnology
Georgian University, Tbilisi Georgia.

Work Experience

2012-present -Research Scientist, Department of Physics of Biological Systems, Ivane Javakhishvili Tbilisi State University Andronikashvili Institute of Physics.

2010-2012 - Laboratory Assistant, Department of Physics of Biological systems, Ivane Javakhishvili Tbilisi State University Andronikashvili Institute of Physics.

Scientific Interests:

Bionanophysics;
Molecular Biophysics;
Nanotechnologies;
Photo induced Processes.

Participation in Researche Grants Project:

2019-2021 - Shota Rustaveli National Science Foundation (Georgia),
DNA as a Catalyst in: Creation of One-Dimensional Silver Nanowires and Nanoscale Resonance Nonradiative Electron Excitation Energy Transfer
Scientific Supervizor and Grant Director YS-19-2047.

2013-2014 - Shota Rustaveli National Science Foundation (Georgia),
Purchase of a Deuterium-Halogen light Source (Avalight – DHS) for Application in Research and Educational Purposes
Assistant GNSF 41/14.

2012-2013 - Shota Rustaveli National Science Foundation. (Georgia)
Creation of metal oligo-desoxi-nucleotide complexes with the use of DNA catalytic properties for bionanophotonics and their study by optical spectroscopy methods
Scientific Supervizor and Grant Director, GNSF 12/24

2010-2012 - Shota Rustaveli National Science Foundation (Georgia)
Study of Influence of Silver Nanoparticles on Redox Reactions of DNA-Transition Metal Ions Complexes,
Assistant GNSF/ST 09-508-2-230

Participation in International Forums/Conferences:

1. 4th International Conference of *European Academy of Science* January 20-30, 2019, Bonn, Germany.
2. International conference and Expo on *Nanotechnology & Nanomaterial's*, 14-15 November 2019, Osaka, Japan.
3. 5th International Conference "Nanotechnologies" Nano-2018, November 19-22, Tbilisi, Georgia.
4. 8th International Conference and Exhibition on Lasers, Optics & Photonics, November 15 - 17, 2017 Las Vegas, Nevada, USA.
5. 15th World Congress on CANCER THERAPY, BIOMARKERS & CLINICAL RESEARCH, December 05-07. 2016, Philadelphia, USA.
6. 3rd International Conference on Medical Physics and Biomedical Engineering, November 07-08, 2016, Barcelona, Spain.

7. 2016 XXI International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED), September 27-29, 2016, Tbilisi, Georgia.
8. Modern Research and Prospects of Their Use in Chemistry, Chemical Engineering and Related Fields, September 21-23, 2016, Ureki, Georgia.
9. Science and Innovation Festival, September 16-25, 2016, Tbilisi, Georgia.
10. 4th International Conference "Nanotechnologies" Nano-2016, October 24-27, 2016 Tbilisi, Georgia.
11. 3rd International Conference "Nanotechnologies" Nano-2014, October 20-24, 2014 Tbilisi, Georgia.
12. 2nd International Conference "Nanotechnologies" Nano-2012, September 19-21, 2012 Tbilisi, Georgia.
13. Basic Paradigms in Science and Technology Development for the 21st Century, September 19-21, 2012 Tbilisi, Georgia.

Tamar Giorgadze is the author of more than 14 scientific publications.
Citation index 24.

Selected Publications

1. Tamar G. Giorgadze, Irine G. Khutsishvili, Zaza G. Melikishvili and Vasil G. Bregadze, Silver atoms encapsulated in G4 pamam (polyamidoamine) dendrimers as a model for their use in nanomedicine for phototherapy, *Eur. Chem. Bull.,* 9(1), 22-27. 2020
2. Vasil G. Bregadze, Irine G. Khutsishvili, Tamar G. Giorgadze, Mikhail G. Gadabadze Teimuraz B. Khuskivadze., DNA Photonics: Spectroscopic and Thermodynamic Methods for Studying Nanotechnological Abilities of DNA in Biomedical Research, Fourth International Conference of European Academy of Science, 102-103, 2019
3. Giorgadze TG, Khutsishvili IG, Khuskivadze TB, Melikishvili ZG and Bregadze VG., The Phenomena of Light Re-radiation and Electron Excitation Energy Transfer in Hydrolysis Reactions and for Analysis of the Quality of DNA Double Helix, *Advanced Techniques in Biology & Medicine*,Volume 5, Issue 2, pp.1-7, 2017.
4. V.G. Bregadze, Z.G. Melikishvili, T.G. Giorgadze, I.G. Khutsishvili, T.B. Khuskivadze, Z.V. Jaliashvili and K.I. Sigua., Laser - Induced Fluorescence Resonance Energy Transfer for Analysis of Quality of DNA Double Helix, *Laser Phys. Lett.* **13** 115601 pp.1-7, 2016.

5. Vasil G. Bregadze, Zaza G. Melikishvili, Tamar G. Giorgadze, Irine G. Khutsishvili, Temur B. Khuskivadze, Zaza V. Jaliashvili, Absorption Spectroscopy of Silver Atoms and Nanomolecular Studies of DNA and Some Organic Structures, *2016 XXI International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED)* pp.145-149, 2016.
6. Vasil G. Bregadze, Tamar G. Giorgadze, Zaza G. Melikishvili, DNA and nanophotonics: original methodological approach, *Nanotechnology Reviews.* Volume 3, Issue 5, Pages 445–465, 2014.
7. Vasil G. Bregadze, Zaza G. Melikishvili, Tamar G. Giorgadze., Photo-Induced DNA-Dependent Conformational Changes in Silver Nanoparticles., *Advances in Nanoparticles*, Vol.2 No.2, 176-181, 2013.
8. Vasil G. Bregadze, Zaza G. Melikishvili, Tamar G. Giorgadze, Zaza V. Jaliashvili, Jemal G. Chkhaberidze, Jamlet R. Monaselidze, Temur B. Khuskivadze., Forster Resonance Energy Transfer and Laser Fluorescent Analysis of Defects in DNA Double Helix., *Cornell University Library arXiv: 1306.1846* [physics.bio-ph] 2013.
9. Vasil G. Bregadze, Zaza G. Melikishvili, Tamar G. Giorgadze, Conformational Transitions in Silver Nanoparticals: DNA and Photoirradiation, *Cornell University Library arXiv:*1206.4815v1 [physics.bio-ph], 2012.