

Curriculum Vitae

1. Name Tamaz Mdzinarashvili სახელი: თამაზ მძინარაშვილი
2. Education – degree, discipline, institution, year განათლება:
 3. 1999 Doctor of Phys.-Math. Science, Ivane Javakhishvili Tbilisi State University, Republic of Georgia 1999 - ფიზიკა-მათემატიკის მეცნიერებათა დოქტორი, დაცვა შედგა თბილისის სახელმწიფო უნივერსიტეტის ფიზიკის ინსტიტუტში
 - 1990 Ph.D (speciality biophysics), Institute of Physics of National Academy of Sciences, Georgia
 - 1974 M.S., Ivane Javakhishvili Tbilisi State University, Tbilisi, Republic of Georgia
4. Academic experience – Full Professor
5. Non-academic experience – Director of Institute of Medical and applied Biophysics at Faculty of Exact and Natural Sciences.
 - *Director of Institute of Medical and applied Biophysics at Faculty of Exact and Natural Sciences.*
 - 1985-1990 *Senior researcher, Ivane Javakhishvili Tbilisi State University, Department of Physics,*
 - *Chair of Physics of Macromolecules, Republic of Georgia*
 - 1977-1985 *Senior Research Assistant, Institute of Physics of National Academy of Science, Republic of Georgia*
6. Research activity:
 - Biophysical study of the structural properties, dynamics & energetical parametrs of the main molecules - proteins and nucleic acids (T. Mdzinarashvili, M. Khvedelidze)
 - Observation of Bacteria multiply process and investigate how different antimicrobial agents influence on this process. Physiology of Bacteria in different physics-chemistry environments (T. Mdzinarashvili, N. Shengelia, M. Khvedelidze)
 - Biophysical Research of the Structural Organization of Bacteriophages; Early mechanism of Phage –Bacteria interaction; Determination of DNA ejection mechanism from phage particles. (T. Mdzinarashvili, M. Khvedelidze)
 - Biophysical Investigation of the Nanoparticles: stability, structural organization of phospholiposoms -DPPC, DPPA, DMPC; PLGA et al. Structural organization of complex Nanoparticles with Biological active Molecules. Nanoparticles as a Drug Delivery System; Preparation of Nanoparticles for New Drug Protection (M. Khvedelidze, T. Mdzinarashvili).
6. Current membership in professional organizations -

- The editorial board members for the Journal “Advances in Modern Oncology Research” (AMOR).
- Editorial member of "journal of Biological Physics and Biochemistry";
- members of "Phage Ecology Group"

7. Honors and awards:

- *2014-2016 Shota Rustaveli national science foundation and CNRS (France) joint grant № 04/21*
“Bacteria and biofilms against antimicrobial cocktails”
- *2013-2015 Regional Training Network in Theoretical Physics.*
- *2009-2012 Georgian National Scientific Foundation grant, GNSF/ST08-369, “Biophysical investigation of interaction mechanism for bacteriophage and bacterial membrane”, Senior Research Scientist. (Manager)*
- *2009-2011 GNSF/CNRS - Call 2009, grant № 09/560 “Study of Bacterial Reproduction Speeds and Action in Biologically Active Materials: Turbidity research”, Senior Research Scientist. (Manager)*
- *2009-2010 GNSF/ST08-374. Change –transfer VS stability patterns of globular proteins: Focus on the bilateral role of conformational flexibility.*
- *2005-2006 Georgian National Scientific Foundation grant, № 76, “Thermodynamic, radiospectroscopy and hydrodynamic study of protein, nucleic acids and their complexes”, Senior Research Scientist.*
- *2000-2002 INTAS-99 01390 – The Biological Dispersion Phenomenon and the Energetics of Mikroplancton: A search of Ecological Regularities and Relationship to Environmental Fluctuations.*

Briefly list the most recent professional development activities (workshops/seminars/conferences attended, technical projects, etc.

- ***E.Shekiladze***, T.Mdzinarashvili, M.Khvedelidze, „Calorimetric study the stability of DPPC liposomes and C and E vitamins complexes“ *Experimental and Clinical medicine, Vol.2, pp. 71-73, 2017.*
- T.Mdzinarashvili, M.Khvedelidze, ***E.Shekiladze***, R.Machaidze “Novel technology for the fast production of complex nanoliposomes” *Journal of Biological Physics and Chemistry, Vol.16/4, pp. 172-176, 2016.*
- Papukashvili I, Lomadze E, Mdzinarashvili T. (2016). *The Action of Bacteriophages and β -Lactam Antibiotic on P. aeruginosa Biofilm Formation Bull. Georg. Natl. Acad. Sci., vol. 10, no. 1, pp 91-96;*
- M.Khvedelidze, T.Mdzinarashvili, ***E.Shekiladze***, M.Schneider, D.Moersdorf, I.Bernhardt “Structure of drug delivery DPPA and DPPC liposomes with ligands and their permeability through cells” *Journal of Liposome Research, Vol. 25, №1, pp. 20-31, 2015.*

- T.Mdzinarashvili, I.Papukashvili, N.Shengelia, M.Khvedelidze "Features of membrane receptors in bacterial multiplication process and necessary conditions for phage infection of bacteria" *Current Microbiology*, Vol. 69, №6, pp. 858-865, 2014.
- T.Mdzinarashvili, M.Khvedelidze, E.Shekiladze "Structural organization of DPPA and DPPC liposomes with ligands and permeability of incorporated Gold nanoparticles into cells" *Second Scientific Conference in Exact and Natural Sciences ENS-2014*, Tbilisi, Georgia, January 29th-31th, 2014.
- T.Mdzinarashvili, M.Khvedelidze, E.Shekiladze "Thermodynamic properties of DPPA and DPPC liposomes" *Second Scientific Conference in Exact and Natural Sciences ENS-2014*, Tbilisi, Georgia, January 29th-31th, 2014.
- T.Mdzinarashvili, Partskhaladze T., M.Khvedelidze, J.Kereselidze, G.Bogatkevich. "Thermodynamic properties of DNA in different acidity environment and about possible recognition DNA district models" *International Conference "Physical Concepts of Nucleic-Acid Structure and Behavior Funded by VolkswagenStiftung, the State Committee of Science (Armenia) and ICTP network NET68"*, Yerevan, Armenia, May 27th-29th, pp. 46-47, 2013.
- Tamaz Mdzinarashvili • Irina Papukashvili • Tamar Partskhaladze • Nino Shengelia • Mariam Khvedelidze *Study of Environmental and Antimicrobial Agents Impact on Features of Bacterial Growth. Cell Biochem Biophys. (2013) 66:759-764*
- T. Mdzinarashvili, T. Partskhaladze, M. Khvedelidze, J. Kereselidze, G.S. Bogatkevich. *Thermodynamic properties of DNA in different acidity environment and about possible recognition DNA district models. International Conference Physical Concepts of Nucleic Acid, 27-29 May 2013, Yerevan, Armenia.*
- T.Mdzinarashvili, Papukashvili I., Shengelia N., M.Khvedelidze "Bacteriophages and Antibiotic Comcentration effects in Relationship to Bacterial Growth" *19th Evergreen International Phage Biology Meeting, Olimpia, August 7th-12th, p. 92, 2011.*
- T.Mdzinarashvili, M.Khvedelidze, Papukashvili I., Shengelia N. "Turbidity method for fast determination the species viruses of infectious diseases" *International Scientific Conference "Physical Research Methods in Medicine", Tbilisi, October 27th-29th, p. 92, 2011.*
- M.Khvedelidze, T.Mdzinarashvili, M.Schneider and U.F.Schaefer "Drug delivery Nanoparticles biophysical investigation" *International Scientific Conference "Physical Research Methods in Medicine", Tbilisi, October 27th-29th, p. 71-72, 2011.*
- M.Khvedelidze, T.Mdzinarashvili, E.Sarukhanyan, T.Partskhaladze, N. Nafee, U.F. Schaefer, M. Schneider "Influence of conditions of preparation on PLGA nanoparticles' thermal stability" *Journal of Biological Physics and Chemistry, , Vol.10(2), 2010.*
- M.Khvedelidze, T.Mdzinarashvili, T.Partskhaladze, N.Nafee, C.-M.Lehr, U.F.Schaefer, M.Schneider "Calorimetric and spectrophotometric investigation of PLGA nanoparticles and their complex with DNA" *Journal of Thermal Analysis and Calorimetry (Impact Facot 1.63), Vol.99, №1, pp. 337-348, 2010.*
- T.Mdzinarashvili, T.Partskhaladze, M.Khvedelidze, T.Lomidze "Conseques of an acidic environment for the structural and functional abilities of DNA" *Journal of Biological Physics and Chemistry, Vol.9, pp. 77-82, 2009.*
- T.Mdzinarashvili, M.Khvedelidze, T.Partskhaladze, N.Nafee, U.F.Schaefer, C.-M. Lehr, M.Schneider "Biophysical approach for evaluate DNA transfer by PLGA nanoparticles" *Journal of Biological Physics and Chemistry, Vol.9, pp. 83-87, 2009.*

- *T.Mdzinarashvili, M.Khvedelidze, T.Partskhaladze, M.Schneider, U.F.Schaefer, N.Nafee, C.-M. Lehr "Typical Physical and Chemical Properties of Drug Delivery Nanoparticles: Calorimetric and Spectrophotometric approaches" Book: Advanced Biologically Active Polyfunctional Compounds and Composites: Health, Cultural Heritage and Environmental Protection, Nova Science Publishers © Copyright 2004 - 2009 (https://www.novapublishers.com/catalog/product_info.php?products_id=10787)*
- *T.Mdzinarashvili, M.Khvedelidze, A.Ivanova, T.Partskhaladze, N.Shengelia "Biophysical properties and mechanisms of phage DNA ejection" 7th European Biophysics Congress, Genoa, Italy, July 11-15, p.44 (also published in European Biophysics Journal, Vol. 38), 2009.*
- *M.Khvedelidze, T.Mdzinarashvili, T.Partskhaladze, N.Nafee, M.Schneider "Biophysical investigation of PLGA nanoparticles and their interaction with DNA" 7th European Biophysics Congress, Genoa, Italy, July 11-15, p.87 (also published in European Biophysics Journal, Vol. 38), 2009.*
- *M.Schneider, M.Khvedelidze, T.Mdzinarashvili, T.Partskhaladze, N.Nafee, U.F.Schaefer "Thermal behavior of polymeric drug delivery system composed of PLGA" Analyse, Manipulation und Simulation auf der Nanometerskala, Kurzvortrag - Biophysikalische Chemie, Deutsche Bunsen-Gesellschaft für Physikalische Chemie, Bunsentagung, Saarbrücken, Germany, May 1-3, p.47, 20*