Gayane Volod Ananyan

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Կոնդենսացված վիճակի ֆիզիկայի կենտրոն
Մակրոմոլեկուլների ֆիզիկայի լաբորատորիա
Senior Researcher

Research Institute of Physics
Կոնդենսացված վիճակի ֆիզիկայի կենտրոն
Մակրոմոլեկուլների ֆիզիկայի լաբորատորիա
Senior Researcher

Institute of Physics
Chair of Condensed Matter Physics
Lecturer on an hourly basis

Education

Institution	Yerevan State University
Faculty	Chair of Molecular physics, faculty of Physics
Date	1983 - 1987
Degree name	PhD student

Institution	Yerevan State University
Faculty	Faculty of Physics
Date	1978 - 1983
Degree name	Qualified specialist

Scientific Rank/degree

Institution	Yerevan State University
Date	2013
Degree name	Associate professor

Institution	Yerevan State University
Date	2007
Degree name	Candidate
Scientific Supervisor	Dalyan Yeva B
Research Topic	“The role of central metal at complexation of water-soluble metalloporphyrins with DNA”

Language skills

Հայերեն Русский English

Work experience

Institution	YSU, Interfaculty scientific-research laboratory of Structural Biophysics
Period of time	2009 till now
Rank/degree	Senior Scientific Researcher

Institution	Interfaculty scientific-research laboratory of Structural Biophysics, YSU
Period of time	2007 - 2009
Rank/degree	Scientific Researcher

Institution	Interfaculty scientific-research laboratory of Structural Biophysics, YSU
Period of time	2002 - 2007
Rank/degree	Junior Scientific Researcher

Institution	Department of Molecular Physics, Faulty of Physics, YSU
Period of time	1983 - 2002
Rank/degree	Laboratory Assistant

Publications

Article

The Influence of X-ray Radiation on DNA and Platinated DNA Complexes in the Presence of Porphyrin

A. Avetisyan, L. Mkrtchyan, S. Khosrovyan, M. Avetisyan, G. Ananyan, L. Aloyan

Radiation Physics and Chemistry 2026 113890

https://www.sciencedirect.com/science/article/pii/S0969806X26003002?via%3Dihub

Article

THERMODYNAMICS OF THE ORDER-DISORDER TRANSITION IN THE DOUBLE-HELICAL STRUCTURE OF DNA IN THE PRESENCE OF CoTAllPyP4 [Термодинамика перехода порядок–беспорядок в двуспиральной структуре ДНК в присутствии CoTAllPyP4]

G. V. Ananyan, P. H. Vardevanyan, N. H. Karapetyan

Journal of Contemporary Physics (Armenian Academy of Sciences) 2026 127–131

https://link.springer.com/article/10.1134/S106833722670026X

Article

INFLUENCE OF CATIONIC PORPHYRINS ON CISPLATIN-MODIFIED DNA

G. V. Ananyan, Ye. B. Dalyan, L. R. Aloyan, A. A. Avetisyan, N. H. Karapetyan

Proceedings of the YSU B Chemical and Biological Sciences 2025 43–56

Article

Physical Properties of Water and Aqueous DNA Solutions under the Influence of Non-Thermal Electromagnetic Waves of the Millimeter Range [Физические свойства воды и водных растворов ДНК под воздействием нетепловых электромагнитных волн миллиметрового ди...

V. P. Kalantaryan, R. S. Ghazaryan, N. H. Karapetyan, G. V. Ananyan, M. L. Movsisyan, Yu. S. Babayan

Journal of Contemporary Physics (Armenian Academy of Sciences) 2025 469-475

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Article

Influence of Cu L-Histidinate Schiff Base Derivatives on Structural Features of Irradiated Rat’s DNA
Nelli H. Karapetyan, Samvel G. Haroutiunian, Gayane V. Ananyan

Cell Biochemistry and Biophysics 2024 2557–2565

Article

Binding Parameters of CuTAllPyP4 and CoTAllPyP4 Porphyrins to DNA Using Adsorption Isotherms [Параметры связывания CuTAllPyP4 и CoTAllPyP4 порфиринов с ДНК по изотермам адсорбции]
G. V. Ananyan, N. H. Karapetyan, Y. B. Dalyan, R. S. Ghazaryan, S. G. Haroutiunian

Proceedings of NAS RA Physics 2024 347-352

Article

STABILITY AND CONDUCTIVITY OF BILAYER LIPID MEMBRANE IN PRESENCE NANOPARTICLES
Jomardyan, T. M., Ananyan, G. V., Arakelyan, V.

Proceedings of the YSU A Physical and Mathematical Sciences 2023 23–30

Article

ANTICANCER EFFECT OF AgTOEPyP4 PORPHYRIN
N. H. KARAPETYAN, G. V. ANANYAN, S. G. HAROUTIUNIAN

ԵՊՀ գիտական տեղեկագիր. Քիմիա և կենսաբանություն: 2023 41–53

Article

Interaction of MnTOEtPyP4 porphyrin with DNA
Gayane V. Ananyan, Yeva B. Dalyan, Nelli H. Karapetyan, Vigen G. Barkhudaryan, Ani A. Avetisyan

Journal of Biomolecular Structure and Dynamics 2023 7290-7296

Conference

Influence of Metal Oxide Nanoparticles in the Stability and Conductivity of BLM
G.V. Ananyan, Ts.M. Jomardyan, V.B. Arakelyan

2023 50-51

https://nanobioap.org/event/apricot/

Conference

Effect of Nanoparticles on Erythrocyte Membranes at Irradiation
N.H. Karapetyan, G.V. Ananyan, R.S. Ghazaryan, T.M. Jomardyan, V.G. Barkhudaryan, V. Kalantaryan

2023 52-53

https://nanobioap.org/event/apricot/

Article

The structural features of poly(dG-dC).poly(dG-dC) at complexation with some porphyrins
Gayane V. Ananyan, Nelli H. Karapetyan, Yeva B. Dalyan

Journal of Biomolecular Structure and Dynamics 2021 1-6

Article

Molecular Transformations in DNA under the Influence of UV-radiation
Vigen G. Barkhudaryan, Gayane V. Ananyan, Nelli H. Karapetyan

Current Applied Polymer Science 2020 1-7

Article

pH-dependent complex formation of Zn-mesotetra(4-N-hydroxyethylpyridyl) porphyrin with cancer DNA
Nelli H. Karapetyan, Gayane V. Ananyan, Yeva B. Dalyan

Journal of Biomolecular Structure and Dynamics 2020 1-6

Article

Development of viscometric methods for studying the interaction of porphyrins with DNA
Vigen G. Barkhudaryan, Gayane V. Ananyan

Journal of Biomolecular Structure and Dynamics 2019 1-6

Article

INFLUENCE OF ZINC OXIDE NANOPARTICLES ON BILAYER LIPID MEMBRANE PROPERTIES
A. L. TOROSYAN, G. V. ANANYAN, V. B. ARAKELYAN

Proceedings of the YSU A Physical and Mathematical Sciences 2019 208–213

Conference

The effect of porphyrins configuration on the hydrodynamic behavior of DNA solutions
Vigen G. Barkhudaryan, Gayane V. Ananyan

2019 84-85

https://www.jbsdonline.com/albany-2019-20th-conversation-c4330.html

Conference

Changes in the stability and conductivity of BLM in the presence of zinc oxide nanoparticles
Anahit L. Torosyan, Gayane V. Ananyan, Valeri B. Arakelyan

2019 86-87

https://www.jbsdonline.com/albany-2019-20th-conversation-c4330.html

Conference

Molecular alterations in DNA under UV-irradiation
Gayane V. Ananyan, Nelli H. Karapetyan, Vigen G. Barkhudaryan

2019 86

https://www.jbsdonline.com/albany-2019-20th-conversation-c4330.html

Conference

Peculiarities of melting DNA from Crocker’s sarcoma of a mouse treated with Ag-meso-tetra(4-N-hydroxyethylpyridyl) porphyrin in the presence of Mn2+ ions
Nelli H. Karapetyan, Gayane V. Ananyan, Yeva B. Dalyan

2019 97 - 98

https://www.scientia.global/anam2019-showcasing-nanoscience-fostering-internati...

Conference

The effect of the molecular mass of PEG on the nature of its interaction with DNA
Ani A. Avetisyan, Gayane V. Ananyan, Vigen G. Barkhudaryan

2019 86 - 87

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Conference

Influence of ZnO nanoparticles in the stability and conductivity of BLM depending on its composition
Gayane V. Ananyan, Syuzi M. Grigoryan, Tsovinar Jomardyan, Ishkhan V. Vardanyan,

Valery. B. Arakelyan
2019 77 - 78

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Conference

The futures of complex formation of poly[d(A-C)]. poly[d(G-T)] with porphyrins
Gayane V.Ananyan, Nelli H. Karapetyan, Yeva B. Dalyan

2019 66 - 67

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Article

Development of viscometric methods for studying the interaction of various porphyrins with DNA. Part IV: Meso-tetra-(4N-allylpyridyl) porphyrin and its Cu-, Coand Zn-containing derivatives
Vigen G. Barkhudaryan, Gayane V. Ananyan

Journal of Porphyrins and Phthalocyanines 2018 1-8

Article

INFLUENCE OF NANOPARTICLES OF CuO ON THE STABILITY AND CONDUCTIVITY OF BLM
A. L. TOROSYAN, G. V. ANANYAN, V. B. ARAKELYAN

Proceedings of the YSU A Physical and Mathematical Sciences 2018 p. 41–46

Article

Development of viscometric methods for studying the interaction of various porphyrins with DNA. Part III: Meso-tetra-(3N-alylpyridyl) porphyrin and its Cu-, Co- and Zn- containing derivatives
Vigen G. Barkhudaryan, Gayane V. Ananyan

Journal of Porphyrins and Phthalocyanines 2017 110-115

http://www.worldscientific.com/worldscinet/jpp

Article

ПЛАВЛЕНИЕ ДНК ОПУХОЛЕНОСЯЩИХ КРЫС, ЛЕЧЕНЫХ мезо-ТЕТРА(4-N-ГИДРОКСИЭТИЛПИРИДИЛ)ПОРФИРИНОМ И ЕГО Ag-, Zn-, Co-ПРОИЗВОДНЫМИ
Н.Г. Карапетян, Г.В. Ананян, Е.Б. Далян, С.Г. Арутюнян

Биофизика (Biophysics) 2017 458–463

http://elibrary.ru/title_about.asp?id=7680

Article

Interaction of Meso-tetra-(4N-allylpyridyl) porphyrin and its Cu-, Co- and Zn- containing derivatives with DNA
Barkhudaryan V. G., Ananyan G. V.

Biological Journal of Armenia 2017 84-93

Conference

Influence of structural features of porphyrins on their ability to effect on DNA
V. G. Barkhudaryan, G. V. Ananyan

2017 1

http://premc.org/conferences/iconan-nanomedicine-nanobiotechnology/

Article

Application of viscometric methods for studying the interaction of various porphyrins with DNA

Vigen G. Barkhudaryan, Gayane V. Ananyan

Journal of Biomolecular Structure and Dynamics 2016 136

http://www.tandfonline.com/action/journalInformation?journalCode=tbsd20#.V25anP...

Article

Development of viscometric methods for studying the interaction of various porphyrins with DNA. Part II: Meso-tetra-(3N-hydroxyethylpyridyl) porphyrin and its Ni-, Cu-, Co- and Zn-containing derivatives

Vigen G. Barkhudaryan, Gayane V. Ananyan

Journal of Porphyrins and Phthalocyanines 2016 766-772

http://www.worldscientific.com/worldscinet/jpp

Conference

Application of viscometric methods for studying the interaction of various porphyrins with DNA

Vigen G. Barkhudaryan, Gayane V. Ananyan

2016 88

http://www.jbsdonline.com/c4327/albany-2015-conversation-19-c4328.html

Conference

Лечение опухоленосящих крыс мезо-тетра(4N-гидроксиэтилпиридил) порфиринами H2TOEtPyP4 и AgTOEtPyP4

Карапетян Н.Г., Ананян Г.В, Далян Е.Б, Арутюнян С. Г.

2016 106

http://biomed2016.icg.nsc.ru

Conference

Application of viscometric methods for studying the interaction of various porphyrins with DNA

Vigen G. Barkhudaryan, Gayane V. Ananyan

2015 85

http://www.jbsdonline.com/c4327/albany-2015book-abstracts-c4329.html

Conference

The features of complexformation of poly(dI-dC) 2 with porphyrins

Gayane V. Ananyan, Nelli H. Karapetyan, Samvel G. Haroutiunian, Yeva B. Dalyan

2015 85

http://www.jbsdonline.com/

Conference

Effect of configuration of porphyrin molecule on the complexation with DNA

G.V. Ananyan, V.G. Barkhudaryan

2015 92-93

http://www.dom-events.org/

Article

Development of viscometric methods for studying the interaction of various porphyrins with DNA. Part I: meso-tetra-(4N-hydroxyethylpyridyl) orphyrin and its Ni-, Cu-, Co- and Zn-containing derivatives

V.G. Barkhudaryan, G.V. Ananyan, Y.B. Dalyan, S.G. Harutunyan

Journal of Porphyrins and Phthalocyanines 2014 594–599

http://www.worldscientific.com/worldscinet/jpp

Conference

Characterization and differentiation of binding modes of water-soluble porphyrins at complexation with DNA

Vigen G. Barkhudaryan, Gayane V. Ananyan, Yeva B. Dalyan

2013 55 - 55

https://pubmed.ncbi.nlm.nih.gov/23738375/

Article

The stability of DNA–porphyrin complexes in the presence of Mn(II) ions.

G. Ananyan, A. Avetisyan, L. Aloyan, Y. Dalyan

Biophysical Chemistry 2011 96-101

http://www.elsevier.com/locate/biophyschem

Article

DNA damage and anti-tumor activity induced by Zn, Ag and Co containing meso- tetra(4-N-oxyethylpyridyl)porphyrins in vivo

Nelli H. Karapetyan, Lusya V. Torosyan, Gayane V. Ananyan, Rafael E. Muradyan

Journal of Porphyrins and Phthalocyanines 2010 pp. 349-353