

# Gayane Volod Ananyan

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## Research Institute of Physics

Laboratory of Physics of Macromolecules

Senior researcher



## Education

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

<b>Institution</b>	Yerevan State University
<b>Faculty</b>	Faculty of Physics
<b>Date</b>	1978 - 1983
<b>Degree name</b>	Qualified specialist



## Scientific Rank/degree

<b>Institution</b>	Yerevan State University
<b>Date</b>	2013
<b>Degree name</b>	Associate professor
<b>Specialty</b>	Physico-mathematical sciences

<b>Institution</b>	Yerevan State University
<b>Date</b>	2007
<b>Degree name</b>	Candidate
<b>Specialty</b>	Physico-mathematical sciences
<b>Scientific Supervisor</b>	Dalyan Yeva B
<b>Research Topic</b>	“The role of central metal at complexation of water-soluble metalloporphyrins with DNA”



## Language skills

Հայերեն Русский English



## Work experience

<b>Institution</b>	YSU, Interfaculty scientific-research laboratory of Structural Biophysics
<b>Period of time</b>	2009 till now

<b>Rank/degree</b>	Senior Scientific Researcher
<b>Institution</b>	Interfaculty scientific-research laboratory of Structural Biophysics, YSU
<b>Period of time</b>	2007 - 2009
<b>Rank/degree</b>	Scientific Researcher
<b>Institution</b>	Interfaculty scientific-research laboratory of Structural Biophysics, YSU
<b>Period of time</b>	2002 - 2007
<b>Rank/degree</b>	Junior Scientific Researcher
<b>Institution</b>	Department of Molecular Physics, Faculty of Physics, YSU
<b>Period of time</b>	1983 - 2002
<b>Rank/degree</b>	Laboratory Assistant

## Publications

### 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

#### **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 CuTAlIPyP4 and CoTAlIPyP4 Porphyrins to DNA Using Adsorption Isotherms [Параметры связывания CuTAlIPyP4 и CoTAlIPyP4 порфиринов с ДНК по изотермам адсорбции]**

G. V. Ananyan, N. H. Karapetyan, Y. B. Dalyan, R. S. Ghazaryan, S. G. Haroutiunian

Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 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. Զիմիա 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

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*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

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*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

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*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

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*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

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*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

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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

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*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

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*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>

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*Article*

**ПЛАВЛЕНИЕ ДНК ОПУХОЛЕНОСЯЩИХ КРЫС, ЛЕЧЕННЫХ 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](http://elibrary.ru/title_about.asp?id=7680)

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*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

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*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...>

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*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>

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*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>

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*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>

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*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

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*Conference*

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

Vigen G. Barkhudaryan, Gayane V. Ananyan

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*Conference*

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

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

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*Conference*

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

Vigen G. Barkhudaryan, Gayane V. Ananyan

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*Conference*

**Лечение опухоленосщих крыс мезо-тетра(4N-гидроксиэтилпиридил) порфиринами H<sub>2</sub>TOEtPyP<sub>4</sub> и AgTOEtPyP<sub>4</sub>**

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

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*Conference*

**Effect of configuration of porphyrin molecule on the complexation with DNA**

G.V. Ananyan, V.G. Barkhudaryan

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*Conference*

**Influence of structural features of porphyrins on their ability to effect on DNA**

V. G. Barkhudaryan, G. V. Ananyan

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*Conference*

**The effect of porphyrins configuration on the hydrodynamic behavior of DNA solutions**

Vigen G. Barkhudaryan, Gayane V. Ananyan

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*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

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*Conference*

**Molecular alterations in DNA under UV-irradiation**

Gayane V. Ananyan, Nelli H. Karapetyan, Vigen G. Barkhudaryan

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*Conference*

**Influence of Metal Oxide Nanoparticles in the Stability and Conductivity of BLM**

G.V. Ananyan, Ts.M. Jomardyan, V.B. Arakelyan

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*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

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*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 Mn<sup>2+</sup> ions**

Nelli H. Karapetyan, Gayane V. Ananyan, Yeva B. Dalyan

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*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

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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

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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

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*Conference*

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

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

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