

# Yeva Beno Dalyan

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## Research Institute of Physics

Laboratory of Physics of Macromolecules

Head of laboratory

## Education

<b>Institution</b>	Yerevan State University
<b>Faculty</b>	Faculty of Physics
<b>Date</b>	1966 - 1971
<b>Degree name</b>	Masters

## Scientific Rank/degree

<b>Institution</b>	Yerevan State University
<b>Date</b>	2007
<b>Degree name</b>	Professor
<b>Specialty</b>	Physico-mathematical sciences

<b>Institution</b>	Institute of Applied Problems of Physics, P00516
<b>Date</b>	2003
<b>Degree name</b>	Doctor
<b>Specialty</b>	Physico-mathematical sciences
<b>Research Topic</b>	STRUCTURE FORMATION IN DNA-LIGAND COMPLEXES. REVERSIBLE AND IRREVERSIBLE BINDING

## Language skills

Հայերեն Русский English

## Work experience

<b>Institution</b>	Yerevan State University
<b>Period of time</b>	1971 - 2025
<b>Rank/degree</b>	Head pf research laboratory of Physics of Macromolecules

## Publications

Article

**The Interaction of TOEPyP4 and ZnTOEPyP4 Porphyrins with G-Quadruplexes**

I. V. Vardanyan, M. Kh. Badalyan, Ts. M. Jomardyan, Y. B. Dalyan, S. G. Haroutiunian  
Journal of Contemporary Physics (Armenian Academy of Sciences) 2025 115-119

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*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

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*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

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*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*

**Bleomycin and Olaparib Induced Modulation of Poly (ADP-Ribose) Polymerase 1 Activity and Chromatin Structure in Thymocyte Nuclei**

Anush L. Asatryan, Karine S. Matinyan, Lusine G. Aslanyan, Yeva B. Dalyan, Irina G. Artsruni

Asian Journal of Pharmaceutics 2023 502-508

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*Article*

**Structural Transitions in Complementary G-Rich and C-Rich Strands and Their Mixture at Various pH Conditions**

Yeva B. Dalyan, Ishkhan V. Vardanyan, Samvel G. Haroutiunian, Milena Kh. Badalyan

ACS Omega 2023 47051-47056

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*Article*

**Photovoltaic Tweezers Based on Optical Holography: Application to 2D Trapping of DNA Molecules on a Lithium Niobate Crystal**

Lusine Aloyan, Yeva Dalyan, Lusine Tsarukyan, Anahit Badalyan, Rafael Drampyan

Optical Memory and Neural Network 2023 S384-S395

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*Article*

**FLAP Collaboration: Tasks and Perspectives. Study of Fundamentals and New Applications of Controllable Generation of Electromagnetic Radiation by Relativistic Electrons Using Functional Materials**

L. Aloyan, A. Avetisyan, Y. Dalyan, L. Grigoryan, N. Karapetyan, V. Kocharyan, A. Mkrtchyan, A. Movsisyan, A. Saharian, A. Shahbazyan, A. Baldin, 37

Physics of Particles and Nuclei Letters 2021 338-353

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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

*Article*

**THE INFLUENCE OF UREA ON G-QUADRUPLEX AND i-MOTIF STRUCTURES IN COMPLEMENTARY DNA SEQUENCES**

Ye. B. Dalyan, L. G. Aslanyan, I. V. Vardanyan

Proceedings of the YSU A. Physical and Mathematical Sciences 2020 115-122

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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*

**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](http://elibrary.ru/title_about.asp?id=7680)

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*Article*

**Effect of urea on G-quadruplex stability**

Yeva B. Dalyan, Ishkhan Vardanyan, Lusine Aslanyan, Tigran V. Chalikian, Jordan Ko, Byul G. Kim

Journal of Physical Chemistry B 2017 6511-6519

<http://pubs.acs.org/journal/jpcbfc>

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*Article*

**Thermodynamics of interaction of meso-tetra-(4-Noxyethylpyridyl) porphyrin and its Cu(II)- and Co(II)- containing derivatives with A and B forms of DNA**

Ani A. Avetisyan, Ishkhan V. Vardanyan, Yeva B. Dalyan

Journal of Porphyrins and Phthalocyanines 2017 731-738

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*Article*

**Two-photon microscopy imaging of oxidative stress in human living erythrocytes.**

GOHAR TSAKANOVA, ELINA ARAKELOVA, VIOLETTA AYVAZYAN, ANNA AYVAZYAN, STEPAN TATIKYAN,

ROUBEN AROUTIOUNIAN, YEVA DALYAN, SAMVEL HAROUTIUNIAN, VASIL TSAKANOV, ARSEN ARAKELYAN

BIOMEDICAL OPTICS EXPRESS 2017 5834-5846

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*Article*

**AREAL low energy electron beam applications in life and materials sciences.**

V.M. Tsakanov, R.M. Aroutiounian, G.A. Amatuni, L.R. Aloyan, L.G. Aslanyan, V.Sh. Avagyan, N.S. Babayan,

V.V. Buniatyan, Y.B. Dalyan, H.D. Davtyan, M.V. Derdzyan, B.A. Grigoryan, N.E. Grigoryan, L.S. Hakobyan,

S.G. Haroutyunian, V.V. Harutiunyan, K.L. Hovhannesian, V.G. Khachatryan, N.W. Martirosyan,

G.S. Melikyan, A.G. Petrosyan, V.H. Petrosyan, A.A. Sahakyan, V.V. Sahakyan, A.A. Sargsyan, A.S. Simonyan,

S.Sh. Tatikyan, G.V. Tsakanova, E. Tsovyan, A.S. Vardanyan, V.V. Vardanyan, A.S. Yeremyan, H.N. Yeritsyan,

G.S. Zanyan

*Article*

**New Porphyrins/Calf Thymus DNA Complexes. Their Thermostability**

Lusine ALOYAN, Yeva DALYAN, Aleksey GOGOLEV

Advanced Materials Research 2015 554-558

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*Article*

**THERMODYNAMICS OF INTERACTIONS OF CoTOEPyP4 PORPHYRIN WITH A-DNA.**

A.A. Avetisyan, Ye.B. Dalyan

Proceedings of the YSU B: Chemical and Biological Sciences 2014 40-45

<http://www.ysu.am/science/hy/journals>

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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*

**EVALUATION OF ERRORS IN DETERMINATION OF DNA MELTING CURVE REGISTERED WITH DIFFERENTIAL SCANNING CALORIMETRY**

D.Y. LANDO, I.E. GRIGORYAN, A.S. FRIDMAN, E.N. GALYUK, Y.B. DALYAN, S.G. HAROUTIUNIAN

Հայաստանի կենսաբանական հանդես 2013 6-12

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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*

**COMPARATIVE ANALYSIS OF THE EFFECTS OF PLATINUM COMPOUNDS ON THERMOSTABILITY OF DNA**

I. E. GRIGORYAN, Ye. B. DALYAN, S. G. HAROUTIUNIAN

Proceedings of the YSU A. Physical and Mathematical Sciences 2011 52-57

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*Article*

**Microcalorimetric Investigation of DNA, poly(dA)poly(dT) and poly[d(A-C)]poly[d(G-T)] Melting in the Presence of Water Soluble (Meso tetra (4 N oxyethylpyridyl) Porphyrin) and its Zn Complex**

J. Monaselidze, Majagaladze, Sh. Barbakadze, D. Khachidze, M. Gorgoshidze, Y. Kalandadze,

S. Haroutiunian, Y. Dalyan, V. Vardanyan

Journal of Biomolecular Structure and Dynamics 2008 419-424

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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

**The comparative study of H<sub>2</sub>TOEPyP<sub>4</sub> and CoTOEPyP<sub>4</sub> porphyrins with A-DNA**

A. Avetisyan, Y. Dalyan

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Conference

**The comparative study of CuTOEPyP<sub>4</sub>-porphyrin with A- and B-forms of DNA**

A.A.Avetisyan, Y.B.Dalyan

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Conference

**Development of anticancer drug transporter on base of gold nanoparticles**

L.R.Aloyan, Y.B.Dalyan

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Conference

**The investigation of sodium-induced G-quadruplex stability and thermodynamics in urea solution**

L.G.Aslyan, I.V.Vardanyan, Y.B.Dalyan

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Conference

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

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

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Conference

**The DNA Damage Induced by Higher Energy Electrons in Presence of Porphyrins**

L. R. Aloyan, L.G. Aslyan, Y. B. Dalyan

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Conference

**High energy electron beam radiation influence on DNA in the presence of porphyrins**

L.R. Aloyan, L.G. Aslyan, Y.B. Dalyan

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Conference

**The influence of CuTOEPyP<sub>4</sub> porphyrin on DNA damage induced by high energy electron beam radiation.**

L. R. Aloyan, Y. B. Dalyan, S.G Haroutiunian

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Conference

**The influence of FeTOEPyP<sub>4</sub> porphyrins on DNA damage induced by high energy electron beam radiation.**

L.R. Aloyan, Y.B. Dalyan, S.G. Haroutiunian

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Conference

**INFLUENCE OF CATION PORPHYRINES ON DNA DAMAGE DURING ELECTRON BEAM IRRADIATION**

L.R. Aloyan, Y.B. Dalyan, S.G Haroutiunian

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*Conference*

**Bessel Beam Assisted Photovoltaic Trapping of Micro/nanoobjects on a Lithium Niobate Crystal**

L. Aloyan, Y. Dalyan, L. Tsarukyan, A. Badalyan, R. Drampyan

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*Conference*

**Optical Techniques for the Study of DNA-porphyrin Interactions**

L. Aloyan, Y. Dalyan

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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*

**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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