# Yeva Beno Dalyan

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**Կոնդենսացված վիճակի ֆիզիկայի կենտրոն**
Մակրոմոլեկուլների ֆիզիկայի լաբորատորիա
head of laboratory

**Research Institute of Physics**
Կոնդենսացված վիճակի ֆիզիկայի կենտրոն
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head of laboratory

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

## Education

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| **Institution** | Yerevan State University |
| **Faculty** | Faculty of Physics |
| **Date** | 1966 - 1971 |
| **Degree name** | Masters |

## Scientific Rank/degree

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|---|---|
| **Date** | 2007 |
| **Degree name** | Professor |

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| **Date** | 2003 |
| **Degree name** | Doctor |
| **Research Topic** | STRUCTURE FORMATION IN DNA–LIGAND COMPLEXES. REVERSIBLE AND IRREVERSIBLE BINDING |

## Language skills

Հայերեն Русский English

## Work experience

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|---|---|
| **Institution** | Yerevan State University |
| **Period of time** | 1971 - 2025 |
| **Rank/degree** | 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 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

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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 Tsarukyana, Anahit Badalyan, Rafael Drampyan

Optical Memory and Neural Networks 2023 S384–S395

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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

2022 13 - 14

https://ipr.sci.am/pl/conferences/archive.html

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*Conference*

**Optical Techniques for the Study of DNA–porphyrin Interactions**
L. Aloyan, Y. Dalyan

2022 45-46

https://ipr.sci.am/pl/conferences/archive.html

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*Article*

**FLAP Collaboration: Tasks and Perspectives.Study of Fundamentals and New Applicationsof Controllable Generation of Electromagnetic Radiationby 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

Journal of Biomolecular Structure and Dynamics 2021 1-6

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*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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*Conference*

**The influence of CuTOEPyP4 porphyrin on DNA damage induced by high energy electron beam radiation.**
L. R. Aloyan, Y. B. Dalyan, S.G Haroutiunian

2019 85-86

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

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*Conference*

**The influence of FeTOEPyP4 porphyrins on DNA damage induced by high energy electron beam radiation.**
L.R. Aloyan, Y.B. Dalyan, S.G. Haroutiunian

2019 68

https://nrpm.yerphi.am/

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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

2019 109-110

https://anam2019.org/

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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 Mn2+ ions**
Nelli H. Karapetyan, Gayane V. Ananyan, Yeva B. Dalyan

2019 97 - 98

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

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*Conference*

**High energy electron beam radiation influence on DNA in the presence of porphyrins**
L.R. Aloyan, L.G. Aslanyan, Y.B. Dalyan

2018 38-39

http://physecolab.ysu.am/workshop2018/

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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

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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/jpcbfk

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*Article*

**Thermodynamics of interaction of meso-tetra-(4Noxyethylpyridyl) 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, VASILI TSAKANOV, ARSEN ARAKELYAN

BIOMEDICAL OPTICS EXPRESS 2017 5834-5846

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*Conference*

**The DNA Damage Induced by Higher Energy Electrons in Presence of Porphyrins**
L. R. Aloyan, L.G. Aslanyan, Y. B. Dalyan

2017 36

http://www.molbiol.sci.am/wrkshp1_gen

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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.Hovhannesyan, 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

Nuclear Instruments and Methods in Physics Research Section A Accelerators Spectrometers Detectors and Associated Equipment
2016 248-253

http://www.journals.elsevier.com/nuclear-instruments-and-methods-in-physics-res...

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*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

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*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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*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/

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*Conference*

**The comparative study of H2TOEPyP4 and CoTOEPyP4 porphyrins with A-DNA**
A. Avetisyan, Y. Dalyan

2015 87

http://dx.doi.org/10.1080/07391102.2015.1032624

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*Conference*

**The comparative study of CuTOEPyp4-porphyrin with A- and B-forms of DNA**
A.A.Avetisyan, Y.B.Dalyan

2015 85-86

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*Conference*

**Development of anticancer drug transporter on base of gold nanoparticles**
L.R.Aloyan, Y.B.Dalyan

2015 70-71

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*Conference*

**The investigation of sodium-induced G-quadruplex stability and thermodynamics in urea solution**
I.V.Vardanyan, Y.B.Dalyan, L.G.Aslanyan

2015 42

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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

Biological Journal of Armenia 2013 6-12

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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

2013 55 - 55

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

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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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