

Կենսաբանության գիտահետազոտական ինստիտուտ  
Ընդհանուր և մոլեկուլային գենետիկայի լաբորատորիա  
Ավագ գիտաշխատող

## Լեզուների իմացություն

Հայերեն English Русский

## Հրատարակումներ

Հոդված

### **AI/ML modeling to enhance the capability of in vitro and in vivo tests in predicting human carcinogenicity**

Ani Tevosyan, Hrach Yeghiazaryan, Gohar Tadevosyan, Lilit Apresyan, Vahe Atoyan, Anna Misakyan, Zaven Navoyan, Helga Stopper, Nelly Babayan, Lusine Khondkaryan

Mutation Research - Genetic Toxicology and Environmental Mutagenesis 2025 503858

Հոդված

### **Enhancing Chemical-Induced Human Carcinogenic Risk Evaluation through Advanced AI Technologies**

Nelly Babayan, Helga Stopper, Lusine Khondkaryan, Ani Tevosyan, Gohar Tadevosyan, Lilit Apresyan, Lusine Adunts, Zaven Navoyan

Proceedings MDPI 2024 12

Հոդված

### **DNA DAMAGE INDUCED BY ULTRASHORT PULSED ELECTRON BEAM IRRADIATION IN HUMAN CANCER AND NORMAL CELLS**

Alisa Manukyan, Nelly Babayan, Lusine Khondkaryan, Ruzanna Grigoryan, Natalya Sarkisyan, Tigran Harutyunyan, Bagrat Grigoryan, Rouben Aroutiounian

ARMENIAN MEETING "Climate Changes: Adaptation" Yerevan, March 27-28, 2023 ABSTRACTS PAPERS BY YOUNG SCIENTISTS  
2023 11-14

Հոդված

### **Datasets Construction and Development of QSAR Models for Predicting Micronucleus In Vitro and In Vivo Assay Outcomes**

Lusine Khondkaryan, Ani Tevosyan, Hayk Navasardyan, Hrant Khachatrian, Gohar Tadevosyan, Lilit Apresyan, Gayane Chilingaryan, Zaven Navoyan, Helga Stopper, Nelly Babayan

Toxics 2023 785

Հոդված

### **Screening of phytochemicals, toxicities, and activities of three Dillenia species**

Pornnarong Siripiyasing, Kittiya Silawong, Tikumporn Thooptianrat, Runglawan Sudmoon, Nelly Babayan, Lusine Khondkaryan, Lilit Apresyan, Tawatchai Tanee, Arunrat Chaveerach

Journal of Herbmec Pharmacology 2022 339-347

Հոդված

**Incidence and Risk Factors of Acute Leukemias in Armenia: A Population-Based Study**

Lusine Khondkaryan, Diana Andreasyan, Yervand Hakobyan, Ezgi Eylül Bankoglu, Rouben Aroutiounian, Helga Stopper, Nelly Babayan

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Հոդված

**Improving VAE based molecular representations for compound property prediction**

Ani Tevosyan, Lusine Khondkaryan, Hrant Khachatryan, Gohar Tadevosyan, Lilit Apresyan, Nelly Babayan, Helga Stopper, Zaven Navoyan

Journal of Cheminformatics 2022 69

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Հոդված

**Increased Yield of Residual  $\gamma$ H2AX Foci in p53-Deficient Human Lung Carcinoma Cells Exposed to Subpicosecond Beams of Accelerated Electrons**

N. Yu. Vorobyeva, N. S. Babayan, B. A. Grigoryan, A. A. Sargsyan, L. G. Khondkaryan, L. S. Apresyan, A. K. Chigasova, E. I. Yashkina, D. V. Guryev, S. M. Rodneva, A. A. Tsishnatti, Yu. A. Fedotov, R. M. Arutyunyan, A. N. Osipov

БЮЛЛЕТЕНЬ ЭКСПЕРИМЕНТАЛЬНОЙ БИОЛОГИИ И МЕДИЦИНЫ (BULLETIN OF EXPERIMENTAL BIOLOGY AND MEDICINE)  
2022 760-763

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Հոդված

**Helix pomatia albumen gland water soluble protein extract as powerful antiaging agent**

Nelly Babayan, Gohar Tsakanova, Violetta Ayvazyan, Elina Arakelova, Anna Ayvazyan, Stepan Tatikyan, Laura Djavadovna, Ruzanna Grigoryan, Natalya Sargsyan, ArsenArakelyan

Experimental Gerontology 2021 111244

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Հոդված

**КОЛОНИЕОБРАЗУЮЩАЯ СПОСОБНОСТЬ И ОСТАТОЧНЫЕ ФОКУСЫ БЕЛКОВ РЕПАРАЦИИ ДНК В ФИБРОБЛАСТАХ ЛЁГКИХ ЧЕЛОВЕКА, ОБЛУЧЁННЫХ СУБПИКОСЕКУНДНЫМИ ПУЧКАМИ УСКОРЕННЫХ ЭЛЕКТРОНОВ**

Н.С.Бабаян, Д.В.Гурьев, Н.Ю.Воробьева, Б.А.Григорян, Г.Л.Тадевосян, Л.С.Апресян, А.К.Чигасова, Е.И.Яшкина, С.М.Роднева, А.А.Цишнатти, Ю.А.Федотов, Н.К.Саркисян, А.Т.Манукян, Р.М.Арутюнян, А.Н.Осипов

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Հոդված

**Low Repair Capacity of DNA Double-Strand Breaks Induced by Laser-Driven Ultrashort Electron Beams in Cancer Cells**

Nelly Babayan, Natalia Vorobyeva, Bagrat Grigoryan, Anna Grekhova, Margarita Pustovalova, Sofya Rodneva, Yuriy Fedotov, Gohar Tsakanova, Rouben Aroutiounian, Andreyan Osipov

International Journal of Molecular Sciences 2020 9488

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Հոդված

**Genotoxic potential of selected medicinal plant extracts in human whole blood cultures**

Babayan Nelly, Harutyunyan Karina, Balayan Karine, Tadevosyan Gohar, Hayrapetyan Manush,

Հոդված

**Ochratoxin A induces global DNA hypomethylation and oxidative stress in neuronal cells in vitro**

Nelly Babayan, Gohar Tadevosyan, Lusine Khondkaryan, Ruzanna Grigoryan, Natalya Sarkisyan,  
Rouben Haroutiounian, Helga Stopper  
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Հոդված

**Laser Driven Ultrashort Pulsed Electron Beam Radiation at Doses of 0.5 and 1.0 Gy Induces Apoptosis in Human Fibroblasts**

Nelly Babayan, Bagrat Grigoryan, Lusine Khondkaryan, Gohar Tadevosyan, Natalya Sarkisyan,  
Ruzanna Grigoryan, Lilit Apresyan, Rouben Aroutiounian, Natalia Vorobyeva, Margarita Pustovalova,  
Anna Grekhova, Andreyan N. Osipov  
International Journal of Molecular Sciences 2019 5140

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Հոդված

**Радиозащитный эффект креатина при повреждении ДНК мононуклеарных клеток периферической крови и адаптационные возможности креатин-креатинкиназной системы мозга и печени крыс**

Нерсесова Л.С., Петросян М.С., Бабаян Н.С., Тадевосян Г.Л., Хондкарян Л.Г., Акопян Ж.И.  
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**Gender differences in DNA damage/repair after laser-generated ultrafast electron beam irradiation**

Babayan N, Grigoryan B, Hovhannisyanyan G, Tadevosyan G, Khondkaryan L, Grigoryan R, Sarkisyan N,  
Aroutiounian R  
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Հոդված

**Screening of phytochemicals and toxicity of medicinal plants, Dillenia species, reveals potential natural product resources**

Tikumporn Thooptianrat, Arunrat Chaveerach, Runglawan Sudmoon, Tawatchai Tanee, Thomas Liehr,  
Nelli Babayan  
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Հոդված

**Dose-rate effect of ultrashort electron beam radiation on DNA damage and repair in vitro**

Nelly Babayan, Galina Hovhannisyanyan, Bagrat Grigoryan, Ruzanna Grigoryan, Natalia Sarkisyan,  
Gohar Tsakanova, Samvel Haroutiounian, Rouben Aroutiounian  
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**Comparative analysis of individual chromosome involvement in micronuclei induced by**

**mitomycin C and bleomycin in human leukocytes.**

Hovhannisyan G, Aroutiounian R, Babayan N, Harutyunyan T, Liehr T

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**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

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**Synthesis, characterization and toxicity studies of pyridinecarboxaldehydes and L-tryptophan derived Schiff bases and corresponding copper (II) complexes**

Malakyan M, Babayan N, Grigoryan R, Sarkisyan N, Tonoyan V, Tadevosyan D, Matosyan V, Aroutiounian R, Arakelyan A

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Հոդված

**Cell viability and DNA damage in MRC5 and HeLa cell lines after histone H1 knockout by CRISPR-Cas9 genome editing technology**

Hovhannisyan G, Aroutiounian R, Harutyunyan T, Babayan N

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**Influence of aflatoxin B1 on copy number variants in human leukocytes in vitro.**

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Գիտաժողովի Այուր

**PROTECTIVE EFFECTS OF SCHIFF BASE CYCLIC AMINO ACID DERIVATIVES AGAINST MYCOTOXINS GENO- AND CYTOTOXICITY**

Tigran HARUTYUNYAN, Galina HOVHANNISYAN, Nelli BABAYAN, Thomas LIEHR, Arsen ARAKELYAN, Rouben AROUTIOUNIAN, Margarita MALAKYAN

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Գիտաժողովի Այուր

**New doxorubicin nanosize composites' anticancer activity in vitro and in vivo**

Babayan N, Apresyan L, Harutyunyan T, Grigoryan S, Arakelova E

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Գիտաժողովի նյութ

**Photodynamic activity and structure/activity relationship of new porphyrins in vitro as potential photosensitizers for application in photodynamic therapy of cancer**

Angela A. Sargsyan, Sona V. Galstyan, Elen A. Hakobyan, Diana H. Vardanyan, Areg Galstyan, Lusine H. Khondkaryan, Nelli S. Babayan

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Գիտաժողովի նյութ

**Genetic effects: DNA radiation damage and repair**

R. Aroutiounian, G. Hovhannisyan, B. Grigoryan, G. Tsakanova, S. Haroutiunian, T. Harutyunyan, N. Babayan

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Գիտաժողովի նյութ

**Neurotoxicity and epigenetic effects of ochratoxin a in vitro**

Nelly Babayan, Gohar Tadevosyan, Lusine Khondkaryan, Ruzanna Grigoryan, Natalya Sarkisyan, Rouben Aroutiounian, Helga Stopper

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Գիտաժողովի նյութ

**The genotoxic and cytotoxic effects of ochratoxin a and t-2 toxin in rats bone marrow and blood cells**

Harutyunyan Tigran, Hovhannisyan Galina, Babayan Nelli, Arakelyan Arsen, Aroutiounian Rouben

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Գիտաժողովի նյութ

**Оценка повреждений и репарации ДНК при облучении сверхкороткими импульсами ускоренных электронов.**

Арутюнян Р.М., Оганесян Г.Г., Григорян Б.А., Цаканова Г.В., Арутюнян С.Г., Арутюнян Т.А., Бабалян Н.С.

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Գիտաժողովի նյութ

**Кинетика репарации ДНК и эпигенетические изменения при облучении сверхкороткими импульсами ускоренных электронов**

Арутюнян Р.М., Оганесян Г.Г., Григорян Б.А., Арутюнян Т.А., Бабалян Н.С.

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Գիտաժողովի նյութ

**DNA double-strand break repair efficiency in cancer cells exposed to laser-driven ultrashort electron beams**

Andreyan Osipov, Nelly Babayan, Natalia Vorobyeva, Bagrat Grigoryan, Anna Chigasova-Grekhova, Margarita Pustovalova, Sofya Rodneva, Yuriy Fedotov, Gohar Tsakanova, Rouben Aroutiounian

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Գիտաժողովի նյութ

**Biomedical applications of ultrafast beams: status and plans**

Tsakanova G, Karalyan Z, Babayan N, Arakelova E, Ayvazyan V, Ayvazyan A, Tatikyan S, Grigoryan B

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Գիտաժողովի նյութ

**Neuronal cell lines as a model to investigate ochratoxin a neurotoxicity**

Babayan N, Grigoryan R, Sarkisyan N, Malakyan M, Stopper H, Aroutiounian R

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Գիտաժողովի նյութ

**Genetic effects of ultrashort pulsed electron beam irradiation - 7 years of joint experience**

Rouben Aroutiounian, Tigran Harutyunyan, Andrian Osipov, Natalya Vorobyeva, Galina Hovhannisyan,

Anzhela Sargsyan, Bagrat Grigoryan, Samvel Haroutiunian, Thomas Liehr, Nelly Babayan

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*Գիտաժողովի նյութ*

**Differences in DNA Damage and Repair in Human Cancer and Normal Cells after Ultrashort Pulsed Electron Beam Irradiation**

Nelly Babayan

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*Գիտաժողովի նյութ*

**Genotoxic effects of low LET irradiation by electron pulses in human cells**

R.M. Aroutiounian, G.G. Hovhannisyan, N. S. Babayan, A.A. Sargsyan, B.A. Grigoryan, T. Liehr,

T.A. Harutyunyan

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*Գիտաժողովի նյութ*

**Study of the Anti-Cancer Effect of Glycoglycerolipids Isolated from Microalgae**

Baghish Harutyunyan, Anna Zakoyan, Ani Aghabekyan, Angelina Sayadyan, Elena Kalita, Nelly Babayan,

Iren Shahazizyan, Vigen Goginyan

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