

## Научно-исследовательский институт биологии

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Старший научный сотрудник

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

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БЮЛЛЕТЕНЬ ЭКСПЕРИМЕНТАЛЬНОЙ БИОЛОГИИ И МЕДИЦИНЫ (BULLETIN OF EXPERIMENTAL BIOLOGY AND MEDICINE)  
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Experimental Gerontology 2021 111244

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БЮЛЛЕТЕНЬ ЭКСПЕРИМЕНТАЛЬНОЙ БИОЛОГИИ И МЕДИЦИНЫ (BULLETIN OF EXPERIMENTAL BIOLOGY AND MEDICINE)  
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International Journal of Molecular Sciences 2020 9488

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Journal of Herbmед Pharmacology 2019 160-162

---

*Статья*

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

MYCOTOXIN RESEARCH 2019 1-9

---

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International Journal of Molecular Sciences 2019 5140

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

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Radiation and Risk (Радиация и риск) 2019 119-131

---

*Статья*

**Gender differences in DNA damage/repair after laser-generated ultrafast electron beam irradiation**

Babayan N, Grigoryan B, Hovhannisyan G, Tadevosyan G, Khondkaryan L, Grigoryan R, Sarkisyan N,

Aroutiounian R

International Journal of Radiology & Radiation Therapy 2018 85-86

---

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**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,

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Journal of Food Biochemistry 2017 e12363, 9

<http://onlinelibrary.wiley.com/doi/10.1111/jfbc.2017.41.issue-3/issuetoc>

---

*Статья*

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

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Journal of Radiation Research 2017 894–897

<https://academic.oup.com/jrr>

---

*Статья*

**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

Molecular Cytogenetics 2016 7

<https://molecularcytogenetics.biomedcentral.com/>

---

*Статья*

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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,

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*Статья*

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

Aroutiounian R, Arakelyan A

F1000Research 2016 1921

<https://f1000research.com/>

---

*Статья*

**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

Proceedings of the YSU B: Chemical and Biological Sciences 2016 64-66

<http://www.y-su.am/science/hy/journals>

---

*Статья*

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

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

Molecular Cytogenetics 2015 25; 5

<https://molecularcytogenetics.biomedcentral.com/>

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