

## Publications

---

### Article

#### **Comparative study of spectral properties of the bovine serum albumin complexes with acridine orange and methylene blue under the effect of millimeter range electromagnetic waves**

A.P. Antonyan, M.A. Shahinyan, M.S. Mikaelyan, A.H. Karapetyan, V.P. Kalantaryan, P.O. Vardevanyan  
Electromagnetic Biology and Medicine 2025 1-11

---

### Article

#### **Thermodynamic Parameters of Binding of Small Molecules to DNA Irradiated by Low-Intensity Millimeter Electromagnetic Waves [Термодинамические параметры связывания малых молекул с ДНК, облученной низкоинтенсивными миллиметровыми электромагнитными волнами]**

V. P. Kalantaryan, R. S. Ghazaryan, Yu. S. Babayan

Journal of Contemporary Physics (Armenian Academy of Sciences) 2024 228–232

---

### Article

#### **Binding Parameters of Mitoxantrone and Ethidium Bromide with A-Form Nucleic Acids Based on Adsorption Isotherms [Параметры связывания митоксантрона и бромистого этидия с А-формой нуклеиновых кислот по изотермам адсорбции]**

V. P. Kalantaryan, R. S. Ghazaryan, Y. S. Babayan, M. A. Parsadanyan

Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2024 404–407

---

### Article

#### **ВЗАИМОДЕЙСТВИЕ СЫВОРОТОЧНОГО АЛЬБУМИНА ЧЕЛОВЕКА С МЕТИЛОВЫМ ФИОЛЕТОВЫМ ПОД ВОЗДЕЙСТВИЕМ ЭЛЕКТРОМАГНИТНЫХ ВОЛН МИЛЛИМЕТРОВОГО ДИАПАЗОНА**

П.О. ВАРДЕВАНЯН, М.А. ШАГИНЯН, М.А. ПАРСАДАНЯН, С.В. ГРИГОРЯН, В.П. КАЛАНТАРЯН

Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2023 268-276

---

### Article

#### **Human Serum Albumin Interaction with Methyl Violet under the Influence of Millimeter-Range Electromagnetic Waves**

P.O. Vardevanyan, M.A. Shahinyan, M.A. Parsadanyan, S.V. Grigoryan, V.P. Kalantaryan

Journal of Contemporary Physics (Armenian Academy of Sciences) 2023 198-203

---

### Article

#### **The Effect of Modulated Millimeter Electromagnetic Waves of Non-Thermal Intensity on the Physical Properties of Aqueous Solutions**

V.P. Kalantaryan, L.R. Sogomonyan, R.S. Ghazaryan, Yu.S. Babayan

Armenian Journal of Physics 2023 62-65

---

Article

**Violation of molecular structure of intracellular water as a possible cause of carcinogenesis and its suppression by microwave radiation(hypothesis)**

Vitali Kalantaryan, Radik Martirosyan, Yuri Babayan, Voldemar Petrosyan

Computational and Structural Biotechnology Journal 2023 3437-3442

---

Article

**ВЗАИМОДЕЙСТВИЕ СЫВОРОТОЧНОГО АЛЬБУМИНА С ЭРИТРОЗИНОМ В ПОД ВОЗДЕЙСТВИЕМ ЭЛЕКТРОМАГНИТНЫХ ВОЛН МИЛЛИМЕТРОВОГО ДИАПАЗОНА**

М.А. Парсаданян, М.А. Шагинян, С.В. Григорян, М.С. Микаелян, Г.А. Погосян, В.П. Калантарян,

П.О. Вардеванян

Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2023 643-651

---

Article

**Interaction of Serum Albumin with Erythrosine B under the Influence of Millimeter-Range Electromagnetic Waves**

M.A. Parsadanyan, M.A. Shahinyan, S.V. Grigoryan, M.S. Mikaelyan, G.H. Poghosyan, V.P. Kalantaryan,

P.O. Vardevanyan

Journal of Contemporary Physics (Armenian Academy of Sciences) 2023 428-434

---

Article

**Influence of Low-Intensity Millimeter Electromagnetic Waves on the Viscosity and Density of Water-Salt Solutions**

R. S. Ghazaryan, V. P. Kalantaryan, Yu. S. Babayan, A. A. Tadevosyan

Journal of Contemporary Physics (Armenian Academy of Sciences) 2022 417-419

---

Article

**On the Possibility of Using Non-Ionizing Electromagnetic Radiation (Millimeter Waves) in Oncology**

Ruzanna Khazaryan, Vitali P. Kalantaryan, Radik Martirosyan, Yura Babayan

Progress in Electromagnetics Research Letters 2020 49-57

---

Article

**Growth properties and hydrogen yield in green microalga *Parachlorella kessleri*: Effects of low-intensity electromagnetic irradiation at the frequencies of 51.8 GHz and 53.0 GHz**

Jemma Manoyan, Lilit Gabrielyan, Vitaly Kalantaryan, Armen Trchounian

JOURNAL OF PHOTOCHEMISTRY AND PHOTOBIOLOGY B-BIOLOGY 2020 112016(1-6)

---

Article

**Study of the influence of millimeter range electromagnetic waves on methylene blue complexes with human serum albumin**

Mariam A. Shahinyan, Ara P. Antonyan, Vitali P. Kalantaryan, Marieta S. Mikaelyan,

Poghos O. Vardevanyan

Journal of Electromagnetic Waves and Applications 2019 2317-2327

---

Article

**ТЕРМОСТАБИЛЬНОСТЬ КОМПЛЕКСОВ ОБЛУЧЕННЫХ ДНК С МИТОКСАНТРОНОМ ПРИ МАЛЫХ ЗАПОЛНЕНИЯХ ЛИГАНДА**

В.П. КАЛАНТАРЯН, Р.С.КАЗАРЯН, Г.Л. КАНАРЯН, Л.Р. СОГОМОНЯН

*Article*

**ДЕЙСТВИЕ ЭЛЕКТРОМАГНИТНОГО ИЗЛУЧЕНИЯ С ЧАСТОТОЙ 51,8 И 53,0 ГГц НА РОСТ, СОДЕРЖАНИЕ ПИГМЕНТОВ, ФОТОВЫДЕЛЕНИЕ ВОДОРОДА И АКТИВНОСТЬ F0F1-АТФазы ПУРПУРНОЙ БАКТЕРИИ *Rhodobacter sphaeroides***

Л. Габриелян, В. Калантарян, А. Трчунян

Биофизика (Biophysics) 2018 468-474

<http://www.maik.ru/ru/journal/biofiz/>

---

*Article*

**Effect of weak electromagnetic waves on thermal properties of biomacromolecule water solutions**

V.P. Kalantaryan, S.N. Hakobyan, P.O. Vardevanyan

Journal of Contemporary Physics (Armenian Academy of Sciences) 2018 175-178

---

*Article*

**Effect of Non-Thermal Millimeter Electromagnetic Radiation on Thermodynamic Parameters of the Binding of Ligands with Nucleic Acids**

V.P.Kalantaryan, Y.S.Babayan, S.N.Hakobyan

Biological Journal of Armenia 2018 22-27

---

*Article*

**Influence of Millimeter Wave Electromagnetic Radiation of Nonthermal Intensity on Density of Aqueous Solutions**

V. P. Kalantaryan, S. N. Hakobyan, Yu. S. Babayan

Journal of Contemporary Physics (Armenian Academy of Sciences) 2017 58-62

<http://www.springer.com/physics/particle+and+nuclear+physics/journal/11958>

---

*Article*

**The distinguishing effects of low-intensity electromagnetic radiation of different extremely high frequencies on *Enterococcus hirae*: growth rate inhibition and scanning electron microscopy analysis**

K. Hovnanyan, V. Kalantaryan, A. Trchounian

Letters in Applied Microbiology 2017 220-225

[http://onlinelibrary.wiley.com/journal/10.1111/\(ISSN\)1472-765X](http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1472-765X)

---

*Article*

**Interaction of netropsin with double-stranded nucleic acids irradiated with nonionizing athermal millimeter electromagnetic waves.**

Yu.S. Babayan, V.P. Kalantaryan, S.H. Hakobyan, R.S. Ghazaryan

Armenian Journal of Physics 2016 167-172

<http://ajp.asj-oa.am/>

---

*Article*

**Action of Non-ionizing Radiation on Tumor and Healthy DNA**

V. Kalantaryan, R. Martirosyan, Y. Babayan, L. Nersesyan, H. Stepanyan, R. Vardapetyan

Armenian Journal of Physics 2016 100-105

<http://ajp.asj-oa.am/>

---

Article

**Interaction of Anticancer drug Doxorubicin with Tumor DNA Irradiated by Nonionizing Millimeter Electromagnetic Waves**

V. Kalantaryan, S. Hakobyan, R. Ghazaryan, R. Martirosyan

American Journal of Medical and Biological Research 2016 5

<http://www.sciepub.com/journal/ajmbr>

---

Article

**The Changes of the Cellular Indicators of Leucopoiesis in Irradiated Animals under Hypomotile Conditions**

Vitali Kalantaryan, Tsovinar Adamyan, Emma Gevorkyan, Nona Adamyan, Tigran Hayrapetyan

American Journal of Medical and Biological Research 2015 33-37

<http://www.sciepub.com/journal/ajmbr>

---

Article

**CHANGES IN THE F0F1-ATPASE ACTIVITY OF IRRADIATED LACTOBACILLUS ACIDOPHILUS IN THE PRESENCE OF CEFTAZIDIME AT LOW pH**

D.R.Soghomonyan, V.P. Kalantaryan, A.H. Trchounian

Հայաստանի կենսաբանական հանդես 2014 39-43

<http://www.flib.sci.am/eng/Biology/>

---

Article

**Воздействие низкоэнергетического миллиметрового электромагнитного излучения на стабильность молекул ДНК в растворе**

Ю.С. Бабаян, А.Ш. Маргарян, В.П. Калантарян, Р.С. Казарян, М.А. Парсаданян, П.О. Вардеванян

Биофизика (Biophysics) 2007 382-384

[http://elibrary.ru/title\\_about.asp?id=7680](http://elibrary.ru/title_about.asp?id=7680)

---

Article

**Некоторые физико-химические свойства ДНК, облученной низкоэнергетическими миллиметровыми когерентными электромагнитными волнами**

Казарян Р. С., Калантарян В. П., Симонян Г. С., Антонян А. П., Вардеванян П. О., Бабаян Ю. С.,

Акопян С. Н., Хачатрян А. Б.

Биомедицинская радиоэлектроника 2006 64-68

<http://jre.cplire.ru/mac/biomed.html>

---

Conference

**The low power electromagnetic millimeter waves influence on the cellular indicators of leucopoiesis**

Vitali Kalantaryan, Radik Martirosyan, Tsovinar Adamyan, Emma Gevorkyan

---

Conference

**The effect of electromagnetic waves with extremely high frequencies and low intensity on human albumin solution**

Poghos Vardevanyan, Vitali Kalantaryan, Mariam Shahinyan, Marina Parsadanyan, Mareta Mikaelyan

---

Conference

**Thermostability of the Mitoxantrone-tumor DNA complexes irradiated by low power electromagnetic waves**

Vitali Kalantaryan, Radik Martirosyan, Sergey Hakobyan, Ruzanna Khazaryan

---

Conference

**Interaction of netropsin with double-stranded nucleic acids irradiated with non ionizing athermal millimeter electromagnetic waves**

Kalantaryan V., Martirosyan R., Babayan Y., Hakobyan S.

---

Conference

**What is the primary target of the action millimeter waves on biological objects?**

Vitali Kalantaryan, Radik Martirosyan, Yura Babayan, Hamlet Badalyan

---

Conference

**Thermostability of the Mitoxantrone-tumor DNA complexes irradiated by low power electromagnetic waves**

V.P. Kalantaryan, R.M. Martirosyan, S.N. Hakobyan, R.S. Khazaryan

---

Conference

**Influence of nonionizing millimeter electromagnetic radiation on tumor and healthy DNA**

Vitali Kalantaryan, Radik Martirosyan, Yura Babayan, Pogos Vardevanyan

---

Conference

**Non-ionizing millimeter electromagnetic waves increase thermodynamic parameters of the binding of anticancer drugs mitoxantrone and doxorubicin with DNA**

Vitali Kalantaryan, Ruzanna Ghazaryan, Sergey Hakobyan, Yura Babayan

---

Conference

**Changes in some metabolic processes of yeasts *Candida guilliermondii* NP-4 under influence of microwaves with a frequency of 51.8GHz**

Marutyan S.V., Petrosyan G.A., Karapetyan H.M., Marutyan S.A., Khachatryan L.D., Kalantaryan V.P.,

Muradyan A.

---

Conference

**Influence of X-irradiation on the activity of ATPase and enzymes of antioxidant system in yeasts *Candida guilliermondii* NP-4**

S. Marutyan, A. Muradyan, H. Karapetyan, V. Khalantaryan, S. Marutyan, L. Khachatryan

---

Conference

**ROYAL JELLY AS A MEANS OF REGULATING PROCESSES DISTURBED BY EXPOSED MILLIMETER WAVES**

Marutyan S.A., Karapetyan H.M., Muradyan A.R., Khachatryan L.D, Kalantaryan V.P., Marutyan S.V.

---

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

---

Conference

**Could oncogenesis be caused by disruption of the molecular structure of intracellular water and its restoration by irradiation?**

V. Kalantaryan, R. Martirosyan, Y. Babayan, V. Petrosyan

---

Conference

**Irradiation of tumor tissues with non-thermal and non-ionizing microwave radiation increases the degree of binding of antitumor drugs to them**

V.Kalantatyan, R.Martirosyan, Y.Babayan

---