

# Hayarpi Gevorg Javrushyan

37493789269

hg.javrushyan@ysu.am



## Research Institute of Biology

Փորձարարական ախտաբանության և բջջային ազդանշանի փոխանցման խումբ  
Group Leader

## Education

|                    |                      |
|--------------------|----------------------|
| <b>Institution</b> | YSU                  |
| <b>Faculty</b>     | Biology/Biochemistry |
| <b>Date</b>        | 2008 - 2010          |
| <b>Degree name</b> | Masters              |

|                    |                      |
|--------------------|----------------------|
| <b>Institution</b> | YSU                  |
| <b>Faculty</b>     | Biology/Biochemistry |
| <b>Date</b>        | 2004 - 2008          |
| <b>Degree name</b> | Bachelor             |

## Scientific Rank/degree

|                              |                                   |
|------------------------------|-----------------------------------|
| <b>Institution</b>           | YSU                               |
| <b>Date</b>                  | 2014                              |
| <b>Degree name</b>           | Candidate                         |
| <b>Specialty</b>             | Biological sciences               |
| <b>Scientific Supervisor</b> | Ph.D, Professor, M.A. Davtyan     |
| <b>Research Topic</b>        | Influence of NO on the urea cycle |

## Language skills

English Русский

## Work experience

|                       |  |
|-----------------------|--|
| <b>Institution</b>    | Yerevan State University   |
| <b>Period of time</b> | 2025 till now  |
| <b>Rank/degree</b>    | Signal Transduction and Experimental Pathology Research group leader |

|                       |                          |
|-----------------------|--------------------------|
| <b>Institution</b>    | Yerevan State University |
| <b>Period of time</b> | 2023 till now            |
| <b>Rank/degree</b>    | assistant professor      |

|                       |                       |
|-----------------------|-----------------------|
| <b>Institution</b>    | YSU                   |
| <b>Period of time</b> | 2023 - 2025           |
| <b>Rank/degree</b>    | Research group leader |

---

|                       |                   |
|-----------------------|-------------------|
| <b>Institution</b>    | YSU               |
| <b>Period of time</b> | 2016 - 2022       |
| <b>Rank/degree</b>    | Junior researcher |

---

## Scientific interests

---

- Biochemistry of cancer, biochemical mechanisms of hypoxia, biochemistry of type 2 diabetes, molecular mechanisms of signaling systems, in vivo animal models, preclinical research
- 

## Participation in international conferences and seminars

---

|                                    |  |
|------------------------------------|--|
| <b>07/10/2024 -<br/>12/10/2024</b> | Erasmus+ Staff Training week "Implementation and Development of Erasmus+ (KA 1+2)"<br>Saarland University<br>Germany |
|------------------------------------|--|

---

|                                    |   |
|------------------------------------|---|
| <b>31/08/2024 -<br/>01/09/2024</b> | Modelling immunotherapy response and toxicity in cancer" (IMMUNO-model)<br>CA21135<br>Dublin City University<br>Ireland |
|------------------------------------|---|

---

## Membership

---

|                       |  |
|-----------------------|--|
| <b>Institution</b>    | The European Association for Cancer Research |
| <b>Period of time</b> | 2024 till now                                |

---

|                       |  |
|-----------------------|--|
| <b>Institution</b>    | The Federation of the European Biochemical Societies |
| <b>Period of time</b> | 2012 till now  |

---

## Other information

---

<https://www.bok.am/user/36305>

## Publications

---

*Article*

**Hypericum alpestre extract exhibits in vitro and in vivo anticancer properties by regulating the cellular antioxidant system and metabolic pathway of L-arginine**

Mikayel Ginovyan, Hayarpi Javrushyan, Hasmik Karapetyan, Izabela Koss-Mikołajczyk,

Barbara Kuszniereicz, Anna Grigoryan, Alina Maloyan, Agnieszka Bartoszek, Nikolay Avtandilyan  
Cell Biochemistry and Function 2024 1-21

---

*Article*

**5-fluorouracil and Rumex obtusifolius extract combination trigger A549 cancer cell apoptosis: uncovering PI3K/Akt inhibition by in vitro and in silico approaches**

Mikayel Ginovyan, Hayarpi Javrushyan, Svetlana Hovhannisyanyan, Edita Nadiryan, Gohar Sevoyan, Tigran Harutyunyan, Smbat Gevorgyan, Zaruhi Karabekian, Alina Maloyan, Nikolay Avtandilyan  
Scientific Reports 2024 1-16

---

*Article*

**Royal Jelly-Mediated Silver Nanoparticles Show Promising Anticancer Effect on HeLa and A549 Cells Through Modulation of the VEGFa/PI3K/Akt/MMP-2 Pathway**

Meri Kocharyan, Syuzan Marutyan, Edita Nadiryan, Mikayel Ginovyan, Hayarpi Javrushyan, Seda Marutyan, Nikolay Avtandilyan  
Applied Organometallic Chemistry 2024 1-11

---

*Article*

**Anti-cancer effect of in vivo inhibition of nitric oxide synthase in a rat model of breast cancer**

Nikolay Avtandilyan, Hayarpi Javrushyan, Mikayel Ginovyan, Anna Karapetyan, Armen Trchounian  
Molecular and Cellular Biochemistry 2023 261-275

---

*Article*

**Anti-cancer effect of Rumex obtusifolius in combination with arginase/nitric oxide synthase inhibitors via downregulation of oxidative stress, inflammation, and polyamine synthesis**

Mikayel Ginovyan, Hayarpi Javrushyan, Gayane Petrosyan, Barbara Kuszniereicz, Izabela Koss-Mikołajczyk, Zuzanna Koziara, Monika Kuczyńska, Patrycja Jakubek, Anna Karapetyan, Naira Sahakyan, Alina Maloyan, Agnieszka Bartoszek, Nikolay Avtandilyan  
International Journal of Biochemistry & Cell Biology 2023 106396

---

*Article*

**Screening revealed the strong cytotoxic activity of Alchemilla smirnovii and Hypericum alpestre ethanol extracts on different cancer cell lines**

Mikayel Ginovyan, Svetlana Hovhannisyanyan, Hayarpi Javrushyan, Gohar Sevoyan, Zaruhi Karabekyan, Narine Zakaryan, Naira Sahakyan, Nikolay Avtandilyan  
AIMS Biophysics 2023 12-22

---

*Article*

**THE CYTOTOXIC PROPERTIES OF ALCHEMILLA SMIRNOVII EXTRACT ON THE HELA CANCER CELLS VIA DOWNREGULATION OF ARGINASE ACTIVITY**

S.M. Hovhannisyanyan, E.E. Nadiryan, M.V. Qocharyan, G.H. Petrosyan, G.P. Sevoyan, Z.I. Karabekyan, H.G. Javrushyan, M.M. Ginovyan, N.V. Avtandilyan  
ԵՊՀ գիտական տեղեկագիր. Քիմիա և կենսաբանություն: 2023 238-247

---

*Article*

**REGULATORY EFFECTS OF RUMEX OBTUSIFOLIUS AND HYPERICUM ALPESTRE EXTRACTS ON THE QUANTITY OF IL-2 IN IN VITRO AND IN VIVO CANCER MODELS**

E.E. Nadiryan, S.M. Hovhannisyanyan, M. V. Qocharyan, G.H. Petrosyan, H.G. Javrushyan, M.M. Ginovyan, N.V. Avtandilyan

Article

**Antihyperglycemic activity of L-norvaline and L-arginine in high-fat diet and streptozotocin-treated male rats**

Hayarpi Javrushyan, Edita Nadiryan, Anna Grigoryan, Nikolay Avtandilyan, Alina Maloyan

Experimental and Molecular Pathology 2022 104763

---

Article

**The effects of NO on the urea cycle pathway in short-term intermittent hypobaric hypoxia in rats**

Hayarpi Javrushyan, Nikolay Avtandilyan, Armen Trchounian

Respiratory Physiology and Neurobiology 2021 103598

---

Article

**NEW THERAPEUTIC APPROACHES IN BREAST ANTICANCER TREATMENT USING ARMENIAN HERBAL EXTRACTS**

H.G. JAVRUSHYAN, N.V. AVTANDILYAN, M.M. GINOVYAN, A.H. TRCHOUNIAN

Biological Journal of Armenia 2021 32-38

---

Article

**The potential therapeutic effect of NG-hydroxy-nor-L-arginine in 7,12-dimethylbenz(a)anthracene-induced breast cancer in rats**

Nikolay Avtandilyan, Hayarpi Javrushyan, Anahit Mamikonyan, Anna Grigoryan, Armen Trchounian

Experimental and Molecular Pathology 2019 1-10

---

Article

**NG-ՀԻԴՐՕՔՍԻ-ՆՈՐ-Լ-ԱՐԳԻՆԻՆԻ ՀԱԿԱՈՒՈՒՑՔԱՅԻՆ ԱՉԴԵՑՈՒԹՅՈՒՆԸ 7.12-ԴԻՄԵԹԻԼԲԵՆԶԱՆԿՐԱՑԵՆՈՎ ԽԹԱՆՎԱԾ ԱՌՆԵՏՆԵՐԻ ԿՐԾՔԱԳԵՂՁԻ ԶԱՂՑԿԵՐԻ ՓՈՐՁԱՐԱՐԱԿԱՆ ՄՈՂԵԼՈՒՄ**

Ավթանդիլյան Էլմիրա, Թովմասյան Մարիամ, Մամիկոնյան Անահիտ, Ջավրուշյան Հայարպի

ԵՊՀ ՈՒԳԸ գիտական հոդվածների ժողովածու 2019 114-121

---

Article

**The Involvement of Arginase and Nitric Oxide Synthase in Breast Cancer Development: Arginase and NO Synthase as Therapeutic Targets in Cancer**

Nikolay Avtandilyan, Hayarpi Javrushyan, Gayane Petrosyan, Armen Trchounian

BioMed Research International 2018 8696923,9

<https://www.hindawi.com/journals/bmri/2018/8696923/>

---

Article

**THE CHANGE OF POLYAMINES AND NITRIC OXIDE QUANTITIES IN HUMAN BLOOD SERUM OF PROSTATE AND BLADDER CANCER**

H. Javrushyan, N. Avtandilyan, A. Mamikonyan, A. Trchounian

Biological Journal of Armenia 2017 125-132

<http://biology.asj-oa.am/view/year/2017.html>

---

Article

**DIETHYLAMINE NONOate INFLUENCE ON RATS UREA CYCLE ENZYMES ACTIVITY AFTER AND BEFORE HYPOXIA**

H. G. Javrushyan, M. H. Khachatryan

Electronic Journal of Natural Sciences of NAS RA 2016 15-19

<http://ejns.sci.am>

---

*Article*

**EFFECT OF HYPOXIA ON THE ACTIVITY OF UREA CYCLE ENZYMES**

H. G. Javrushyan, M. H. Khachatryan, M.A. Davtyan

Electronic Journal of Natural Sciences of NAS RA 2014 13-16

<http://ejns.sci.am>

---

*Article*

**THE INFLUENCE OF NG -HYDROXY-L-ARGININE ON THE ACTIVITY OF THE UREA CYCLE ENZYMES**

H. G. JAVRUSHYAN

Biological Journal of Armenia 2014 113-117

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

---

*Conference*

**INHIBITION OF NOS ACTIVITY AS AN EFFECTIVE ANTICANCER THERAPY AGAINST 7,12-DMBA RAT MODEL OF BREAST CANCER**

Mamikonyan A., Avtandilyan N., Javrushyan H., Trchounian A.

---

*Conference*

**Arginase is an enzyme with real tricks in antitumor treatment of 7,12-dimethylbenz(a)anthracene induced breast cancer in rats**

G.Petrosyan, N. Avtandilyan, H. Javrushyan, A. Trchounian

---

*Conference*

**The change of polyamines and NO quantities in different stages of breast and prostate cancers**

H. Javrushyan, A. Trchounian

---

*Conference*

**Inhibition of breast cancer tumorigenesis by NG-Nitro-L-arginine methyl ester in rats**

H. Javrushyan, A. Trchounian

---

*Conference*

**Polyamines deprivation as a targeted therapy for mammary carcinoma in rats induced by 7,12-dimethylbenz[a]anthracene**

H. Javrushyan, A. Mamikonyan, A. Trchounian

---

*Conference*

**Effect of L-arginine catabolic enzymes inhibitors on 7,12-dimethylbenz(a)anthracene-induced mammary tumors in rats**

NIKOLAY AVTANDILYAN, HAYARPI JAVRUSHYAN, ANAHIT MAMIKONYAN, ARMEN TRCHOUNIAN

---

*Conference*

**Suppression of tumor progression by arginase and NO-synthase combined inhibition in 7,12-dimethylbenz(a)anthracene-induced breast cancer in rats**

A. Mamikonyan, H. Javrushyan, N. Avtandilyan, A. Trchounian

---

Conference

**Upregulation of nitric oxide quantity by L-norvaline and L-arginine in high-fat diet and Streptozotocin-treated male rats**

E. Nadiryan, H. Javrushyan, N. Avtandilyan, A. Maloyan

---

Conference

**Hypericum alpestre combined with arginase and NOS inhibitors shows antiproliferative activity in the rat breast cancer model**

H.Javrushyan, N.Avtandilyan, S.Hovhannsiyan, M.Qocharyan, M.Ginovyan, A.Maloyan

---

Conference

**Anti-inflammatory and immunostimulatory effect of Hypericum alpestre combined with arginase and NOS inhibitors in the rat breast cancer model**

H.Javrushyan, E.Nadiryan, G.Petrosyan, M.Ginovyan, A.Maloyan, N.Avtandilyan

---

Conference

**New therapeutic approach in breast anti-cancer treatment using a combination of Rumex obtusifolius extract and L-arginine pathway inhibitors**

N. Avtandilyan, H. Javrushyan, A. Karapetyan, M. Ginovyan

---

Conference

**Evaluation of immunostimulatory effect of combination of herbal extracts and chemotherapeutic drugs by quantitative alteration of interleukin-2**

H. Javrushyan, G. Sevoyan, M. Ginovyan, Z. Karabekian, N. Avtandilyan

---

Conference

**Adipose Tissue Dysfunction in the Offspring of Obese Mothers**

Hayarpi Javrushyan, Yem J Alharithi, Nolan Gregg, Sushil Kumar, Alina Maloyan

---

Conference

**The combination of herbs and chemotherapeutic agents inhibits tumor progression via down-regulation of the TNFa-VEGFa/PI3K/Akt/NOS/COX-2-MMP-2 pathway in DMBA-induced breast cancer in rats**

N. Avtandilyan, M. Kocharyan, S. Hovhannisyan, S. Gevorgyan, H. Javrushyan, M. Ginovyan, A. Maloyan

---

Conference

**ANTI-CANCER PROPERTIES AND POTENTIAL MOLECULAR MECHANISMS OF COMBINATIONS OF HERBAL EXTRACTS AND CHEMOTHERAPEUTIC AGENTS**

N. Avtandilyan, H. Javrushyan, H. Karapetyan, A. Grigoryan, E. Nadiryan, G. Sevoyan, M. Ginovyan,

A. Maloyan

---

Conference

**Enhanced anti-inflammatory and antiproliferative effects of Inula helenium herbal extract and arginase inhibitor in breast cancer in vivo study**

E. Nadiryan, H. Javrushyan, N. Avtandilyan

---