

Hayarpi Gevorg Javrushyan

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Research Institute of Biology

Signal transduction and experimental pathology research group from
Group Leader

Education

Institution	YSU
Faculty	Biology/Biochemistry
Date	2008 - 2010
Degree name	Masters

Institution	YSU
Faculty	Biology/Biochemistry
Date	2004 - 2008
Degree name	Bachelor

Scientific Rank/degree

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

Language skills

English Русский

Work experience

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

Institution	Yerevan State University
Period of time	2023 till now
Rank/degree	assistant professor

Institution	YSU
Period of time	2023 - 2025
Rank/degree	Research group leader

Institution	YSU
Period of time	2016 - 2022
Rank/degree	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
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Participation in international conferences and seminars

07/10/2024 - 12/10/2024	Erasmus+ Staff Training week "Implementation and Development of Erasmus+ (KA 1+2)" Saarland University Germany
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31/08/2024 - 01/09/2024	Modelling immunotherapy response and toxicity in cancer" (IMMUNO-model) CA21135 Dublin City University Ireland
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Membership

Institution	The European Association for Cancer Research
Period of time	2024 till now

Institution	The Federation of the European Biochemical Societies
Period of time	2012 till now

Other information

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

Publications

Article

Elucidating the impact of Hypericum alpestre extract and L-NAME on the PI3K/Akt signaling pathway in A549 lung adenocarcinoma and MDA-MB-231 triple-negative breast cancer cells
Hayarpi Javrushyan, Mikayel Ginovyan, Tigran Harutyunyan, Smbat Gevorgyan, Zaruhi Karabekian,

Article

ALTERATIONS IN ARGINASE ACTIVITY, NITRIC OXIDE, AND MDA LEVELS IN BONE MARROW DURING DMBA-INDUCED BREAST CANCER IN RATS

Svetlana M. Hovhannisyanyan, Aqsana S. Hakobyan, Arpine N. Hakobyan, Astghik A. Mkrtchyan,

Hayarpi G. Javrushyan

Proceedings of the YSU B: Chemical and Biological Sciences 2025 113-121

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 Kusznierevicz, 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 Kusznierevicz,

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

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. Թիմիա 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

ԵՊՀ գիտական տեղեկագիր. Թիմիա և կենսաբանություն: 2023 248-257

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 ՀԱԿԱՌԻՈՒՑՔԱՅԻՆ ԱՉԴԵՑՈՒԹՅՈՒՆԸ 7.12-ԴԻՄԵԹԻԼԲԵՆՉԱՆԿՐԱՑԵՆՈՎ ԽԹԱՆՎԱԾ ԱՌՆԵՏՆԵՐԻ ԿՐԾՔԱԳԵՂՁԻ ԶԱՐՑԿԵՐԻ ՓՈՐՁԱՐԱՐԱԿԱՆ ՄՈԴԵԼՈՒՄ

Ավթանդիլյան Էլվիրա, Թովմասյան Մարիամ, Մամիկոնյան Անահիտ, Ջավրուշյան Հայարպի

ԵՊՀ ՈԲԸ 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 TNF α -VEGF α /PI3K/Akt/NOS/COX-2-MMP-2 pathway in DMBA-induced breast cancer in rats

N. Avtandilyan, M. Kocharyan, S. Hovhannsiyan, 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

Conference

Interconnection between hyperglycemia, cancer, and arginine metabolism: a unified therapeutic approach

E. Nadiryan, H. Javrushyan, N. Avtandilyan

Conference

Hypericum alpestre Inhibits PI3K/Akt/mTOR and HIF-1 α Signaling While Activating Caspase-3 in MDA-MB-231 Cells: A Comparative Study with Dactolisib and Doxorubicin

H. Javrushyan, N. Avtandilyan, A. Maloyan

Conference

Synergistic Inhibition of HIF1 α and PI3K/Akt Signaling and Activation of Caspase3 by Emodin and Metformin Combination in MDAMB231 Cells

M. Kocharyan, H. Javrushyan, N. Avtandilyan

Conference

Phytochemicals and Chemotherapy: Present and Future Strategy

Hayarpi Javrushyan, Edita Nadiryan, Nikolay Avtandilyan, Alina Maloyan

Conference

Modulating Bone Marrow Microenvironment in Breast Cancer: Impact of Combined Chemotherapy and Herbal Extracts

Edita Nadiryan, Gayane Petrosyan, Nikolay Avtandilyan, Hayarpi Javrushyan

Conference

Hypericum alpestre Extract and L-NAME Suppress PI3K/Akt Pathway and Enhance Apoptosis in Lung and Breast Cancer Cells

Svetlana Hovhannisyan, Gayane Petrosyan, Hayarpi Javrushyan, Mikayel Ginovyan, Nikolay Avtandilyan

Conference

Hypoxia-Linked Alterations in Arginine Metabolism and Oxidative Stress in the Bone Marrow during Breast Cancer Progression and Treatment

Hayarpi Javrushyan, Edita Nadiryan, Svetlana Hovhannisyan, Nikolay Avtandilyan
