

Nikolay Vladimir Avtandilyan

☎ 45-25

✉ nv.avtandilyan@ysu.am



Research Institute of Biology

Հիմնարար և ախտաբանական կենսաքիմիայի լաբորատորիա
Head of laboratory

Education

Institution	Yerevan State University
Faculty	Faculty of Biology/Department of Biochemistry
Date	2008 - 2010
Degree name	Masters

Institution	Yerevan State University
Faculty	Faculty of Biology/Department of Biochemistry
Date	2004 - 2008
Degree name	Bachelor

Scientific Rank/degree

Institution	Yerevan State University
Date	2013
Degree name	Candidate
Specialty	Biological sciences
Scientific Supervisor	Դավթյան Միսակ Արշամի
Research Topic	Ուրեոթելիկ և ոչ ուրեոթելիկ արգինազների դերը պոլիամինների կենսասինթեզում

Language skills

English Русский

Work experience

Institution	Yerevan State University
Period of time	2022 till now
Rank/degree	Head of The Laboratory of Basic and Pathological Biochemistry, Institute of Biology

Scientific interests

- Biochemistry, Medical biochemistry, Molecular biology, Animal model, Experimental biology, Experimental pathology

Membership

Institution	European Association for Cancer Research
Period of time	2021 till now

Institution	Federation of European Biochemical Societies (FEBS)
Period of time	2010 till now

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 Kusznierevicz, Anna Grigoryan, Alina Maloyan, Agnieszka Bartoszek, Nikolay Avtandilyan

Cell Biochemistry and Function 2024 1-21

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 Hovhannisyan, Hayarpi Javrushyan, Gohar Sevoyan, Zaruhi Karabekyan,

Narine Zakaryan, Naira Sahakyan, Nikolay Avtandilyan

AIMS Biophysics 2023 12-22

Article

The Action Mechanisms, Anti-Cancer and Antibiotic-Modulation Potential of Vaccinium myrtillus L. Extract

Mikayel Ginovyan, Anush Babayan, Anahit Shirvanyan, Alvard Minasyan, Meri Qocharyan,

Barbara Kusznierevicz, Izabela Koss-Mikołajczyk, Nikolay Avtandilyan, Anne Vejux, Agnieszka Bartoszek,

Naira Sahakyan

Article

The possible anti-inflammatory properties of hydro-ethanolic extract of Oregano

Armenuhi Moghrovyan, Mikayel Ginovyan, Nikolay Avtandilyan, Lilya Parseghyan, Armen Voskanyan, Naira Sahakyan, Anna Darbinyan

Functional Foods in Health and Disease 2023 476-486

Article

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

S.M. Hovhannisyan, 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. Hovhannisyan, 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

ALTERATION OF TOTAL AND MITOCHONDRIAL ATPASE ACTIVITY IN THE BREAST AND LIVER IN BREAST CANCER-INDUCED RATS

Seda V. Marutyan, Gayane A. Petrosyan, Anna R. Muradyan, Lilit A. Marutyan, Syuzan A. Marutyan,

Nikolay V. Avtandilyan

Proceedings of the YSU B: Chemical and Biological Sciences 2022 151-160

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

EVALUATION OF THE ANTIOXIDANT ACTIVITY AND THE ANTI-CANCER PROPERTIES OF ALCHEMILLA SMIRNOVII JUZ. EXTRACT ON THE HELA CANCER CELL LINE

S. Hovhannisyan, E. Nadiryan, M. Qocharyan, G. Sevoyan, M. Ginovyan, N. Avtandilyan

СТУДЕНЧЕСКАЯ ГОДИЧНАЯ НАУЧНАЯ КОНФЕРЕНЦИЯ ЯРОССИЙСКО-АРМЯНСКИЙ УНИВЕРСИТЕТА 2022 40-46

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 & 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

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

CHANGES OF ARGINASE ACTIVITY AND ARGINASE ISOENZYME SPECTRUM IN HUMAN SERUM DURING DIFFERENT STAGES OF BREAST CANCER BEFORE SURGERY AND AFTER CHEMOTHERAPY

Mariam Sargsyan, Hermine Gevorgyan, Nikolay Avtandilyan, Susanna Karapetyan

ԵՊՀ ՈՒԳԸ գիտական հոդվածների ժողովածու 2017 176-183

Article

The change of arginase activity in blood serum during breast and prostate cancers

Avtandilyan N.V., Karapetyan S.A., Alexanyan K. A.

Electronic Journal of Natural Sciences of NAS RA 2016 12-14

<http://ejns.sci.am>

Article

The relationship between arginase activity and change of polyamines quantity in human blood serum during breast cancer.

Avtandilyan N. V., Karapetyan S. A., Aleksanyan K. A.

Biological Journal of Armenia 2016 92-99

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

Article

Relationship between liver polyamines quantity and arginase isoenzymes activity after arginase inhibition by NG-hydroxy-L-arginine

Avtandilyan N.V., Karapetyan S.A.

Electronic Journal of Natural Sciences of NAS RA 2015 3-6

<http://ejns.sci.am>

Article

Պոլիամինների քանակության փոփոխության ուսումնասիրումը լյարդի արգինազի իզոֆերմենտների արգելակման ժամանակ

Մարիամ Սարգսյան, Նիկոլայ Ավթանդիլյան, Սուսաննա Կարապետյան

ԵՊՀ ՌԻԳԸ գիտական հոդվածների ժողովածու 2015 75 - 81

<http://www.ysu.am/sss/hy>

Article

The relationship of blood serum arginase activity and polyamines quantity during human breast cancer

Avtandilyan N.V., Karapetyan S.A., Aleksanyan K.A.

New Armenian Medical journal 2015 10 - 10

http://www.ysmu.am/index.php?option=com_content&view=article&id=111&Itemid=638&...

Article

Polyamines quantity change after inhibition of rats kidney and brain arginase isoenzymes by NG-hydroxy-L-arginine.

Karapetyan S. A., Avtandilyan N. V.

Issues in theoretical and clinical medicine 2014 20-24

<http://pananarm.info/>

Article

The change of the activity of arginase isoenzymes after the intravenous injection of polyamines

Avtandilyan N.V., Karapetyan S.A., Davtyan M.A.

Electronic Journal of Natural Sciences of NAS RA 2014 9-12

<http://ejns.sci.am>

Article

The research of the role of nonureotelic arginases in polyamines biosynthesis in brain and kidney in vitro

Avtandilyan N.V.

Biological Journal of Armenia 2013 26-32

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

Article

Polyamines are noncompetitive inhibitors for nonureotelic arginases in the different tissues of rats

Avtandilyan N.V., Karapetyan S.A., Davtyan M.A.

Electronic Journal of Natural Sciences of NAS RA 2013 7-10

<http://ejns.sci.am>

Article

The change of kinetics of nonureotelic arginase under influence of exogenous polyamines in rat brain and kidney

Avtandilyan N.V., Karapetyan S.A., Davtyan M.A.

Perspectives for development of molecular and cellular biology - 3. International young scientists conference
2012 48-52

<http://www.molbiol.sci.am>

Conference

Serum arginase activity during women breast and men prostate cancers.

Nikolay V. Avtandilyan, Susanna A. Karapetyan, Knarik A. Alexanyan

Conference

The change of arginase activity in the serum of patients diagnosed with breast cancer.

Sargsyan M.S., Avtandilyan N.V., Karapetyan S.A.

Conference

Изменение аргиназной активности и количества полиаминов в сыворотке крови при злокачественных опухолях предстательной железы

Геворгян Э.Р., Автандилян Н.В., Карапетян С.А.

Conference

Arginase and NO-synthase are target enzymes in breast anticancer therapy

N. Avtandilyan, A. Trchounian

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 potential therapeutic effect of nor-NOHA and L-NAME in breast cancer treatment

N. Avtandilyan, A. Trchounian

Conference

Oxidative stress in the 7,12-dimethylbenz[a]anthracene rat model of breast cancer: suppression by a NO-synthase inhibitor NG-nitro-L-arginine methyl ester

N.Avtandilyan, G.Petrosyan, 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

Antioxidant properties of some herbal extracts from Armenian flora, evaluation of their cytotoxicity and genotoxicity on HT29 cell line

Mikayel Ginovyan, Zuzanna Koziara, Monika Baranowska, Klaudia Suliborska, Patrycja Jakubek, Barbara Kusznierevicz, Nikolay Avtandilyan, Naira Sahakyan, Agnieszka Bartoszek

Conference

High antioxidant and cytotoxic activity of Rumex obtusifolius seed extract and metabolomic characterization of its bioactive phytochemicals.

M. Ginovyan, Z. Koziara, M. Baranowska, I. Koss-Mikolajczyk, K. Suliborska, P. Jakubek, B. Kusznierevicz, N. Avtandilyan, N. Sahakyan, A. Bartoszek

Conference

Deamination of adenine compounds in different organs of rats with DMBA-induced cancer

G.Petrosyan, N.Avtandilyan, S.Marutyan

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

BIOLOGICAL ACTIVITY OF ARMENIAN HONEY BEES' VENOM AND LACTIC ACID BACTERIA ISOLATED FROM HONEYBEES' GUT

Anahit Sahakyan, Nelli Vardazaryan, Mery Qocharyan, Nikolay Avtandilyan, Inessa Semerjyan,

Inga Bazukyan
