

Armine Armen Margaryan

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Research Institute of Biology

Մանրէաբանական կենսավերականգնման խումբ
Group Leader

Education

Institution	Yerevan State University
Faculty	Faculty of Biology/Department of Microbiology and Biotechnology of Plants and Microorganisms
Date	2007 - 2012
Degree name	PhD student

Institution	Yerevan State University
Faculty	Faculty of Biology/Department of Microbiology and Biotechnology of Plants and Microorganisms
Date	2005 - 2007
Degree name	Masters

Institution	Yerevan State University
Faculty	Faculty of Biology/Department of Microbiology and Biotechnology of Plants and Microorganisms
Date	2001 - 2005
Degree name	Bachelor

Scientific Rank/degree

Institution	Yerevan State University
Date	2021
Degree name	Associate professor
Specialty	Biological sciences

Institution	Yerevan State University
Date	2014
Degree name	Candidate
Specialty	Biological sciences
Scientific Supervisor	Hovik Panosyan
Research Topic	Microbiota of Armenian copper and gold mines, Isolation, identification and heavy metal resistance mechanisms of heavy metal resistant bacilli

Language skills



Work experience

Institution	Research Institute of Biology, Faculty of Biology, Yerevan State University
Period of time	2023 till now
Rank/degree	Head of the scientific group

Institution	Department of Biochemistry, Microbiology and Biotechnology, Faculty of Biology, Yerevan State University
Period of time	2021 till now
Rank/degree	Associate Professor

Institution	Medical Microbiology, Department of Bioscience, Traditional Medical University, Armenia
Period of time	2018 - 2021
Rank/degree	Assistant Professor

Institution	Research Institute of Biology, Faculty of Biology, Yerevan State University
Period of time	2012 - 2023
Rank/degree	Researcher

Institution	Department of Biochemistry, Microbiology and Biotechnology, Faculty of Biology, Yerevan State University
Period of time	2011 - 2021
Rank/degree	Assistant Professor

Institution	Department of Microbiology and Biotechnology of Plants and Microorganisms, Faculty of Biology, Yerevan State University
Period of time	2007 - 2012
Rank/degree	Senior Lab Assistant



Scientific interests

- Microbiology
- Microbial Ecology
- Metagenomics
- Extremophiles



Publications

Article

Biodegradation of polyhydroxyalkanoates: current state and future prospects

Hovik Panosyan, Ani Paloyan, Mane Tadevosyan, Diana Ghevondyan, Armine Margaryan,

Mariam Karapetyan, Lev Khojetsyan, Garabed Antranikian

Frontiers in Microbiology 2025 1-18

Article

Assessment of feather degrading activity of thermophilic bacilli isolated from Armenian geothermal springs

Hovik Panosyan, Mane Tadevosyan, Armine Margaryan

Biologia 2025 765-777

Article

Mining thermophiles for biotechnologically relevant enzymes: evaluating the potential of European and Caucasian hot springs

Hovik H. Panosyan, Armine Margaryan, Ani Paloyan, Christin Burkhardt, Leon Baruth,

Neele Meyer-Heydecke, Barbara Klippel, Garabed Antranikian

Extremophiles 2024 27

Article

Polyhydroxyalkanoates produced by extremophiles: main structure, synthesis, and application

Hovik Panosyan, Armine Margaryan, Diana Ghevondyan, Rafii Shakhmuradian

Microbial Essentialism: An Industrial Prospective 2024 243-263

Article

Detergent-resistant α -amylase derived from *Anoxybacillus karvacharensis* K1 and its production based on whey

Hovik Panosyan, Armine Margaryan, Diana Ghevondyan, Ani Paloyan, Tigran Soghomonyan,

Pargev Hovhannisyan, Nils Kare Birkeland, Garabed Antranikian

Scientific Reports 2024 12682

Article

Microbial thermostable hydrolases (amylases, lipases, and keratinases) and polymerases: biology and applications

Hovik Panosyan, Mane Tadevosyan, Sahak Yeghiazaryan, Diana Ghevondyan, Ani Saghatelyan,

Armine Margaryan

Extremozymes and Their Industrial Applications 2022 177-204

Article

Microbial Diversity of Terrestrial Geothermal Springs in Armenia and Nagorno-Karabakh: A Review

Hovik Panosyan, Armine Margaryan, Ani Saghatelyan, Nils-Kåre Birkeland

Microorganisms 2021 1473

Article

Extremophiles Thriving in Extreme Ecosystems of Armenia

Panosyan Hovik, Margaryan Armine

Extreme Environments 2021 234-251

Article

Anoxybacillus karvacharensis sp. nov., a novel thermophilic bacterium isolated from the Karvachar geothermal spring in Nagorno-Karabakh

Hovik Panosyan, Armine Margaryan, Nils-Kare Birkeland

INTERNATIONAL JOURNAL OF SYSTEMATIC AND EVOLUTIONARY MICROBIOLOGY 2021 9

Article

Heavy Metal Resistance in Prokaryotes: Mechanism and Application

Hovik Panosyan, Armine Margaryan, Birkeland NK.

Microorganisms for Sustainability: Microbial Communities and their Interactions in the Extreme Environment
2021 273-313

Article

Microbial Diversity of High-Altitude Geothermal Springs in Tajikistan

Hovik Panosyan, Armine Margaryan, Dzshuraeva M.M., Ratnadevi C.M., Birkeland NK., Bobodzhanova K.I.

Microorganisms for Sustainability: Microbial Communities and their Interactions in the Extreme Environment
2021 43-63

Article

Geothermal springs in Armenia and Nagorno-Karabakh: potential sources of hydrolase-producing thermophilic bacilli

Hovik Panosyan, Armine Margaryan, Nils-Kåre Birkeland

Extremophiles 2020 519-536

Manual

ՄՈԼԵԿՈՒԼԱՅԻՆ ՄԱՆՐԵԱԲԱՆՈՒԹՅԱՆ ԼԱԲՈՐԱՏՈՐ ԱՇԽԱՏԱՆՔՆԵՐ

Հ.Հ. Փանոսյան, Ա.Ա. Մարգարյան, Ի.Լ. Բազուկյան, Ա.Հ. Թռչունյան

2020 120

Article

Insights into the Bacterial Diversity of the Acidic Akhtala Mine Tailing in Armenia Using Molecular Approaches

Armine Margaryan, Hovik Panosyan, Chonticha Mamimin, Armen Trchounian, Nils-Kåre Birkeland

Current Microbiology 2019 462-469

Article

The Effects of Low Doses of Gamma-Radiation on Growth and Membrane Activity of Pseudomonas aeruginosa GRP3 and Escherichia coli M17

D. Sghomonyan, A. Margaryan, K. Trchounian, K. Ohanyan, H. Badalyan, A. Trchounian

Cell Biochemistry and Biophysics 2018 209-217

<https://link.springer.com/article/10.1007%2Fs12013-017-0831-4>

Article

Microbial Diversity of Terrestrial Geothermal Springs in Lesser Caucasus

Hovik Panosyan, Armine Margaryan, Liana Poghosyan, Ani Saghatelyan, Ekaterine Gabashvili,

Ekaterine Jaiani, Nils-Kåre Birkeland

Microorganisms for Sustainability: Extremophiles in Eurasian Ecosystems: Ecology, Diversity, and Applications
2018 81-117

Article

Geobacillus and Anoxybacillus spp. from Terrestrial Geothermal Springs Worldwide: Diversity and Biotechnological Applications

Armine Margaryan, Grigor Shahinyan, Pargev Hovhannisyan, Hovik Panosyan, Armen Trchounian,

Nils-Kåre Birkeland

Microorganisms for Sustainability: Extremophiles in Eurasian Ecosystems: Ecology, Diversity, and Applications
2018 119-166

Article

Identification and sequence analyses of novel lipase encoding novel thermophilic bacilli isolated from Armenian geothermal springs

Grigor Shahinyan, Armine Margaryan, Hovik Panosyan, Armen Trchounian

BMC Microbiology 2017 1-11

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

Article

DENATURING GRADIENT GEL ELECTROPHORESIS (DGGE) PROFILES OF THE PARTIAL 16S rRNA GENES DEFINED BACTERIAL POPULATION INHABITING IN ARMENIAN GEOTHERMAL SPRINGS

H.H. Panosyan, A. A. Margaryan, A.A. Trchounian

Biological Journal of Armenia 2017 102-109

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

Article

BACTERIAL COMMUNITY STRUCTURE OF ARMENIAN MINING TERRITORIES REVEALED BY PCR-DGGE FINGERPRINTING

A.A. MARGARYAN

Biological Journal of Armenia 2017 56-62

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

Article

Comparative Analysis of UV Irradiation Effects on Escherichia coli and Pseudomonas aeruginosa Bacterial Cells Utilizing Biological and Computational Approaches

A. Margaryan, H. Badalyan, A. Trchounian

Cell Biochemistry and Biophysics 2016 381-389

<http://link.springer.com/journal/12013>

Article

Isolation and characterization of lipase-producing bacilli from Tatev geothermal spring

Vardanyan G., Margaryan A., Panosyan H.

ԵՊՀ ՈՒԳԸ գիտական հոդվածների ժողովածու 2015 33-36

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

Article

ISOLATION AND CHARACTERIZATION OF LIPASE-PRODUCING THERMOPHILIC BACILLI FROM GEOTHERMAL SPRINGS IN ARMENIA AND NAGORNO-KARABAKH

G.S. Shahinyan, A.A. Margaryan, H.H. Panosyan, A.H. Trchounian

Հայաստանի կենսաբանական հանդես 2015 7-15

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

Article

АНТИМИКРОБНАЯ АКТИВНОСТЬ ХИТОЗАНОВЫХ ПЛЕНОК, МОДИФИЦИРОВАННЫХ ПИРАЗОЛ КАРБОНОВЫМИ КИСЛОТАМИ

А.Э. Акопян, А.А. Маргарян, О.С. Аттарян, Г.В. Асратян, И.Л. Базукян, О.А. Паносян, А.А. Трчунян

Հայաստանի կենսաբանական հանդես 2015 45-49

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

Article

ТЕРМОФИЛЬНЫЕ БАЦИЛЛЫ, ВЫДЕЛЕННЫЕ ИЗ ГЕОТЕРМАЛЬНЫХ ИСТОЧНИКОВ АРМЕНИИ И НАГОРНОГО КАРАБАХА, КАК ПРОДУЦЕНТЫ ГИДРОЛИТИЧЕСКИХ ФЕРМЕНТОВ

ВАРДАНЫАН Г.Г., ОГАНЕСЯН П.А., МАРГАРЯН А.А., ПАНОСЯН О.А., ТРЧУНЯН А.А.

АКТУАЛЬНЫЕ ПРОБЛЕМЫ ГУМАНИТАРНЫХ И ЕСТЕСТВЕННЫХ НАУК 2014 47-50

http://elibrary.ru/title_about.asp?id=28238

Article

ВЫДЕЛЕНИЕ И ИЗУЧЕНИЕ THERMUS SCOTODUCTUS KARVACHAR-1 ИЗ ГОРЯЧЕГО ИСТОЧНИКА КАРВАЧАР

САГАТЕЛЯН А.Р., МАРГАРЯН А.А., ПАНОСЯН О.А., ТРЧУНЯН А.А.

АКТУАЛЬНЫЕ ПРОБЛЕМЫ ГУМАНИТАРНЫХ И ЕСТЕСТВЕННЫХ НАУК 2014 89-92

http://elibrary.ru/title_about.asp?id=28238

Article

Բուհական կրթական համակարգում լաբորատոր աշխատանքների իրականացման ժամանակակից մոտեցումները:

Հ.Հ. Փանոսյան, Ի.Լ. Բազուկյան, Ա.Ա. Մարգարյան, Յու.Գ. Պոպով, Ա.Հ. Թոքունյան

Բնագետ 2014 145-146

<http://www.ysu.am/bnaget>

Manual

Մանրէաբանության լաբորատոր աշխատանքներ, ուսումնամեթոդական ձեռնարկ Թոքունյան Ա.Հ., Փանոսյան Հ.Հ., Բազուկյան Ի.Լ., Մարգարյան Ա.Ա., Պոպով Յու.Գ.

2014 316

Article

Functional, structural and phylogenetic analysis of domains underlying the Al sensitivity of the aluminum-activated malate/anion transporter, TaALMT1

Armine Margaryan, Ayalew Ligaba, Ingo Dreyer, David J. Schneider, Leon Kochian, Miguel Piñeros

Plant Journal 2013 766-780

[http://onlinelibrary.wiley.com/journal/10.1111/\(ISSN\)1365-313X](http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1365-313X)

Article

Heavy metal accumulation and the expression of the copA and nikA genes in Bacillus subtilis AG4 isolated from the Sotk Gold Mine in Armenia

A.A. Margaryan, H.H. Panosyan, A. Trchounian, N.-K. Birkeland

Biological Journal of Armenia 2013 51-57

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

Article

Isolation and characterization of new metallotolerant bacilli strains

Margaryan A., Panosyan H., Popov Yu.

Biotechnology & Biotechnological Equipment 2010 450-454

<http://www.tandfonline.com/loi/tbeq20#.V4SWt0t97cc>

Article

Изучение распространения почвенных бактерий в 20 км зоне Армянской Атомной Электростанции (ААЭС)

Паносян О.А., Маргарян А.А., Бозоян Л.А.

Գազադի պետական համալսարանի գիտական հոդվածների ժողովածու 2010 61-67

<http://www.gsu.am/?go=menu32>

Article

Выделение и изучение термофильных металлоустойчивых бацилл

Маргарян А., Паносян О., Попов Ю.

Միջազգային գիտաժողովի նյութեր նվիրված ԱրԴՀ հիմնադրման 40-ամյակին 2009 135-137

Article

Новые штаммы металлоустойчивых термофильных бацилл

O.A. Panosyan, A.A. Margaryan

ԵԴՀ Գիտական տեղեկագիր, Բնական գիտություններ 2008 109-112

<http://ysu.am/science/hy/1355990920>

Conference

Application of computational and biological approaches to detect UV radiation effects on bacterial cells

Margaryan A., Ohanyan V., Torgomyan H., Soghomonyan D., Badalyan H., Trchounian A.

Conference

Diversity of thermophiles in Armenian geothermal springs

Panosyan H., Saghatelian A, Margaryan A., Birkeland N.-K., Trchounian A.

Conference

Microbial Diversity in Armenian Mining Areas Revealed by Molecular Approach

A. Margaryan, N-K. Birkeland, H. Panosyan, A. Trchounian

Conference

New Approach to Monitor Gamma-rays Effects on Different Bacteria in the Environment

A. Margaryan, D. Soghomonyan, S. Astanyan, K. Ohanyan, H. Badalyan, A. Trchounian

Conference

Could Bacillus subtilis AG4 strain isolated from Armenian Gold Mine be a tool for bioremediation of heavy metal contaminated environment?

Armine A. Margaryan., Hovik H. Panosyan., Armen Trchounian

Conference

Anoxybacillus flavitermus K103 strain as an active producer of amylolytic enzymes

Pargev A. Hovhannisyanyan, Armine A. Margaryan., Hovik H. Panosyan, Armen Trchounian

Conference

Distribution of Heavy Metal Resistant Bacteria in Armenian Copper and Gold Mines and their Response to Heavy Metal Stress

Margaryan A., Birkeland N.-K., Trchounian A., Panosyan H.

Conference

ARMENIAN MINES AS A SOURCE OF HEAVY METAL ACCUMULATING METALOPHILIC BACILLI

Margaryan A., Birkeland N.-K., Popov Yu., Panosyan H., Trchounian A.

Conference

THERMOSTABLE HYDROLYTIC ENZYME PRODUCING BACILLI ISOLATED FROM GEOTHERMAL SPRINGS OF ARMENIA AND NAGORNO-KARABAKH

Hovhannisyan P., Vardanyan G., Margaryan A., Panosyan H., Trchounian A.

Conference

Термофильные бациллы, выделенные из геотермальных источников Армении, как продуценты гидролитических ферментов

Оганнисян П. А., Варданян Г. Г., Маргарян А. А., Паносян О. А., Трчунян А. А.

Conference

Thermus scotoductus, изолированный из горячего источника Карвачар

Сагателян А. Р., Маргарян А. А., Паносян О. А., Трчунян А. А.

Conference

НОВЫЕ МЕТАЛЛОУСТОЙЧИВЫЕ ШТАММЫ БАЦИЛЛ

Маргарян А.А., Паносян О.А.

Conference

Амилазная активность металлоустойчивой термофильной бактерии Bacillus subtilis AG4 в присутствии Cu(II), Ni(II), Zn(II) и Cd(II)

Маргарян А. А., Мкртчян А. С., Паносян О. А.

Conference

Bacterial diversity in the Alaverdi Copper Smelter (Armenia)

Margaryan A., Birkeland N.-K., Panosyan H., Popov Y., Trchounian A.

Conference

Выделение и изучение металлоустойчивых термофильных бацилл

Маргарян А. А., Бозоян Л. А., Паносян О. А.

Conference

Распространение экстремофильных бацилл в термальных горячих вод и соламчаков Армении

Паносян О. А., Маргарян А. А.

Conference

Antibiotic resistant bacteria inhabiting Lake Sevan (ARmenia)

Hovik Panosyan, Armine Margarayn, Inga Bazukyan, Ekaterine Jaiani, Ekaterine Gabashvili,

Marina Tediashvili

Conference

Микробиота рудных пород Армении, выделение металлоустойчивых микроорганизмов и изучение механизмов металлоустойчивости

Маргарян А. А., Паносян О. А., Трчунян А. А

Conference

Antibiotic resistant environmental bacilli and their bacteriophages isolated from freshwater and marine environments of Georgia and Armenia

Ekaterine Gabashvili, Nino Janelidze, Elene Didebulidze, Hovik Panosyan, Armine Margaryan, Inga Bazukyan, George Tsertsvadze, Marina Tediashvili, Ekaterine Jaiani

Conference

New Metal-Tolerant Bacilli Strains AS A Prospective Tool For Bioremediation

Margaryan A.

Conference

The Modelling of Lipase Protein Structures Based on Newly Isolated Thermophilic Bacilli Gene Sequences

G. Shahinyan, A. Margaryan, H. Panosyan, A. Trchounian

Conference

Heavy metal resistance of Bacillus subtilis AG4 isolated from the Sotk Gold Mine (Armenia)

A. Margaryan, H. Panosyan, N.-K. Birkeland, A. Trchounian

Conference

Thermostable α -amylase produced by Anoxibacillus flavitermus K103 isolated from an Armenian geothermal spring

Panosyan H.H., Margaryan A.A., Birkeland N.-K.

Conference

The effect of combined heavy metal ions on copA, nika and czcD genes expression of metal-resistant bacilli

Margaryan A., Birkeland N.-K., Panosyan H., Popov Y., Trchounian A.

Conference

New heavy metal tolerant alkalophilic bacteria isolated from Artsvanik tailing

I. Ayvazyan, A. Margaryan, A. Trchounian

Conference

New acidophilic metal tolerant bacteria isolated from mining sites in Armenia

S. Mirzoyan, A. Margaryan

Conference

Металлоустойчивые бактерии из хвостохранилища Арцваник: Идентификация бактерий и определение генов, обеспечивающих их металлоустойчивость

Айвазян И. С., Маргарян А. А., Трчунян А. А.

Conference

Antibiotic Resistance of Bacteria: Novel Findings on Antimicrobial Agents and Activation of

Resistance Genes

I. Bazukyan, D. Soghomonyan, A. Margaryan, N. Sahakyan, M. Petrosyan, A. Trchounian

Conference

Microbial community of Armenian mining areas, their heavy metal resistance and th role in bioremediation

Armine Margaryan, Hovik Panosyan, Armen Trchounian, Nils-Kare Birkeland

Conference

BACILLUS SUBTILIS AG4 AS A PROSPECTIVE TOOL FOR BIOREMEDIATION

Armine Margaryan, Hovik Panosyan, Armen Trchounian, Birkeland Nils Kare

Conference

Bacterial Membrane Protein Activity Affected by 60Co Gamma Radiation

D. Soghomonyan, A. Margaryan, H. Badalyan, A. Trchounian

Conference

EXPLORING METAL RESISTANT MICROBES OF ARMENIAN MINING AREAS IN ORDER TO FIND NEW MEANS FOR BIOREMEDIATION

Margaryan Armine, Shahinyan Grigor, Panosyan Hovik, Trchounian Armen

Conference

Metal resistant microbes of Armenian mining areas as new means for bioremediation

Armine Margaryan

Conference

Heavy metal resistance of Arthrobacter oryzaea VL55 and Pseudomonas sp. AI2 strains

D. Ghevondyan, O. Miqayelyan, A. Margaryan

Conference

The hexavalent-chromium reduction by the metal-resistant Bacillus sp. NA7 strain

N. Abrahamyan, A. Margaryan

Conference

Metal resistant microbes of Armenian mining areas as new means for bioremediation

Margaryan A.

Conference

Isolation and characterization of new heavy metal resistant alkaliphilic bacteria from Artsvanik Tailing

I. Ayvazyan, A. Margaryan, A. Trchounian

Conference

The study of heavy metal resistance of newly isolated acidotolerant metal-resistant Arthrobacter oryzaea VL55 strain

Ghevondyan D., S. Mirzoayn, A. Margaryan

Conference

Microbial Community structure of Armenian mining territories

A.A. Margaryan, H.H. Panosyan, A.H. Trchounian

Conference

Fe ions effect on hydrogenase activity of Ralstonia eutropha H16 in various growth media

Sona Nikolyan, Armine Margaryan, Anna Poladyan

Conference

Genomic and chemical insights into extracellular polymeric substances produced by thermophilic Parageobacillus toebii strain H - 70

H. Panosyan, D. Ghevondyan, A. Margaryan, A. Cattaneo, I. Finore, A. Poli, N. Birkeland

Conference

Recombinant thermostable α -amylase from anoxybacillus karvacharensis k1

Hovik Panosyan, Diana Ghevondyan, Armine Margaryan, Ani Paloyan, Garabed Antranikian,

Nils-Kare Birkeland
