

# Bella G. Babayan

## Research Institute of Biology

Ecological Monitoring Group

Researcher

✉ bella.babayan@ysu.am



## Education

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<b>Institution</b>	Yerevan Culture University
<b>Faculty</b>	Arts
<b>Date</b>	2019 - 2021
<b>Degree name</b>	Bachelor

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<b>Institution</b>	SPC "Armbiotechnology" NAS RA
<b>Faculty</b>	Microbiology, Blotechnology
<b>Date</b>	2017 - 2024
<b>Degree name</b>	Applicant

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<b>Institution</b>	Russian-Armenian University
<b>Faculty</b>	Medical Blochemistry
<b>Date</b>	2008 - 2011
<b>Degree name</b>	PhD student

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<b>Institution</b>	Yerevan State University
<b>Faculty</b>	Biology/ Biochemistry
<b>Date</b>	2006 - 2008
<b>Degree name</b>	Masters

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<b>Institution</b>	Yerevan State University
<b>Faculty</b>	Biology/ Biochemistry
<b>Date</b>	2002 - 2006
<b>Degree name</b>	Bachelor

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## Scientific Rank/degree

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<b>Institution</b>	SPC "Armbiotechnology" NAS RA
<b>Date</b>	2024
<b>Degree name</b>	Postgraduate
<b>Scientific Supervisor</b>	N.A. Hovhannisyán
<b>Research Topic</b>	The study of Multi-Drug Resistance in Bacteria of Pseudomonas, Stenotrophomonas, Xanthomonas Genera Several Species and The Overcoming of It by L-tartaric Acid Synthetic Derivatives.

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## Language skills

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Русский English Հայերեն

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## Work experience

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<b>Institution</b>	Yerevan State University
<b>Period of time</b>	2023 till now
<b>Rank/degree</b>	researcher

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## Scientific interests

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- Biochemistry, Biotechnology, Ecology, Molecular Biology, Genetics, Toxicology, Pharmacology, Cave Microbiome, arts, music
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## Membership

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<b>Institution</b>	SPELEOLOGICAL CENTER OF ARMENIA, Secretary, member of council,
<b>Period of time</b>	2019 - 2023

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<b>Institution</b>	BAA
<b>Period of time</b>	2017 - 2024

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<b>Institution</b>	BAA Secretary
<b>Period of time</b>	2017 - 2019

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<b>Institution</b>	FEMS
<b>Period of time</b>	2018 - 2024

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<b>Institution</b>	FEBS
<b>Period of time</b>	2023 - 2024

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## State awards and honorary titles

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2025 Honorary member of the jury of "Constelația Talentelor" International Festival-Competiton, UNESCO

2010 "Synopsys" foundation I prize in IT TEchnologies

2010 The Presidential Award "The Best PhD Student"

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## Other information

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<https://blog.eif.am/2021/08/02/phd-support-program-fellow-bella-babayan...>

<https://www.youtube.com/watch?v=xx43jI8dyQQ> <https://www.youtube.com/watch?v=dXEAYIZ7SLM>

[https://www.youtube.com/watch?v=D\\_y9sRjerR4](https://www.youtube.com/watch?v=D_y9sRjerR4) <https://www.youtube.com/watch?v=pSNFKpiPRd8>

## Publications

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*Article*

### **Genetic Changes In Common Dandelion (*Taraxacum officinale*) Induced by High Concentrations of Heavy Metals in Soil**

Bella Babayan, Alexander Yesayan, Garegin Sevoyan, Tigran Yesayan

Functional Foods in Health and Disease 2025 625-633

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*Article*

### ***Pseudomonas fluorescens*: Prospective green antimicrobial for crops cultivation**

Marina Melkumyan, Bella Babayan, Alexander Yesayan, Tigran Yesayan, Sevoyan Garegin,

Armen Grigoryan, Anna Grigoryan

Bioactive Compounds in Health and Disease 2025 269 - 278

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*Article*

### **Artificial fragrances and semisynthetic perfumes: The hidden health risks**

Bella Babayan, Tigran Yesayan, Marina Melkumyan, Gagik Mikaelyan, Samvel Bagdasaryan,

Silviana Elbakyan, Anzhelika Avanesyan, Alexander Yesayan, Garegin Sevoyan

Functional Food Science 2025 621-632

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*Article*

### **Therapeutic utilization of tetrodotoxin for treating carcinomas: a comparative molecular docking and dosage adjustment study**

Anna Grigoryan, Hamlet Karayan, Samvel Bagdasaryan, Tatevik Evadzhyan, Peri Ghukasyan,

Marina Melkumyan, Bella Babayan

Bioactive Compounds in Health and Disease 2025 422-431

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*Article*

### **Tartaric acid new derivatives as prospective and safe alternative to antimicrobials for food products packing**

Mikaelyan A.R., Babayan B.G., Grigoryan A.L., Grigoryan A.M., Asatryan N.L., Melkumyan M.A.

Functional Foods in Health and Disease 2024 33-50.

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*Article*

### **Carnivorous fungi application for pesticide-free vegetable cultivation**

Alexander Yesayan, Tigran Yesayan, Bella Babayan, Syuzanna Esoyan, Ani Hayrapetyan,

Garegin Sevoyan, Armine Chakhmakhchyan, Siranush Nanagulyan, Marina Melkumyan

Functional Food Science 2024 325-336

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*Article*

### **Strategic food reserves storage, safety and risk minimization: Problems and perspectives**

Samvel M. Shahinyan, Ani Yu. Badasyan, Bella G. Babayan, Marina A. Melkumyan, Tigran A. Yesayan,

Alexandr H. Yesayan

Functional Foods in Health and Disease 2024 615-629

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Article

**Crops biological protection: Phytopathogens growth inhibition by the entomopathogens**

Marina Melkumyan, Bella Babayan, Anna Grigoryan, Alexander Yesayan

Bioactive Compounds in Health and Disease 2024 361-374

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Article

**Traditional vegetarian food products in villages of Syunik, Armenia: Technogenic contamination risks assessment**

Garegin G. Sevoyan, Karen A. Ghazaryan, Tigran A. Yesayan, Ani K. Hayrapetyan, Seyran H. Minasyan, Bella G. Babayan, Ivan G. Gabrielyan, Syuzanna S. Esoyan, Armine D. Chakhmakhchyan, Anna M. Grigoryan, Marina A. Melkumyan, Alexander H. Yesayan

Functional Food Science 2024 380-389

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Article

**Impact of ceramic packaging on the quality and safety of Armenian fermented dairy product Matsoun**

Syuzanna S. Esoyan, Ani K. Hayrapetyan, Tigran A. Yesayan, Armine E. Sargsyan,

Armine D. Chakhmakhchyan, Bella G. Babayan, Garegin G. Sevoyan, Aleksandr H. Yesayan

Functional Food Science 2024 370-379

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Article

**The safety of animal-derived food products in areas of technogenic pollution**

Garegin G. Sevoyan, Seyran H. Minasyan, Tigran A. Yesayan, Bella G. Babayan, Syuzanna S. Avetisyan,

Alexander H. Yesayan

Functional Foods in Health and Disease 2024 704-712

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Article

**The preliminary study of antifungal and antibacterial properties of wine by-products**

Ani K. Hayrapetyan, Tigran A. Yesayan, Armine D. Chakhmakhchyan, Bella G. Babayan,

Garegin G. Sevoyan, Alexander H. Yesayan, Syuzanna S. Esoyan

Bioactive Compounds in Health and Disease 2024 570-580

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Article

**Colamine and tartaric acid based innovative antioxidant and anti-spoilage food additive for fish product industry**

Aram R. Mikaelyan, Tigran Soghomonian, Bella G. Babayan, Samvel A. Bagdasaryan, Nona L. Asatryan,

Anna M. Grigoryan, Marina A. Melkumyan

Bioactive Compounds in Health and Disease 2024 489-499

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Article

**New functionally substitutes cyclopropanecarboxylic acids as ethylene biosynthesis innovative regulators**

Aram Mikaelyan, Samvel Bagdasaryan, Bella Babayan, Nona Asatryan, Marina Melkumyan,

Anna Grigoryan

Bioactive Compounds in Health and Disease 2024 500-510

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Article

**The epigenetic impact of daily diet food choices on human health and chronic diseases**

Yesayan A. H., Chetta M., Babayan B. G., Yesayan T. A., Esoyan S. S., Sevoyan G. G.

*Article*

**Sustainable methods for producing food-derived bioactive compounds**

Aram R. Mikaelyan, Samvel A. Bagdasaryan, Alexander H. Yesayan, Tigran A. Yesayan,  
Ani K. Hayrapetyan, Bella G. Babayan, Marina A. Melkumyan, Vardan Sargsyan

Bioactive Compounds in Health and Disease 2024 525-535

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*Article*

**THE STUDY OF PROTEOLYTIC ACTIVITY OF PHYTOPATHOGENIC RHODOCOCCUS,  
PSEUDOMONAS AND XANTHOMONAS SOME STRAINS**

Melkumyan M., Babayan B.

EUROPEAN SCIENCE REVIEW 2023 3-7

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*Article*

**Assessment of 'Complex-co' preparation efficiency for some cereal crops growth stimulation**

H.S. Martirosyan, A.R. Mikaelyan, N.L. Asatryan, B.G. Babayan

Agronomy Research 2023 1213-1220

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*Article*

**Tartaric acid synthetic derivatives effect on phytopathogenic bacteria**

A.R. Mikaelyan, B.G. Babayan, A.A. Vartanyan, H.V. Tokmajyan

Agronomy Research 2022 644-659

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*Article*

**Analysis of genome sequence and trehalose lipid production peculiarities of the  
thermotolerant Gordonia strain**

Yanina Delean, Armen Sargsyan, Nelli Hovhannisyan, Bella Babayan, Kirill Petrikov, Mikhail Vainstein

Journal of Basic Microbiology 2020 14-21

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*Article*

**Исследования стабильности плазмид антибиотикорезистентности у почвенных условно-  
патогенных штаммов Stenotrophomonas и Pseudomonas**

Бабаян Б.Г., Саргсян А.С., Багдасарян С.А, Мелкумян М.А., Давидян Т.С, Оганесян Н.А,

Оганесян А.М.

Авиценна 2019 13-17

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*Article*

**RESISTANCE TO  $\beta$ -LACTAM ANTIBIOTICS IN SOME SOIL STENOTROPHOMONAS AND  
PSEUDOMONAS.**

Hovhannisyan A.M., Hovhannisyan N. A., Babayan B.G., Sargsyan A.S., Davidyan T.S.

The scientific heritage 2019 32-38

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*Article*

**Inactivation of *Macrovipera lebetina obtusa* snake venom by enzymes of multidrug resistant  
*Pseudomonas***

Bella G. Babayan, N.A. Hovhannisyan, M.A. Melkumyan, A. Sargsyan

Toxicon 2019 S20

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*Article*

**СОВРЕМЕННЫЕ ТЕНДЕНЦИИ В РАЗРАБОТКЕ ЭФФЕКТИВНЫХ КОМБИКОРМОВ ДЛЯ РЫБ**

В. Ю. Агеец, А. Р. Микаелян, Ж. В. Кошак, Б. Г. Бабаян, С. М. Дегтярик

Весті Нацыянальнай акадэміі навук Беларусі. Серыя аграрных навук 2019 323–333

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*Conference*

**The Research of Aminoglycoside Resistance Spread in Non-Pathogenic Strains of Pseudomonas Isolated From Soil**

A.Hovhannisyanyan, N. Hovhannisyanyan, A.Sargsyanyan, B. Babayanyan, M. Kinosityanyan, T.Davidyanyan, S. Bagdasaryanyan, M.Melkumyanyan, G.Oganezovaya

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*Conference*

**“Study on stability of soil Pseudomonas and Xanthomonas plasmids possessing antibiotic resistance genes”**

Hovhannisyanyan N.A., Babayanyan B.G., Sargsyanyan A.S., Bagdasaryanyan S.A, Hovhannisyanyan A.M.

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*Conference*

**Antimicrobial Activity of Newly Synthesized Derivatives of Tartaric Acid Against the Multidrug Resistant Soil Strains of Pseudomonas and Stenotrophomonas**

Aram R. Mikaelyanyan, Nona L. Asatryanyan, Samvel A. Bagdasaryanyan, Bella G. Babayanyan

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*Patent*

**Համակցված ադեցուրթյան հակաբորբոքային քսուլ**

Քազիկ Ներսիսյան, Արամ Միքաելյան, Բելլա Բաբայան

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*Conference*

**The Effect of Tartaric Acid New Derivatives Against the Multidrug Resistant Opportunistic Pathogenic Soil Strains of Pseudomonas Fluorescens**

Bella G. Babayanyan, Aram R. Mikaelyanyan, Nona L. Asatryanyan, Samvel A. Bagdasaryanyan, Marina A. Melkumyanyan

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*Conference*

**Tartaric Acid New Synthetic Derivatives Antibacterial Activity against the Phytopathogenic Pseudomonas syringae**

Bella G. Babayanyan, Aram R. Mikaelyanyan, Nona L. Asatryanyan, Marina A. Melkumyanyan, Samvel A. Bagdasaryanyan,

Anna M. Grigoryanyan

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*Conference*

**Carnivorous Fungi: Innovative Safe Alternative Against The Agricultural Worm Pests**

A. H. Yesayanyan, T. A. Yesayanyan, B. G. Babayanyan, G. G. Sevoyanyan, S. S. Esoyanyan, A. K. Hayrapetyanyan,

A. D. Chakhmakhchyan

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*Conference*

**“Complex-Co” Innovative Ecologically Safe Agropreparation**

A.R. Mikaelyanyan, B.G. Babayanyan, M.A. Melkumyanyan, T.M. Soghomonyanyan, N.L. Asatryanyan, A.M. Grigoryanyan,

S.A. Bagdasaryanyan, H.S. Martirosyanyan, A.S. Melikanyan

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*Conference*

**The Preliminary Research of Magellan’s Cave Microbiome**

Samvel M. Shahinyanyan, Bella G. Babayanyan, Smbat Davtyanyan, Tigran A. Yesayanyan, Alexander H. Yesayanyan,

Marina A. Melkumyanyan

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*Conference*

**CARNIVOROUS FUNGI APPLICATION PERSPECTIVES FOR PESTICIDE- FREE VEGETABLES CULTIVATION**

Alexander Yesayan, Tigran Yesayan, Bella Babayan, Syuzanna Esoyan, Ani Hayrapetyan, Garegin Sevoyan, Armine Chakhmakhchyan, Siranush Nanagulyan, Marina Melkumyan

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*Conference*

**The prospectives of crops biological protection based on *Pseudomonas fluorescens* non-pathogenic bacteria**

Marina A. Melkumyan, Bella G. Babayan, Marina H. Kinosyan, Tamara S. Davidyan

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*Conference*

**Innovative Green Agents Against the Pathogens of Crops Based On *Brevibacillus Laterosporus***

Bella G. Babayan, Marina A. Melkumyan, Gagik S. Mikaelyan

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*Conference*

**Carnivorous Fungi: Innovative Green Alternative Against the Worm-pests of Crops**

Tigran A. Yesayan, Alexander H. Yesayan, Bella G. Babayan

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*Conference*

**Antimicrobial Resistance of Native Bacteria and The Spread of It out of Clinics**

Bella G. Babayan, Marina A. Melkumyan, Marina H. Kinosyan, Tamra S. Davidyan, Alexander H. Yesayan, Garegin G. Sevoyan, Tigran A. Yesayan

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*Conference*

**Crops Biological Protection Based on *Pseudomonas fluorescens*: Prospectives for Green Agriculture**

Marina Melkumyan, Bella Babayan, Alexander Yesayan, Tigran Yesayan

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