

# Lusine Hovhannes Melkonyan

✉ [lusinemelkonyan@ysu.am](mailto:lusinemelkonyan@ysu.am)



## Institute of Pharmacy

Ֆարմաբիոտեխնոլոգիայի և ֆարմակոգնոզիայի ամբիոն  
Assistant

## Education

<b>Institution</b>	Armenian State Pedagogical University after Kh. Abovyan
<b>Faculty</b>	Faculty of Biology and Chemistry, Department of Bio-ecology
<b>Date</b>	2000 - 2005
<b>Degree name</b>	Qualified specialist

## Scientific Rank/degree

<b>Institution</b>	SPC "Armbiotechnology" NAS RA SNPO
<b>Date</b>	2014
<b>Degree name</b>	Candidate
<b>Specialty</b>	Biological sciences
<b>Scientific Supervisor</b>	Avetisova Gayane Ye.
<b>Research Topic</b>	"Obtaining of Highly Active Strain-Producers of L-alanine and Development of Biosynthesis Technology"

## Language skills

English

## Work experience

<b>Institution</b>	SPC "Armbiotechnology" NAS RA, SNPO
<b>Period of time</b>	2018 till now
<b>Rank/degree</b>	Senior Researcher

<b>Institution</b>	Institute of Pharmacy, Yerevan State University
<b>Period of time</b>	2017 till now
<b>Rank/degree</b>	Assistant Professor

<b>Institution</b>	Armenian State Pedagogical University after Kh. Abovyan, Chair of Human and Animals Physiology
<b>Period of time</b>	2015 - 2016
<b>Rank/degree</b>	Lecturer

## Participation in international conferences and seminars

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<b>17/09/2022 - 03/11/2022</b>	“21T-2I229: Development of a New Multifunctional Biotechnological Preparation as a Biofertilizer, Biostimulant, Biopesticide”, 2021-2024 (funded by the Science Committee of the Ministry of Education, Science, Culture and Sport RA), Project coordinator) Laboratório Nacional de Energia e Geologia, I.P. (LNEG), Lisbon Portugal
<b>02/09/2022 - 16/09/2022</b>	“BRISK2” Transnational Access (TA) (Grant Agreement nº 731101 - Horizon 2020 project funded by the European Commission), “Lneg4: Advantages of Mutualistic Relationships between Microalgae and Nitrogen-Fixing Bacteria”, grantee Laboratório Nacional de Energia e Geologia, I.P. (LNEG), Lisbon Portugal
<b>16/06/2019 - 18/08/2019</b>	“Phoenix (H2020-MSCA-RISE-2015 Grant Agreement NUMBER 690925, secondee) Laboratório Nacional de Energia e Geologia, I.P. (LNEG), Lisbon Portugal
<b>19/07/2018 - 21/08/2018</b>	“Phoenix (H2020-MSCA-RISE-2015 Grant Agreement NUMBER 690925, secondee) Laboratório Nacional de Energia e Geologia, I.P. (LNEG), Lisbon Portugal
<b>07/07/2018 - 14/07/2018</b>	43rd FEBS Congress (“FEBS Bursary” grantee) - Czech Republic (the)
<b>09/07/2017 - 13/07/2017</b>	7th Congress of European Microbiologists (FEMS) (#203719 “Short Term Conference and Travel Grant” funded by Calouste Gulbenkian Foundation, grantee) - Spain
<b>13/12/2014 - 19/12/2014</b>	International Conference “Translational Biocatalysis” (#137270 “Short Term Conference and Travel Grant” funded by Calouste Gulbenkian Foundation, grantee) - United Kingdom of Great Britain and Northern Ireland (the)

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## Membership

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<b>Institution</b>	Federation of European Biochemical Societies (FEBS)
<b>Period of time</b>	2017 till now
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<b>Institution</b>	Federation of European Microbiological Societies (FEMS)
<b>Period of time</b>	2016 till now
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<b>Institution</b>	Armenian Association of Biochemists

**Period of time** 2017 till now

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**Institution** Armenian Microbiological Association

**Period of time** 2016 till now

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**Institution** Biotechnological Association of Armenia

**Period of time** 2009 till now

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## Other information

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2005-2009: Post-graduate student (SPC "Armbiotechnology" NAS RA SNPO)

## Publications

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*Article*

**Obtaining Osmo resistant Mutants in Nitrogen Fixing Bacteria Isolated from Saline Soils**

Keleshyan S. K., Karapetyan Z. V., Toplaghalsyan A. G., Avetisova G. Y., Melkonyan L. H.,

Vardanyan A. A., Ghochikyan V. T.

Current Microbiology 2022 251

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*Article*

**Brevibacterium flavum մանրէի հիման վրա L-տրիպտոֆանի շտամ-արտադրիչի ստացման գենետիկասելեկցիոն մոտեցումները**

Ավետիսովա Գ., Մելքոնյան Լ., Ծառուկյան Գ., Ղոչիկյան Վ., Զելեշյան Ս., Կարապետյան Ժ.,

Թովլաղալցյան Ա.

ՀԻՄՆԱՐԱՐ ԵՎ ԿԻՐԱՌԱԿԱՆ ԳԻՏԱԿԱՆ ՀԵՏԱԶՈՏՈՒԹՅՈՒՆՆԵՐ. ԱՐԴԻԱԿԱՆ ԽՆԴԻՐՆԵՐ ԵՎ

ՁԵՆՔԲԵՐՈՒՄՆԵՐ

2022 173-187

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*Article*

**Microbial approaches for amino acids production**

A. Paloyan, L. Melkonyan, G. Avetisova

Microbial Syntrophy-Mediated Eco-enterprising 2022 177-209

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*Article*

**Biostimulant and biopesticide potential of microalgae growing in piggery wastewater**

Alice Ferreira, Lusine Melkonyan, Sofia Carapinha, Belina Ribeiro, Daniel Figueiredo, Gayane Avetisova,

Luisa Gouveia

Environmental Advances 2021 100062

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*Article*

**Co-cultivation of L-tryptophan-producing strain Brevibacterium flavum and Azotobacter vinelandii as an alternative method for indole-3-acetic acid production**

Avetisova G., Melkonyan L., Toplaghalsyan A., Tsarukyan G., Keleshyan S., Karapetyan Z.,

Ghochikyan V.

BIOTECHNOLOGY: SCIENCE AND PRACTICE, INNOVATION AND BUSINESS 2021 6-10

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Article

**Influence of Vitamins on L-Tryptophan Production by *Brevibacterium flavum***

Melkonyan L., Avetisova G., Tsarukyan G., Keleshyan S., Karapetyan Z., Toplaghalsyan A.,

Ghochikyan V.

BIOTECHNOLOGY: SCIENCE AND PRACTICE, INNOVATION AND BUSINESS 2021 82-86

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Article

**Production and properties of a novel raw starch hydrolyzing  $\alpha$  amylase from *Bacillus amyloliquefaciens* MDC1974**

Paloyan A.M., Melkonyan L.H., Sargsyan A.S., Mkhitarayan A.V., Dyukova K.G., Hambardzumyan A.A.

Electronic Journal of Natural Sciences of NAS RA 2020 4-11

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Article

***Scenedesmus obliquus* microalga-based biorefinery - from brewery effluent to bioactive compounds, biofuels and biofertilizers - aiming a circular bioeconomy**

A. Ferreira, B. Ribeiro, M.L.A. Tavares, J. Vladic, S. Vidovic, D. Cvetkovic, L. Melkonyan, G. Avetisova, V. Goginyan, L. Gouveia

Biofuels, Bioproducts and Biorefining 2019 1169-1186

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Article

**Характеристика микрофлоры засоленных почв Армении**

С.К. Келешян, Ж. В. Карапетян, А.Г. Топлакалцян, Г.Е. Аветисова, Л.О. Мелконян, В.Т. Кочикян

Хранение и переработка сельхозсырья 2019 76-85

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Book

**Combining Microalgae-Based Wastewater Treatment with Biofuel and Bio-Based Production in the Frame of a Biorefinery. In: Hallmann A., Rampelotto P. (eds) Grand Challenges in Algae Biotechnology. Grand Challenges in Biology and Biotechnology**

Alice Ferreira, Alberto Reis, Senka Vidovic, Jelena Vladic, Spyros Gkelis, Lusine Melkonyan,

Gayane Avetisova, Roberta Congestri, Gabriel Ación, Raul Muñoz, Pierre Collet, Luisa Gouveia

2019 591

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Article

**Новое биоудобрение «Азоцеовит-1» для органического овощеводства и его испытание на посадках перца и баклажана в Армении**

К.М. Сарикян, Г.Ж. Саргсян, Г.Е. Аветисова, Л.О. Мелконян

Неделя науки в Крутах -2017 2017 264-271

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Article

**НОВЫЙ БИОПРЕПАРАТ «ЭКОБИОФИД+» ДЛЯ ОРГАНИЧЕСКОГО ЗЕМЛЕДЕЛИЯ И ЕГО ИСПЫТАНИЕ НА ПОСАДКАХ ТОМАТОВ В АРМЕНИИ**

Мелконян Л.О., Степанян С.Х., Аветисова Г.Е., Сарикян К. М.

INNOVATIVE APPROACHES AND PERSPECTIVE IDEAS OF YOUNG SCIENTISTS IN AGRARIAN SCIENCES. The proceedings of the international scientific-practical conference of young scientist  
2017 384-387

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Article

**Influence of Glutamate Dehydrogenase Activity on L-Proline Synthesis**

S.K. Keleshyan, Zh.V. Karapetyan, A.Kh. Chakhalyan, N.A. Hovhannisyanyan, G.Ye. Avetisova,

*Article*

**Изучение ингибирующих свойств новых небелковых аминокислот и отбор эффективных аналогов L-аминокислот для селекции высокоактивных штаммов-продуцентов**

А.Х. Чахалян, С.К. Келешян, Ж.В. Карапетян, А.Г. Давтян, Г.Е. Аветисова, Л.О. Мелконян,  
А.С. Дадаян, А.С. Сагиян

Прикладная биохимия и микробиология (Applied Biochemistry and Microbiology) 2016 62-67

[http://elibrary.ru/title\\_about.asp?id=7955](http://elibrary.ru/title_about.asp?id=7955)

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*Article*

**The nitrogen-fixing strain for biopreparation**

L.H. Melkonyan, G.H. Tepanosyan, G.Ye. Avetisova, A.Kh. Chakhalyan, S.Gh. Keleshyan,

Zh.V. Karapetyan

Biological Journal of Armenia 2016 65-68

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

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*Conference*

**BIOTECHNOLOGICAL APPROACHES FOR OBTAINING OF NEW COMPLEX BIOPREPARATION FOR ORGANIC AGRICULTURE**

L. Melkonyan, G. Avetisova, A. Chakhalyan, S. Keleshyan, Zh. Karapetyan, S. Stepanyan,

A. Toplaghalsyan, A. Saghyan

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*Conference*

**PURIFICATION AND CHARACTERIZATION OF  $\alpha$ -AMYLASE FROM BACILLUS AMYLOLIQUIFACIENS**

A. Paloyan, L. Melkonyan, A. Mkhitarian, A. Hambardzumyan, A. Saghyan

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*Conference*

**Substrate specificity of  $\alpha$ -amylase isolated from *B. amyloliquefaciens* strain MDC1974**

A. Paloyan, L. Melkonyan, A. Sargsyan, A. Mkhitarian, A. Hambardzumyan

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*Conference*

**Effect of " Ecobiofeed+ " Biopreparation on Eggplant (*Solanum Melongena* S.)**

G. Avetisova, L. Melkonyan, S. Stepanyan, K. Sarikyan, V. Ghochikyan, S. Keleshyan, Zh. Karapetyan,

A. Toplaghalsyan

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*Conference*

**Screening of lactic acid bacteria with a wide spectrum of antifungal activity**

A. Toplaghalsyan, S. Keleshyan, Zh. Karapetyan, N. Khachaturian, G. Avetisova, L. Melkonyan,

S. Stepanyan

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*Conference*

**Optimization of fermentation condition for  $\alpha$ -amylase production**

A. Paloyan, L. Melkonyan, A. Sargsyan, T. Arakelyan, M. Izmailyan, G. Avetisova, A. Hambardzumyan,

A. Saghyan

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*Conference*

**Study of some metals effect on  $\alpha$ -amylase activity of *Bacillus amyloliquefaciens* MDC 1974**

**strain**

L. Melkonyan, A. Paloyan, A. Hambardzumyan, G. Avetisova, A. Mkhitarian, A. Sargsyan, S. Stepanyan, S. Arabachyan, A. Saghyan

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*Conference***Study of synthesis of amino acids by Azotobacter vinilandii AV1 strain**

G. Avetisova, L. Melkonyan, A. Paloyan, V. Ghochikyan, A. Tsaturyan, S. Keleshyan, Z. Karapetyan, A. Toplaghalsyan

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*Conference***Optimization of fermentation conditions for histidine producers resistant to non-protein amino acids**

A. Toplaghalsyan, S. Keleshyan, Z. Karapetyan, G. Avetisova, L. Melkonyan, A. Vardanyan

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*Conference***New  $\alpha$ -amylase from Bacillus sp. MDC 3500 strain**

A. Paloyan, L. Melkonyan, A. Hambardzumyan, A. Mkhitarian, G. Avetisova

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*Conference***Industrial wastewater-grown Scenedesmus obliquus biomass-to-fuels and biofertilizers production: an integrative approach**

A. Ferreira, B. Ribeiro, J. Vlastic, S. Vidovic, D. Cvetkovic, L. Melkonyan, G. Avetisova, A.F. Ferreira, A. Reis, L. Gouveia

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*Conference***Tiny Microalgae For Huge Applications. Biorefinery Approach**

Alice Ferreira, Sofia Carapinha, Jelena Vlastic, Senka Vidovic, Dragoljub Cvetkovic, Lusine Melkonyan, Gayane Avetisova, Luisa Gouveia

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*Conference***Agrobacterium sp. as nitrogen-fixing bacteria: effect of osmo-resistant strains on the growth of plants in saline soils of Armenia**

S. Keleshyan, Zh. Karapetyan, A. Toplaghalsyan, G. Avetisova, L. Melkonyan, G. Tsarukyan, V. Ghochikyan

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*Conference***New  $\alpha$ -amylase with potential to commercialize**

A. Paloyan, L. Melkonyan, A. Mkhitarian, K. Dyukova, A. Hambardzumyan

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*Conference***ASSESSMENT OF BIOSTIMULANT AND BIOPESTICIDE POTENTIAL OF MICROALGAE FOLLOWING PIGGERY WASTEWATER TREATMENT**

A. Ferreira, L. Melkonyan, S. Carapinha, B. Ribeiro, D. Figueiredo, G. Avetisova, L. Gouveia

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*Conference***Determination of Enzymatic Activity of Nitrogen-Fixing Bacteria Isolated from Saline Soils of Armenia**

Toplaghalsyan A., Keleshyan S., Karapetyan Z., Avetisova G., Melkonyan L., Tsarukyan G.

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*Conference*

**BACTERIAS FIJADORAS DE NITRÓGENO COMO ALTERNATIVA AL USO DE FERTILIZANTES QUÍMICOS PARA LA PRODUCCIÓN DE *Chlorella vulgaris***

Ana Sánchez-Zurano, Silvia Villaró Cos, Daniel Figueiredo, Lusiné Melkonian, Francisco Gabriel Acién, Tomás Lafarga, Luísa Gouveia

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*Conference*

**ISOLATION AND CHARACTERIZATION OF NITROGEN-FIXING BACTERIA TO CREATE A NEW MULTIFUNCTIONAL BIOTECHNOLOGICAL MEAN FOR ORGANIC AGRICULTURE**

Lusine Melkonyan, Zhaneta Karapetyan, Anna Toplaghaltsyan, Luisa Gouveia, Gayane Avetisova

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*Conference*

**CREATING A CONSORTIUM OF NITROGEN-FIXING BACTERIUM AND MICROALGA FOR HEALTHIER ORGANIC FOOD**

Lusine Melkonyan, Alice Ferreira, Carolina Vela Bastos, Daniel Figueiredo, Gayane Avetisova, Zhaneta Karapetyan, Anna Toplaghaltsyan, Luisa Gouveia

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*Conference*

**MICROBIAL PRODUCTION OF THE ESSENTIAL AMINO ACID L-TRYPTOPHAN FOR FOOD AND NUTRITION**

Gayane Avetisova, Vahe Ghochikyan, Gevorg Tsarukyan, Susanna Keleshyan, Zhaneta Karapetyan, Anna Toplaghaltsyan, Lusine Melkonyan

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*Conference*

**GROWTH DYNAMICS OF NITROGEN-FIXING BACTERIA AT INCREASED SALINITY**

Toplaghaltsyan A., Karapetyan Zh., Keleshyan S., Avetisova G., Melkonyan L., Tsarukyan G., Ghochikyan V.

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*Conference*

**ENZYMATIC ACTIVITY OF NITROGEN-FIXING SOIL BACTERIA**

Toplaghaltsyan A., Karapetyan Zh., Keleshyan S., Avetisova G., Melkonyan L., Tsarukyan G., Ghochikyan V.

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