

# Anahit Hambarzum Shirvanyan

## Research Institute of Biology

Մանրեալանության, կենսաէնէրգէտիկայի և կենսատեխնոլոգիայի  
լաբորատորիա  
Junior Researcher

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## EĞİTİM / Education

<b>Institution</b>	Yerevan State University
<b>Faculty</b>	Faculty of Biology, Department of Biochemistry, Microbiology and Biotechnology
<b>Date</b>	2020 - 2023
<b>Degree name</b>	PhD student

<b>Institution</b>	Yerevan State University
<b>Faculty</b>	Faculty of Biology, Department of Biochemistry, Microbiology and Biotechnology
<b>Date</b>	2018 - 2020
<b>Degree name</b>	Masters

<b>Institution</b>	Yerevan State University
<b>Faculty</b>	Faculty of Biology, Department of Biochemistry, Microbiology and Biotechnology
<b>Date</b>	2014 - 2018
<b>Degree name</b>	Bachelor

## ƏSSƏT / Scientific Rank/degree

<b>Institution</b>	Yerevan State University
<b>Date</b>	2024
<b>Degree name</b>	Candidate
<b>Specialty</b>	Biological sciences
<b>Scientific Supervisor</b>	Թոջունյան Կարեն Արմենի
<b>Research Topic</b>	The action mechanisms of stress factors on some yeast growth parameters and antioxidant enzymes activity.

## ƏLÇƏN / Language skills

Հայերեն Русский English

## ƏMƏK HƏMŞƏRİ / Work experience

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

<b>Rank/degree</b>	Researcher at 23LCG-1F003 "The role of global regulators and transcriptional activators in the regulation of metabolic and bioenergetic parameters of microorganisms under conditions of fermentation and respiration" research grant
<b>Institution</b>	Laboratory of Microbiology, Bioenergetics and Biotechnology of YSU Research Institute of Biology
<b>Period of time</b>	2023 till now
<b>Rank/degree</b>	Junior researcher
<b>Institution</b>	Yerevan State University
<b>Period of time</b>	2021 - 2023
<b>Rank/degree</b>	Researcher at 21AG-4D027 "The potential of plant origin compounds in the development of food and feed preservatives and new biologically active additives" research grant
<b>Institution</b>	Department of Biochemistry, Microbiology and Biotechnology of Faculty of Biology, YSU
<b>Period of time</b>	2019 - 2023
<b>Rank/degree</b>	Senior laboratory assistant
<b>Institution</b>	Norapat secondary school
<b>Period of time</b>	2018 - 2019
<b>Rank/degree</b>	Teacher of Biology

## **Scientific interests**

- Biochemistry
- Microbiology
- Biotechnology

## **Participation in international conferences and seminars**

<b>22/08/2022 -</b>	Scientific expedition in framework of 21AG-4D027 research grant
<b>23/09/2022</b>	Gdansk University of Technology Poland
<b>09/07/2022 -</b>	The Global Biochemistry summit
<b>14/07/2022</b>	Portugal
<b>01/04/2019 -</b>	Erasmus+ Research program
<b>19/07/2019</b>	University of Saarland Germany

## Membership

<b>Institution</b>	Armenian Microbiological Association (FEMS constituent society)
<b>Period of time</b>	2023 - 2023

<b>Institution</b>	Armenian Biochemical Association (FEBS founding society)
<b>Period of time</b>	2021 - 2023

<b>Institution</b>	OSA YSU and NAS RA student chapter
<b>Period of time</b>	2020 - 2021

<b>Institution</b>	ArMicro ASM Student Chapter
<b>Period of time</b>	2019 - 2023

<b>Institution</b>	Union of Biologists of Armenia
<b>Period of time</b>	2016 - 2023

<b>Institution</b>	YSU Student Scientific Society
<b>Period of time</b>	2014 - 2020

## Publications

### *Article*

#### **EVALUATION OF ETHANOL AND BIOMASS PRODUCTION RATE BY DIFFERENT SACCHAROMYCES CEREVISIAE STRAINS DEPENDING ON EXTERNAL pH AND TEMPERATURE**

Anahit H. Shirvanyan

Proceedings of the YSU B: Chemical and Biological Sciences 2023 141-153

### *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 Kusznierewicz, Izabela Koss-Mikołajczyk, Nikolay Avtandilyan, Anne Vejux, Agnieszka Bartoszek,

Naira Sahakyan

Discovery Medicine 2023 590-611

### *Article*

#### **Relationship between proton/ potassium fluxes and central carbon catabolic pathways in different Saccharomyces cerevisiae strains under osmotic stress conditions**

Anahit Shirvanyan, Satenik Mirzoyan, Karen Trchounian

Process Biochemistry 2023 309-318

### *Article*

#### **CHEMICAL COMPOSITION AND ANTIBACTERIAL ACTIVITY OF ESSENTIAL OIL OF MENTHA ARVENSIS L. HARVESTED AT HIGH ALTITUDE ARMENIAN FLORA**

*Article*

**PECULIARITIES OF GROWTH PARAMETERS OF SACCHAROMYCES CEREVISIAE UNDER DIFFERENT CONDITIONS**

Anahit H. Shirvanyan, Satenik N. Mirzoyan, Karen A .Trchounian

Proceedings of the YSU B: Chemical and Biological Sciences 2021 255-265

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*Article*

**Changes of ATPase activity and lipid peroxidation in conditions of long-term hypokinesia**  
Shirvanyan A. A., Karapetyan H. M., Trchounian A. H.

Հայաստանի կենսաբանական հանդես 2020 80-84

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*Conference*

**The effect of hydrogen peroxide-induced oxidative stress on catalase activity in yeast *Saccharomyces cerevisiae***  
Shirvanyan A.H, Karapetyan H.M.

*Conference*

**Potassium and proton ions transport during glucose fermentation in *Saccharomyces cerevisiae* under glycerol-induced osmotic stress at different pHs**  
A. Shirvanyan, S. Mirzoyan, K. Trchounian

*Conference*

**Antimicrobial and antioxidant potential of some plant crude extract**  
Margarit Petrosyan, Alvard Minasyan, Anahit Shirvanyan, Anush Babayan, Mikayel Ginovyan,  
Naira Sahakyan

*Conference*

**Prospects for the use of *Ficus carica L.* leave extract as bio-preservative agent**  
Anahit Shirvanyan, Alvard Minasyan, Anush Babayan, Armine Moghroyan, Naira Sahakyan,  
Margarit Petrosyan, Karen Trchounian

*Conference*

**Regulation of catalase and superoxide dismutase activities by sodium and potassium ions in *Saccharomyces cerevisiae***  
A. Shirvanyan, S. Mirzoyan, K. Trchounian

*Conference*

**THE OXIDATIVE STRESS AND POSSIBLE PREVENTIVE ACTION OF PLANT BORN POLYPHENOLS**  
Anahit Shirvanyan, Anush Babayan, Alvard Minasyan, Margarit Petrosyan, Anna Poladyan,  
Naira Sahakyan

*Conference*

**The role of *Saccharomyces cerevisiae* ATPases in adaptation mechanisms to osmotic stress under aerobic conditions**  
A. Shirvanyan, K. Trchounian

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*Conference*

**From metabolomics to medicine: exploiting the functional potential of plant extracts in human health, with emphasis on *Ribes nigrum*, *Ficus carica* and *Vitis vinifera***  
S. Tadevosyan, M. Ginovyan, N. Avtandilyan, A. Shirvanyan, A. Bartoszek, N. Sahakyan

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*Conference*

**From agro-bio-waste to application: the power of bilberry aerial part extract as anti-cancer and antibiotic-modulating agent**  
N. Sahakyan, M. Ginovyan, A. Babayan, A. Shirvanyan, A. Minasyan, B. Kusznierewicz, I. Koss-Mikołajczyk, N. Avtandilyan, A. Bartoszek

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*Conference*

**Harnessing plant extracts to overcome antibiotic resistance: leaf extracts of *Ribes nigrum*, *Ficus carica*, and *Vitis vinifera* as resistance modifiers of *E. coli* strains**  
M. Ginovyan, A. Shirvanyan, S. Tadevosyan, A. Babayan, B. Kusznierewicz, N. Avtandilyan, A. Bartoszek, N. Sahakyan

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*Conference*

**The impact of acetic acid stress on growth parameters and sodium flux of *Saccharomyces cerevisiae* strains under varying oxygen conditions**  
Anahit H. Shirvanyan, Gohar S. Azbekyan, Karen A. Trchounian

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*Conference*

**Impact of menthol on ATPase activity and ion flux in antibiotic-resistant *Escherichia coli***  
Silvard K. Tadevosyan, Anahit Shirvanyan, Karen Trchounian, Naira Sahakyan

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