

Hayarpi Mantash Simonyan

Institute of Pharmacy

Ֆարմաբիոտեխնոլոգիայի և ֆարմակոգնոզիայի ամբիոն
Ամբիոնի վարիչ (դոցենտ)

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✉ hayarpi.simonyan@ysu.am

🌐 R⁶

🎓 Education

Institution	Yerevan State University
Faculty	Faculty of Chemistry
Date	2001 - 2006
Degree name	Qualified specialist

🎓 Scientific Rank/degree

Institution	Yerevan State University
Date	2014
Degree name	Candidate
Specialty	Chemical sciences
Scientific Supervisor	Ashot Saghyan
Research Topic	Biomimetic asymmetric synthesis of new heterocyclic substituted non-proteinogenic α -amino acids

🌐 Language skills

English Русский

📁 Work experience

Institution	EU4INNOVATION project, World Bank Armenia
Period of time	2019 - 2022
Rank/degree	Chemistry Expert

Institution	YSU Institute of Pharmacy, Chair of Pharmaceutical Chemistry and Pharmacognosy
Period of time	2017 till now
Rank/degree	Head of the Chair

Institution	Araratian Baccalaureate Examination Center
Period of time	2016 - 2018
Rank/degree	Chemistry subject specialist,

Institution YSU Institute of Pharmacy
Period of time 2014 - 2017
Rank/degree Assistant professor

Institution YSU Institute of Pharmacy
Period of time 2014 till now
Rank/degree Senior researcher

Institution Scientific and Production Center "Armbiotechnology" NAS RA
Period of time 2007 - 2019
Rank/degree Junior Researcher

Institution YSU Faculty of Chemistry
Period of time 2006 - 2014
Rank/degree Junior Researcher

Scientific interests

- Asymmetric synthesis of non protein amino acids
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Participation in international conferences and seminars

22/07/2022 - 03/08/2022 Scientific Collaboration
Institute of Biostructures and Bioimaging (IBB) of the National Research Council (CNR)
Italy

18/02/2020 - 21/02/2020 Discussion of joint educational programs
Peoples' Friendship University of Russia, Belgorod State National Research University of RF
Russian Federation (the)

01/09/2019 - 05/09/2019 VIII EFMC International Symposium on Advances in Synthetic and Medicinal Chemistry
Athens
Greece

08/07/2018 - 13/07/2018 16th Belgian Organic Synthesis Symposium
Brussels
Belgium

24/07/2017 - 26/07/2017 5th International Conference of Green chemistry and Technology
Rome
Italy

03/08/2015 - 07/08/2015	14th International Congress on Amino Acids, Peptides and Proteins Vienna Austria
29/07/2014 - 31/07/2014	International Congress on Green Chemistry and Sustainable Engineering Barcelona Spain
09/10/2013 - 13/10/2013	11th International Congress of Young Chemists Poznan Poland
17/09/2013 - 21/09/2013	3th International Scientific Conference "New trends in the chemistry of heterocyclic compounds", Pyatigorsk Russian Federation (the)
17/05/2013 - 19/05/2013	3-rd International Conference of Young Scientists Tbilisi Georgia
12/11/2012 - 16/11/2012	6th International conference "Chemistry of Nitrogen Containing Heterocycles" Kharkov Ukraine
21/04/2012 - 23/04/2012	Second International Conference of Young Chemists Tbilisi Georgia

Membership

Institution	Member of the Association of Young Chemists
Period of time	2013 - 2023
Institution	Member of RA "Armenian Association of Biotechnologists" public organization
Period of time	2014 - 2023
Institution	Member of the Scientific Council of YSU Institute of Pharmacy
Period of time	2015 - 2023

State awards and honorary titles

2015 State prize in the field of exact and natural sciences for the work "Efficient small-scale production technology of new generation non-protein amino acids"

Article

Binding of G-quadruplex DNA and serum albumins by synthetic non-proteinogenic amino acids: Implications for c-Myc-related anticancer activity and drug delivery

Hayarpi Simonyan, Satenik Petrosyan, Lusine Sahakyan, Gagik Melikyan, Ashot Sagyan,

Rosanna Palumbo, Caterina Vicidomini, Pasqualina Liana Scognamiglio, Giovanni N. Roviello

Molecular Therapy Nucleic Acids 2025 102478

Article

Neuroprotective Properties of Clove (*Syzygium aromaticum*): State of the Art and Future Pharmaceutical Applications for Alzheimer's Disease

Tatevik Sargsyan, Hayarpi Simonyan, Avetis Tsaturyan, Lala Stepanyan, Raffaele Pastore,

Caterina Vicidomini, Germano Guerra, Giovanni N. Roviello

Biomolecules 2025 452

Article

The Synthesis, Characterization, and Biological Evaluation of a Fluorenyl-Methoxycarbonyl-Containing Thioxo-Triazole-Bearing Dipeptide: Antioxidant, Antimicrobial, and BSA/DNA Binding Studies for Potential Therapeutic Applications in ROS Scavenging and Dr

Lala Stepanyan, Tatevik Sargsjan, Valentina Mittova, Zurab Tsetskhladze, Nino Motsonelidze,

Ekaterina Gorgoshidze, Niccolo Nova, Monika Israyelyan, Hayarpi Simonyan, Franco Bisceglie,

Lusine Sahakyan, Karapet Ghazaryan, Giovanni Roviello

Biomolecules 2025 933

Article

Biomacromolecular interactions and antioxidant properties of novel synthetic amino acids targeting DNA and serum albumin

Tatevik Sargsyan, Heghine Hakobyan, Hayarpi Simonyan, Tigran Soghomonyan, Avetis Tsaturyan,

Anahit Hovhannisyan, Siranush Sardaryan, Ashot Saghyan, Giovanni N. Roviello

Journal of Molecular Liquids 2025 1-13

Article

BSA Binding and Aggregate Formation of a Synthetic Amino Acid with Potential for Promoting Fibroblast Proliferation: An In Silico, CD Spectroscopic, DLS, and Cellular Study

Hayarpi Simonyan, Rosanna Palumbo, Satenik Petrosyan, Anna Mkrtchyan, Armen Galstyan,

Ashot Saghyan, Pasqualina Liana Scognamiglio, Caterina Vicidomini, Marta Fik-Jaskólka,

Giovanni N. Roviello

Biomolecules 2024 579

Article

Advances in Amino Acid-Based Chemistry

Hayarpi Simonyan, Rosanna Palumbo, Giovanni N. Roviello

Pharmaceuticals 2023 1490

Article

Asymmetric Synthesis of Derivatives of Alanine via Michael Addition Reaction and their Biological Study

Mkrtchyan Anna, Tovmasyan Anna, Paloyan Ani, Sargsyan Armen, Simonyan Hayarpi, Sahakyan Lusine,

Petrosyan Satenik, Hayriyan Liana, Sargsyan Tatevik
Synlett 2022 2013-2018

Article

Spectroscopic and SEM evidences for G4-DNA binding by a synthetic alkyne-containing amino acid with anticancer activity

Marta A.Fik-Jaskółka, Anna F.Mkrtchyan, Ashot S.Saghyan, Rosanna Palumbo, Agnieszka Belter,
Liana A.Hayriyan, Hayarpi Simonyan, ValentinaRoviello, Giovanni N.Roviello

SPECTROCHIMICA ACTA PART A-MOLECULAR AND BIOMOLECULAR SPECTROSCOPY 2020 117884

Article

Biological macromolecule binding and anticancer activity of synthetic alkyne-containing L-phenylalanine derivatives

Marta A. Fik-Jaskółka, Anna F. Mkrtchyan, Ashot S. Saghyan, Rosanna Palumbo, Agnieszka Belter,
Liana A. Hayriyan, Hayarpi Simonyan, Valentina Roviello, Giovanni N. Roviello

Amino Acids 2020 755-769

Article

Исследование асимметрического нуклеофильного бис-присоединения дегидроаланиновых комплексов Ni(II)

Петросян С. Г., Симонян А. М, Мкртчян А. Ф., Саакян Л. Ю., Цатурян А. О., Сагян А. С.

Հայաստանի քիմիական հանդես 2020 213-222

Manual

Ամինաթթուների ֆիզիկաքիմիական, օպտիկական հատկությունները և ստացման եղանակները
Հ.Մ. Սիմոնյան, Ա.Ֆ. Մկրտչյան

2018 40

Manual

ՊԵՊՏԻԴՆԵՐ, ՖԵՐՄԵՆՏՆԵՐ

Ա. Ֆ. Մկրտչյան, Հ.Մ. Սիմոնյան

2018 36

Article

Synthesis and biological evaluation of a novel Amadori compound

Hayarpi Simonyan, Giovanni N. Roviello, Roberta Iannitti, Valentina Roviello, Rosanna Palumbo,

Caterina Vicidomini

Amino Acids 2017 327-335

<http://link.springer.com/journal/726>

Article

Асимметрический синтез новых гетероциклически замещенных аналогов α-аминомасляной кислоты, содержащих замещенные триазольные группы в боковом радикале

А.С.Сагян, Л.Ю.Саакян, А.М.Симонян, С.Г.Петросян, А.Ф.Мкртчян, М.А.Самвелян, Т.В.Кочикян,

П.Лангер

Химический Журнал Армении 2017 71-81

<http://www.flib.sci.am/eng/Qimia/Frame.html>

Article

Асимметрический синтез новых гетероциклически замещенных аналогов (S)- α -аланина, содержащих 3,4-дизамещенные -5-тиоксо-1,2,4-триазолы в боковом радикале

А.М.Симонян, А.С.Сагиян, Л.Ю.Саакян, Н.Н.Багян, А.О.Восканян, Ж.Н.Сарибекян, М.А.Самвелян,

Т.В.Кочикян

Химический Журнал Армении 2017 82-91

<http://www.flib.sci.am/eng/Qimia/Frame.html>

Article

Lac-L-TTA, a novel lactose-based amino acid-sugar conjugate for anti-metastatic applications

Hayarpi Simonyan, Giovanni N. Roviello, Roberta Iannitti, Rosanna Palumbo, Caterina Vicidomini,

Valentina Roviello

Amino Acids 2017 1347-1353

<http://link.springer.com/journal/726>

Article

Асимметрический синтез (S)-b-(4-(b-фенэтил)-3-бутил-5-тиоксо-1,2,4-триазол-1-ил)- α -аланина

А.М. Симонян

Հայաստանի քիմիական հանդես 2017 522-528.

Article

ВЫДЕЛЕНИЕ ПРОЛИНА ИЗ СМЕСИ АМИНОКИСЛОТ

А.М. Симонян, А.С. Сагян, Ж.Н. Сарибекян, А.Е. Агаджанян

Հայաստանի քիմիական հանդես 2017 417-429

Article

New generations of optically active non-proteinogenic α -amino acids, synthesis and study

Hovhannisyan A. M., Saghyan A. S., Mkrtchyan A. F., Simonyan H. M

Հայաստանի քիմիական հանդես 2016 81-101

<http://www.flib.sci.am/eng/Qimia/Frame.html>

Article

Synthesis of enantiomerically enriched amino acids containing acetylenic bond in the side-chain radical

Hayarpi M. Simonyan, Ashot. S. Saghyan, Anna F. Mkrtchyan, Ani J. Karapetyan, Zorayr Z. Mardiyan,

Liana A. Hayriyan

International Journal of Chemical Engineering and Applications 2016 413-416

<http://www.ijcea.org/>

Article

Синтез положительно заряженных комплексов CoIII и их исследование в качестве хиральных катализаторов в реакциях асимметрического генерирования С-С связи.

Мкртчян А. Ф., Геолчанян А. В., Симонян А. М., Петросян С. Г., Сагиян А. С., Малеев В. И.,

Белоконь Ю. Н., Хрусталев В. Н

Химический Журнал Армении 2015 108-121

<http://www.flib.sci.am/eng/Qimia/Frame.html>

Article

АСИММЕТРИЧЕСКИЙ СИНТЕЗ НОВЫХ ЭНАНТИОМЕРНО ОБОГАЩЕННЫХ НЕНАСЫЩЕННЫХ

α-АМИНОКИСЛОТ

А. Ф. МКРТЧЯН, З. З. МАРДИЯН, А. Ж. КАРАПЕТЯН, А. С. ПОГОСЯН, С. Г. ПЕТРОСЯН, А. М. СИМОНЯН,
А. О. ЦАТУРЯН, А. С. САГИЯН

Химический Журнал Армении 2015 403-412

<http://www.flib.sci.am/eng/Qimia/Frame.html>

Article

Thiophenyl-substituted triazolyl-thione L-alanine: asymmetric synthesis, aggregation and biological properties

Ashot S. Saghyan, Hayarpi M. Simonyan, Petrosyan G. Satenik, Arpine V. Geolchanyan,

Giovanni N. Riovello, Domenica Musumeci, Valentina Roviello

Amino Acids 2014 2325–2332

<http://link.springer.com/journal/726>

Conference

Asymmetric synthesis of new enantiomerically enriched α-amino acids

A.S. Saghyan, A.F. Mkrtchyan, S.G. Petrosyan, J.A. Yedoyan, A.M. Simonyan, A.V. Geolchanyan,

P. Langer, A.M. Petrosyan

Conference

Metallocomplex precursors for the synthesis of 18f-fluorinated aromatic amino acids labelled in alpha fluoromethyl moiety

A. V. Geolchanyan, A. S. Saghyan, A. F. Mkrtchyan, S. G. Petrosyan, H. M. Simonyan, V. I. Maleev,

Yu. N. Belokon, R. Schibli, R. N. Krasikova

Conference

Efficient method for the synthesis of novel enantiomerically enriched derivatives of propargylglycine

Anna F. Mkrtchyan, Ashot S Saghyan, Liana A Hayriyan, Ani J Karapetyan, Zorayr Z Mardiyan,

Hayarpi M Simonyan, Adonc Hovhannes

Conference

Asymmetric synthesis of potential biologically active new heterocyclic analogs of (S)-α - alanine containing 3,4-substituted 5-thioxo-1,2,4- triazoles in the side-chain radical

H.M. Simonyan, L.Yu. Sahakyan, S.Gh. Petrosyan, A.F. Mkrtchyan, N.N. Baghyan,, J.N. Saribekyan,

A.S. Saghyan

Conference

Asymmetric synthesis of new heterocyclic analogs of alpha-aminopropionic acid and alpha-aminobutyric acid via Michael nucleophilic addition reactions

Hayarpi Simonyan, Lusine Sahakyan, Anna Mkrtchyan, Satenik Petrosyan, Ashot Saghyan

Conference

Efficient method for the synthesis of novel enantiomerically enriched derivatives of unsaturated amino acids

Ashot Saghyan, Anna Mkrtchyan, Liana Hayriyan, Zorayr Mardiyan, Hayarpi Simonyan

Conference

Asymmetric synthesis of enantiomerically enriched analog of α-aminobutyric acid containing

heterocycle in the side chain radical .

L.Yu.Sahakyan, A.S. Saghyan, H.M. Simonyan, S.Gh.Petrosyan, A.F.Mkrtchyan

Conference

Asymmetric synthesis and biological activity of novel heterocycle substituted analogues of α -aminobutyric acid

Sahakyan L.Yu., Simonyan H. M, Petrosyan S. Gh., Mkrtchyan A. F., Simonyan M. A., Saghyan A. S.,

Sekoyan E. S.

Conference

Asymmetric synthesis of potential biologically active new analogs of (S)-alanine containing nitrogenous bases in the side-chain radical

H.M.Simonyan, L.Yu. Sahakjan, A.F.Mkrtchyan, S.Gh.Petrosyan, N.N.Baghyan, A.O.Voskanyan,

J.N.Saribekyan, A.S.Saghyan

Conference

Асимметрический синтез новых производных (S)- α -аланина, содержащих 3-замещенные 4-изобутил-5-тиоксо-1,2,4-триазолы в боковом радикале

А.М.Симонян, Н.Н.Багян, А.О.Восканян, Ж.Н.Сарибекян, Л.Ю.Саакян, А.Ф.Мкртчян, С.Г.Петросян,

А.С.Сагиян

Conference

Asymmetric synthesis of enantiomerically enriched analogs of NiII complexes of (S)-allylglycine

L.A.Hayriyan, A.F.Mkrtchyan, Z.Z.Mardiyana, A.J.Karapetyan, H.V. Adonc, H.M. Simonyan, S.Gh. Petrosyan,

L.Yu.Sahakyan, A.S. Saghyan

Conference

Synthesis of optically pure (S)-2-amino-5-(3-fluorophenyl)-2-(prop-2-yn-1-yl)pent-4-ynoic acid by using Sonogashira reaction

Z.Z. Mardiyana, L.A. Hayriyan, A.F.Mkrtchyan, A.X.Tsaturyan, A.J. Karapetyan, H.V. Adonc, H.M. Simonyan,

S.Gh.Petrosyan, L.Yu.Sahakyan, A.S. Saghyan

Conference

Asymmetric synthesis of enantiomerically enriched new analogs of Ni II complexes of (S)-propargylglycine

L. Hayriyan, A. Saghyan, H. Simonyan, A. Karapetyan, Z. Mardiyana, A. Mkrtchyan

Conference

Asymmetric synthesis of optically active derivatives of α -aminobutyric acid containing triazole groups in the side chain radical

L.Sahakyan, H.Simonyan, S. Petrosyan, A. Mkrtchyan, A. Saghyan, E. Sekoyan

Conference

SYNTHESIS OF A NOVEL HETEROCYCLIC AMINO ACID AND ITS USE FOR THE SYNTHESIS OF SUGAR-AMINO ACID CONJUGATES

Hayarpi Simonyan, Giovanni Roviello, Anna Mkrtchyan, Lusine Sahakyan, Satenik Petrosyan,

Ashot Saghyan

Conference

Synthesis and Biological Evaluation of Unusual Alpha-amino Acids for Biomedical Strategies

Hayarpi Simonyan, Giovanni N. Roviello, Ernest Ewert, Marta Fik-Jaskółka, Anna Mkrtchyan

Conference

DEVELOPMENT OF NOVEL PEPTIDE-MIMETIC COMPOUNDS AS POTENTIAL ANTICANCER

AGENTS: A COLLABORATIVE POLISH-ITALIAN-ARMENIAN STUDY

Danuta Witkowska, Giovanni N. Roviello, Agnieszka Rombel-Bryzek, Paweł Lenartowicz,

Hayarpi Simonyan
