

# Liana Arthur Hayriyan

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## Research Center for the Institute of Pharmacy

Researcher

### Education

<b>Institution</b>	Yerevan State University
<b>Faculty</b>	Chemistry and Pharmacology
<b>Date</b>	2013 - 2015
<b>Degree name</b>	Masters

<b>Institution</b>	Yerevan State University
<b>Faculty</b>	Chemistry
<b>Date</b>	2009 - 2013
<b>Degree name</b>	Bachelor

### Scientific Rank/degree

<b>Institution</b>	The National Academy of Sciences of Armenia
<b>Date</b>	2021
<b>Degree name</b>	Candidate
<b>Specialty</b>	Chemical sciences
<b>Scientific Supervisor</b>	Anna Mkrtchyan
<b>Research Topic</b>	SYNTHESIS AND REASERCH OF NEW ENANTIOMERICALLY ENRICHED UNSATURATED $\alpha$ -AMINO ACIDS

### Language skills

Հայերեն Русский English

### Work experience

<b>Institution</b>	Insitut of Pharmacy
<b>Period of time</b>	2023 till now
<b>Rank/degree</b>	Researcher

<b>Institution</b>	ETH Zurich
<b>Period of time</b>	2019 - 2019
<b>Rank/degree</b>	Researcher

**Institution** A.N.Nesmeyanov Institute of Organoelement Compounds of Russian Academy of Sciences (INEOS RAS)  
**Period of time** 2018 - 2018  
**Rank/degree** Researcher

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**Institution** SPC "Armbiotechnology" SNPO NAS RA  
**Period of time** 2015 till now  
**Rank/degree** Researcher

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## Publications

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*Article*

**Glaser Heterocoupling Reaction for the Synthesis of Enantiomerically Enriched Unnatural  $\alpha$ -Amino Acids Incorporating Asymmetric Diyne Moieties: Mechanistic Insights and Optimization**

Liana Hayriyan, Anna Tovmasyan, Anna Grigoryan, Karapet Ghazaryan, Barbara Biondi,

Olgert L. Dallakyan, Mikayel S. Chobanyan, Hayk Zaqaryan, Ashot Saghyan, Anna Mkrtchyan

ACS Omega 2025 A-G

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*Article*

**Synthesis and Biological Activity of Ultrashort Antimicrobial Peptides Bearing a Non-Coded Amino Acid**

Cristina Peggion, Andrea Schivo, Martina Rotondo, Simona Oancea, Lucia-Florina Popovici,

Teodora Călin, Anna Mkrtchyan, Ashot Saghyan, Liana Hayriyan, Emma Khachatryan,

Fernando Formaggio, Barbara Biondi

Journal of Peptide Science 2025 8

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*Article*

**A3-Mannich coupling reaction via chiral propargylglycine Ni(ii) complex: an approach for synthesizing enantiomerically enriched unnatural  $\alpha$ -amino acids**

Liana Hayriyan, Anna Grigoryan, Hasmik Gevorgyan, Avetis Tsaturyan, Armen Sargsyan, Peter Langer,

Ashot Saghyan, Anna Mkrtchyan

RSC Advances 2025 35379-35387

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*Article*

**Catalytic ipso-Nitration of Organosilanes Enabled by Electrophilic N-Nitrosaccharin Reagent**

Ivan Mosiagin, Anthony J. Fernandes, Alena Budinská, Liana Hayriyan, Kai E. O. Ylijoki, Dmitry Katayev

Angewandte Chemie - International Edition 2023 e202310851

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*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

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*Article*

**Synthesis of enantiomerically enriched non-protein  $\alpha$ -amino acids and their study as aldose**

**reductase inhibitors**

Anna F. Mkrtchyan, Liana A. Hayriyan, Armen S. Sargsyan, Ani M. Paloyan, Anna S. Tovmasyan, Ani J. Karapetyan, Artur A. Hambardzumyan, Nelli A. Hovhannisyan, Henrik A. Panosyan, Hamlet N. Khachatryan, Ani S. Dadayan, Ashot S. Saghyan  
Synthetic Communications 2021 1433-1450

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*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, Valentina Roviello, Giovanni N. Roviello  
SPECTROCHIMICA ACTA PART A-MOLECULAR AND BIOMOLECULAR SPECTROSCOPY 2020 117884

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*Article***Asymmetric synthesis, biological activity and molecular docking studies of some unsaturated  $\alpha$ -amino acids, derivatives of glycine, allylglycine and propargylglycine**

A. F. Mkrtchyan, A. S. Saghyan, L. A. Hayriyan, A. S. Sargsyan, A. J. Karapetyan, A. S. Tovmasyan, A. H. Tsaturyan, E. V. Minasyan, A. S. Poghosyan, A. M. Paloyan, H. A. Panosyan, Lu. Yu. Sahakyan  
Journal of Molecular Structure 2020 127850

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*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

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*Article***Using the Ni-[(Benzylpropyl)amino]benzophenone complex in the Glaser reaction for the synthesis of bis  $\alpha$ -amino acids**

Anna F. Mkrtchyan, Liana A. Hayriyan, Ani J. Karapetyan, Anna S. Tovmasyan, Avetis H. Tsaturyan, Victor N. Khrustalev, Viktor I. Maleev, Ashot S. Saghyan  
New Journal of Chemistry 2020 8

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*Article***Synthesis of Enantiomerically Enriched Non-Proteinogenic  $\alpha$ -Amino Acids Using the Suzuki Reaction**

Saghyan Ashot, Mkrtchyan Anna, Mardiyan Zorayr, Hayriyan Liana, Yuri N. Belokon, Peter Langer  
ChemistrySelect 2019 4686-4688

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*Article***Synthesis of enantiomerically enriched alkynylaryl-substituted  $\alpha$ -amino acids through Sonogashira reactions**

Ashot S. Saghyan, Anna F. Mkrtchyan, Zorayr Z. Mardiyan, Liana A. Hayriyan, Ani J. Karapetyan, Yuri N. Belokon, Peter Ehlers, Peter Langer  
ChemistrySelect 2019 13806-13809

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*Article***Synthesis of a new enantiomerically enriched  $\alpha$ -amino acid using the Glaser reaction**

*Article*

**Nickel-coordinated chiral enols and Michael addition intermediate stabilized by the Ni-C bond**

Liana A. Hayriyan, Anna F. Mkrtchyan, Margarita Moskalenko, Viktor Maleev, Zalina Gugkaeva,

Mikhail Il'in, Kirill Babiyevski, Pavel Dorovatorskiy, Viktor Khrustalev, Aleksandr Peregudov, Yu. Belokon

Mendeleev Communications 2018 464-466

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*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

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*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

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*Conference*

**Modeling, synthesis and study of impact of peptides containing unsaturated double bond amino acids on collagenase activity**

T. Sargsyan, T.Khachatryan, A.S. Sargsyan, L.Yu. Danghyan, S.M. Jamgaryan, E.A.Gyulumyan,

N. A. Hovhannisyan, L.A. Hayriyan, A.M. Hovhannisyan, A. H. Tsaturyan, A.S. Saghyan

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*Conference*

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

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

L.Yu.Sahakyan, A.S. Saghyan

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*Conference*

**Synthesis of optically pure (S)-2-amino-5-(3-fluorophenyl)-2-(prop-2-yn-1-yl)pent-4-yonic acid b y using Sonogashira reaction**

Z.Z. Mardiyan, 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

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*Conference*

**FIVE-YEAR ACHIEVEMENTS IN THE FIELD OF THE ASYMMETRIC SYNTHESIS OF UNSATURATED AMINO ACIDS**

A. S. Saghyan, L.A. Hayriyan, Z.Z. Mardiyan, A.F. Mkrtchyan

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*Conference*

**THE SYNTHESIS OF POTENTIALLY ACTIVE NEW ENANTIOMERICALLY ENRICHED DERIVATIVES OF GLYCINE THROUGH CLICK REACTION**

H.V. Adonts, A.S. Saghyan, L.A.Hayriyan, A.F. Mkrtchyan

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*Conference*

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

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

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*Conference*

**Asymmetric synthesis of new enantiomerically enriched  $\alpha$ -amino acids**

A.S. Saghyan, A.F. Mkrtchyan, Z.Z. Mardiyan, L.A. Hayriyan, H.V. Adonts

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*Conference*

**Synthesis and reactivity of chiral enols coordinated with Ni<sup>2+</sup> ions and a case of a Michael adduct intermediate stabilized by the Ni-C bond**

L. A. Hayriyan, A. F. Mkrtchyan, Y. N. Belokon, A. S. Saghyan

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*Conference*

**Asymmetric synthesis of enantiomerically enriched new analogs of Ni II complexes which contain unsaturated alkene groups**

L. Hayriyan, A. Mkrtchyan, A. Saghyan

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*Conference*

**Asymmetric synthesis of new enantiomerically enriched unsaturated  $\alpha$ -amino acids by promotion of cross-coupling reactions**

Liana Hayriyan, Anna Mkrtchyan, Ashot Saghyan

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*Conference*

**Asymmetric synthesis and biological activity of some unsaturated  $\alpha$ -amino acids**

L. Hayriyan, A. Karapetyan, A. Tovmasyan, A. Mkrtchyan, A. Sargsyan, A. Saghyan

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