

# Liana Manvel Vanyan

## Research Institute of Biology

Laboratory of Microbiology, Bioenergetics and Biotechnology  
Junior Researcher

37494535101

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## Education

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| <b>Institution</b> | Yerevan State University                              |
| <b>Faculty</b>     | Biology/ Biochemistry, Microbiology and Biotechnology |
| <b>Date</b>        | 2021 - 2024   |
| <b>Degree name</b> | PhD student   |

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|--------------------|--------------------------|
| <b>Institution</b> | Yerevan State University |
| <b>Faculty</b>     | Biology                  |
| <b>Date</b>        | 2019 - 2021              |
| <b>Degree name</b> | Masters                  |

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|--------------------|--------------------------|
| <b>Institution</b> | Yerevan State University |
| <b>Faculty</b>     | Biology                  |
| <b>Date</b>        | 2015 - 2019              |
| <b>Degree name</b> | Bachelor                 |

## Language skills

Հայերեն Русский English

## Work experience

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| <b>Institution</b>    | Research Institute of Biology |
| <b>Period of time</b> | 2021 till now                 |
| <b>Rank/degree</b>    | Junior researcher             |

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| <b>Institution</b>    | Research Institute of Biology |
| <b>Period of time</b> | 2019 - 2021                   |
| <b>Rank/degree</b>    | Laboratory assistant          |

## Publications

Article

**Evidence for bidirectional formic acid translocation in vivo via the Escherichia coli formate channel FocA**

*Article*

**PROTON AND POTASSIUM FLUXES IN ESCHERICHIA COLI MUTANTS WITH DEFECTS IN SUBUNITS RESPONSIBLE FOR MATURATION OF HYD-1 AND HYD-2 DURING GLUCOSE FERMENTATION**

L.M. Vanyan

Proceedings of the YSU B: Chemical and Biological Sciences 2024 54-67

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*Article*

**HyfF subunit of hydrogenase 4 is crucial for regulating FOF1 dependent proton/potassium fluxes during fermentation of various concentrations of glucose**

Liana Vanyan, Karen Trchounian

Journal of Bioenergetics and Biomembranes 2022 69-79

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*Article*

**Biogas and Biohydrogen Production Using Spent Coffee Grounds and Alcohol Production Waste**

Liana Vanyan, Adam Cenian, Karen Trchounian

Energies 2022 5935

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*Article*

**Coffee silverskin as a substrate for biobased production of biomass and hydrogen by Escherichia coli**

Satenik Mirzoyan, Hayarpi Aghekyan, Liana Vanyan, Anait Vassilian, Karen Trchounian

International Journal of Energy Research 2022 23110-23121

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*Article*

**INDUSTRIAL WASTE-BASED HYDROGEN PRODUCTION TECHNOLOGY: THE PROFITABILITY FOR INDUSTRIAL WASTE GENERATORS**

Liana Vanyan, Heghine Gevorgyan, Hripsime Petrosyan, Armen Trchounian, Karen Trchounian

ԿԵՐԱԿԱՆԳԼԿՈՂ ԵՎ ՄԱՔՈՒՐ ԷՆԵՐԳԻԱՅԻ 7-ՐԴ ՄԻՋԱԶԳԱՅԻՆ ՀԱՄԱԺՈՂՈՎԻ ՆՅՈՒԹԵՐ 2021 56-59

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*Article*

**Defining the roles of the hydrogenase 3 and 4 subunits in hydrogen production during glucose fermentation: A new model of a H<sub>2</sub>-producing hydrogenase complex**

Hripsime Petrosyan, Liana Vanyan, Armen Trchounian, Karen Trchounian

International Journal of Hydrogen Energy 2020 5192-5201

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*Article*

**Roasted coffee wastes as a substrate for Escherichia coli to grow and produce hydrogen**

Hripsime Petrosyan, Liana Vanyan, Satenik Mirzoyan, Armen Trchounian, Karen Trchounian

FEMS Microbiology Letters 2020 fnaa088 ,7Էջ

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*Conference*

**The Role of Escherichia coli FOF1 -ATPase and Hydrogenases on Specific Growth Rate During Glucose Fermentation**

Karen Trchounian, Hripsime Petrosyan, Liana Vanyan, Armen Trchounian, Anait Vassilian

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Conference

**Interaction between Escherichia coli Hydrogenase-4 and FOF1- ATPase for proton translocation during fermentation of various glucose concentrations at slightly alkaline pH.**  
LIANA VANYAN, ARMEN TRCHOUNIAN, KAREN TRCHOUNIAN

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Conference

**Anaerobic Utilization of Spent Coffee Grounds (SCG) by E. Coli: the Importance of Pretreatment to Optimize Hydrogen and Biomass Generation**  
L. Vanyan, H. Aghekyan, K. Trchounian

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Conference

**NOVEL APPLICATION FOR ROASTED COFFEE WASTES AS A SUBSTRATE FOR DEVELOPMENT OF BIOFERTILIZERS**  
Liana Vanyan Manvel

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Conference

**Proton/potassium Fluxes Depend on Glucose Concentration in E. coli at pH 7.5**  
Liana Vanyan, Anait Vassilian, Karen Trchounian

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Conference

**Is FHL Complex Responsible for Sensing Glucose Concentration?**  
Liana Vanyan, Anait Vassilian, Karen Trchounian

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Conference

**Biohydrogen Production from Roasted Coffee Waste: Understanding the Role of E. coli Hydrogenases During Fermentation**  
S. Mirzoyan, L. Vanyan, H. Aghekyan, A. Poladyan, K. Trchounian

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Conference

**ՕՐԳԱՆԱԿԱՆ ԹԱՓՈՆՆԵՐԻՑ ԿԵՆՍԱԶԱՆԳՎԱԾԻ ԵՎ ԿԵՆՍԱԷՆԵՐԳԻԱՅԻ ՓՈԽԱԿԵՐՊՄԱՆ ԿԵՆՍԱՔԻՄԻԱԿԱՆ ՈՐԴԻՆԵՐԻ ԲՆՈՒԹԱԳՐՈՒՄԸ ԵՎ ՕՔՍԻԴԱԿԵՐԱԿԱՆԳՈՂԱԿԱՆ ԿԱՐԳԱՎՈՐՈՒՄԸ**  
Փոլադյան Ա.Ա., Գևորգյան Հ.Խ., Վանյան Լ.Մ., Բաբայան Ա.Ռ., Բաղդասարյան Լ.Հ., Վասիլյան Ա.Վ., Պետրոսյան Հ.Հ.

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Conference

**BIOTECHNOLOGICAL POTENTIAL OF SPENT COFFEE GROUNDS FOR LARGE-SCALE HYDROGEN PRODUCTION**  
Liana Vanyan, Anait Vassilian, Anna Poladyan, Karen Trchounian

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Conference

**THE ROLE OF E. COLI HYDROGENASE-1 IN PROTON FLUX DURING GLUCOSE UTILIZATION AT PH 7.5**  
Liana Vanyan, Karen Trchounian

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Conference

**Understanding the Role of Escherichia coli Hydrogenase-2 subunits in proton flux under different glucose concentrations**  
Liana Vanyan, Anait Vassilian, Anna Poladyan, Karen Trchounian

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*Conference*

**The effect of entire deletion of Hydrogenase-1 and 2 on proton flux during utilization of varied glucose concentration at pH 7.5**

L. Vanyan, K. Trchounian

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*Conference*

**The role of the CRP global regulator in proton flux of Escherichia coli under different glucose concentrations**

Liana Vanyan, Lilit Grigoryan, Karen Trchounian

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