

Silvia Ravera

Associate Professor

EDUCATION AND TRAINING

November 28, 2013

Bachelor's Degree in Dietetics

Thesis: "The Role of Dietary Counseling in the Treatment of Diabetic Patients: Comparison Between Group Therapy Approach and Individual Patient Consultation".

Final grade: 110/110 with Honors

University of Genoa

April 21, 2010

Ph.D. in Applied Neurosciences (XXII cycle), Doctoral School in Biomedical Sciences and Technologies

Thesis: "Bioenergetics of the Central Nervous System: A New Trophic Role of the Myelin Sheath".

University of Genoa

July 27, 2004

Master's Degree in Biological Sciences

Thesis: "Identification of the Enzyme Adenylate Kinase in Various Tissues and Its Purification in Retina".

Final grade: 110/110 with Honors

University of Genoa

PROFESSIONAL HISTORY

July 2024 – present

Associate Professor (SSD: BIOS-12/A)

Department of Experimental Medicine (DIMES), Section of Human Anatomy, University of Genoa

AY 2020/2021, AY 2022/2023, AY 2024/2025

Organizer of a Seminar Cycle for the IANUA-ISSUGE Graduate School

First-Level Cycle entitled: "Multidisciplinary Approaches to the Assessment of Cellular Metabolism"

University of Genoa

July 2021 – June 2024

Tenure-Track Assistant Professor (RTD-B; SSD: BIOS-12/A)

Department of Experimental Medicine (DIMES), Section of Human Anatomy, University of Genoa

AY 2018/2019 – present

Lecturer in Human Anatomy

for the following degree programs:

Bachelor's Degree in Dietetics
Bachelor's Degree in Nursing
Master's Degree in Applied and Experimental Biology
Master's Degree in Medicine and Surgery
Master's Degree in Dentistry and Dental Prosthetics
University of Genoa

AY 2018/2019 – present

Lecturer in Diet Therapy of Metabolic Diseases

for the Bachelor's Degree in Dietetics
University of Genoa

November 2018 – June 2021

Fixed-Term Researcher, Type A (RTD-A; SSD: BIOS-12/A)

Department of Experimental Medicine (DIMES), Section of Human Anatomy, University of Genoa

July 2017 – October 2018

Research Fellow

Research project: "Contribution of Neuronal and Non-Neuronal Cells in Amyotrophic Lateral Sclerosis: An Innovative Approach for New Therapies".
Department of Pharmacy (DIFAR), University of Genoa

July 2015 – June 2017

Research Collaboration Contract

Research activities within the project "Evaluation of Energy Metabolism in Hematopoietic Stem Cells".
IRCCS – Giannina Gaslini Institute, Laboratory of Post-Natal Stem Cells and Cell Therapies

AY 2014/2015 – AY 2017/2018

Adjunct Professor

Lecturer of the module "Diet in Metabolic Diseases and Internal Medicine II" in the Integrated Course of Clinical Diet Therapy II, Bachelor's Degree in Dietetics.
University of Genoa

July 2013 – June 2015

Postdoctoral Research Fellow

Two-year Postdoctoral Fellowship in Neurobiology "Giuseppe Levi" awarded by the National Academy of the Lincei for research within the project: "Extranuclear ATP Production in Myelin: Localization of Respiratory Chain Complexes and Possible Role in Axonal Degeneration in Multiple Sclerosis".
Department of Pharmacy (DIFAR), University of Genoa

March 2013 – June 2013

Research Fellow

Research fellowship funded by the Italian Multiple Sclerosis Foundation (2012 Call) within the project: "Assessment of Aerobic Metabolism Damage of the Myelin Sheath in EAE Mice, a Murine Model of Multiple Sclerosis".
Department of Pharmacy (DIFAR), University of Genoa

April 2012 – March 2013

Research Collaboration Contract

Research activities within the project: “Energy Metabolism of Myelinated Axons: Correlation Between Demyelination, Energy Support, and Axonal Degeneration in Multiple Sclerosis”.
Department of Pharmacy (DIFAR), University of Genoa

January 2010 – December 2011

Research Fellow

Research project: “Energy Metabolism of Myelinated Axons: Correlation Between Demyelination, Energy Support, and Axonal Degeneration in Multiple Sclerosis”.
Department of Pharmacy (DIFAR), University of Genoa

January 2007 – December 2009

PhD Student

XXII cycle, PhD in Applied Neurosciences.
Department of Neurosciences, Ophthalmology, and Genetics (DINOG), University of Genoa

September 2006 – August 2007

Research Fellow

Research project: “Effects of Extremely Low Frequency Electromagnetic Fields on Enzymatic Activities of Vertebrate Retinal Photoreceptors”.
Department of Biology (DIBIO), University of Genoa

February 2006 – August 2006

Research Fellow

Research fellowship within the project: “Applications of Electric Fields on Biosystems”.
Department of Biology (DIBIO), University of Genoa

AY 2005/2006 – AY 2013/2014

Adjunct Professor

Course of Biochemistry and Laboratory, Bachelor’s Degree in Biological Sciences
University of Genoa

September 2004 – January 2006

Intern

Internship outside the official academic curriculum (D.M. 25.03.1998, no. 142).
Department of Biology (DIBIO), University of Genoa

September 2004 – present

Thesis Supervisor/Tutor for Experimental Theses:

- Supervisor of 2 PhD students, Doctoral Program in Biotechnology of Translational Medicine, Department of Experimental Medicine, University of Genoa
- Supervisor of 4 Bachelor’s Theses in Biotechnology, University of Genoa
- Supervisor of 20 Bachelor’s Theses in Biological Sciences, University of Genoa
- Supervisor of 11 Master’s Theses in Applied and Experimental Biological Sciences, University of Genoa
- Supervisor of 1 Master’s Thesis in Biological Sciences, University of Pavia
- Supervisor of 9 Bachelor’s Theses in Dietetics, University of Genoa
- Supervisor of 1 Master’s Thesis in Pharmacy, University of Genoa
- Co-supervisor of 3 Master’s Theses in Chemistry and Pharmaceutical Technologies, University of Genoa

ACADEMIC APPOINTMENTS

[December 2024 – present](#)

Member of the Quality Assurance Committee (AQ) of the PhD Program in Biotechnology in Translational Medicine.

University of Genoa

[November 2024 – present](#)

Member of the Research Committee of the Department of Experimental Medicine (DIMES).

University of Genoa

[AY 2020/2021 – present](#)

Member of the Graduate School of the University of Genoa (IANUA-ISSUGE).

University of Genoa

[AY 2020/2021 – present](#)

Representative for the Section of Anatomy, Department of Experimental Medicine, for activities related to Pathways for Transversal Skills and Orientation (PCTO).

University of Genoa

[AY 2019/2020 – present](#)

Member of the Academic Board of the PhD Program in Biotechnology in Translational Medicine.

University of Genoa

[AY 2019/2020 – present](#)

Coordinator of the Integrated Course in Clinical Diet Therapy II, Bachelor's Degree in Dietetics.

University of Genoa

[AY 2017/2018 – present](#)

Member of the Quality Assurance Committee (AQ) of the Bachelor's Degree in Dietetics.

University of Genoa

[AY 2017/2018 – present](#)

Member of the Teaching Committee of the Bachelor's Degree in Dietetics.

University of Genoa

EXPERIENCE

MAIN SEMINARS

[May 7, 2025](#)

Seminar for the Italian Secretariat of Medical Students (SISM) entitled: "Eating Disorders. Understanding to Prevent: The Role of Nutrition in Mental Health"

University of Genoa

[December 5, 2024](#)

Seminar entitled: "The Evolution of Human Nutrition: Impact on Health and the Environment"

Rita Levi-Montalcini High School of Acqui Terme (AL)

April 14, 2024

Seminar within the “Environment and Health” Project entitled: “The Mediterranean Diet: History of Human Nutrition”

Andrea D’Oria Classical High School, Genoa

March 20, 2023

Seminar within the “Environment and Health” Project entitled: “Hunger and Abundance: History of Nutrition from Human Origins to the Mediterranean Diet”

Andrea D’Oria Classical High School, Genoa

September 23, 2022

Moderator of the Session: “Inside the Cardiomyocyte”

Conference “Heart and Beyond – Basic Science”, Genoa

September 26, 2019

Invited speaker with the talk: “Changes in Glucose Metabolism Define Aging” at the International Conference “The Future of Medicine Starts Now 2019 (2nd edition)”, September 26–27, 2019, Genoa

February 20, 2019

Seminar entitled: “Energy Metabolism Defect as a Possible Cause of Bone Marrow Failure in Fanconi Anemia”, invited by Dr. Valeria Naim

Gustave Roussy Cancer Campus Grand Paris, Villejuif (Paris)

February 13, 2019

Seminar entitled: “Definition of a New Biological Clock Based on Changes in Energy Metabolism”, within the Biomedical Research Seminar Series – Winter 2019 Session, invited by Prof. Katia Cortese and Prof. Patrizio Castagnola

University of Genoa, Department of Experimental Medicine

May 8 and 22, 2014

Seminars entitled: “Carbohydrate Counting for Type 1 Diabetic Patients”, recognized as Elective Didactic Activity (ADE), for the Bachelor’s Degree in Dietetics, invited by Dr. Raffaella Gradaschi

University of Genoa, Department of Internal Medicine

December 19, 2008

Seminar entitled: “Serendipitous Finding of an Aerobic Metabolism in Extra-Mitochondrial Central Nervous System Locations”, invited by Prof. Alberto Diaspro

University of Genoa, Department of Physics

SCIENTIFIC RESPONSIBILITY FOR RESEARCH PROJECTS ACCEPTED FOR FUNDING ON THE BASIS OF COMPETITIVE CALLS INVOLVING PEER REVIEW

2022–2026

Investigating Biochemical and Molecular Markers Responsible for Early Aging in Childhood Cancer Survivors (MFAG, Ref. 25850).

Associazione Italiana Ricerca sul Cancro (My First AIRC grant call).

2022–2024

Multi-omic Approach to Identify a Common Biochemical Defect in All Bone Marrow Aplasias
Head of the unit affiliated with the University of Genoa.

PI: Dr. Maurizio Miano
Fondo 5x1000 dell'IRCCS - Istituto Giannina Gaslini

2022-2023

Evaluation of Metabolic Dysfunction Associated with Fanconi Genes in the Invasiveness of Head and Neck Tumors (HNSCC) in Patients with Fanconi Anemia.
Associazione Italiana Ricerca sull'Anemia di Fanconi (AIRFA)

2021-2022

Role of Cytoskeletal Alteration and Metabolic Dysfunction Associated with Fanconi Genes in the Invasiveness of Head and Neck Tumors (HNSCC) in Patients with Fanconi Anemia.
Associazione Italiana Ricerca sull'Anemia di Fanconi (AIRFA)

2015-2017

Evaluation of Cellular Oxidative Stress as a Marker of Early Aging in Childhood Cancer Survivors.
Fondo 5x1000 dell'IRCCS - Istituto Giannina Gaslini

2009-2013

Energetic Metabolism of Myelinated Axons: A New Trophic Role for the Myelin Sheath (protocol no. 2008.1142).
Compagnia di San Paolo

EDITORSHIP OR PARTICIPATION IN EDITORIAL BOARDS OF JOURNALS, PUBLISHING SERIES, ENCYCLOPAEDIAS AND TREATISES

January 2022 – March 2023

Guest Editor for the Special Issue entitled: "Obesity and Associated Comorbidities: Implications for Neural and Immune Regulation of Energy Metabolism".
Metabolites (ISSN 2218-1989).

November 2021 – present

Review Editor for the Translational Medicine section
Frontiers in Medicine (ISSN: 2296-858X)

November 2021 – January 2022

Contributor to the Italian Edition of the university textbook Anatomia del Gray (42nd Ed.) for the following chapters: 3. Nervous System; 7. Skin and Cutaneous Appendages; 8. Preimplantation Development; 61. Posterior Abdominal Wall and Retroperitoneum.
Edra Edizioni

March 2021 – June 2022

Guest Editor for the Interdisciplinary Special Issue entitled: "Redox Metabolism"
Antioxidants (ISSN 2076-3921) and Metabolites (ISSN 2218-1989)

January 2021 – present

Member of the Editorial Board
Metabolites (ISSN 2218-1989)

January 2020 – March 2021

Guest Editor for the Special Issue entitled: "Skeletal Muscle Metabolism"
Metabolites (ISSN 2218-1989)

December 2018 – December 2022

Member of the Editorial Board

American Journal of Life Sciences (ISSN: 2328-5702)

January 2012 – September 2012

Editor of selected chapters of the university textbook “Biochimica”, Authors: Campbell & Farrell,

Edizione EdiSES, Napoli

2010 – present

Reviewer for the following international journals:

- Cellular and Molecular Life Sciences
- European Journal of Pharmacology
- FEBS Open Bio
- Journal of Cell Biology
- Medical Hypotheses
- Investigative Ophthalmology & Visual Science (IOVS)
- Antioxidants
- Cancers
- Metabolites

PRIZES AND ACCOLADES FOR SCIENTIFIC ACTIVITY, INCLUDING MEMBERSHIP OF ACADEMIES

2024 – present

Affiliation with the Shared Platform between the University of Genoa and IRCCS Ospedale Policlinico San Martino, Genoa, for research purposes to access Ministry of Health funding.

2023 – present

Ordinary Member of the Italian Society of Human Anatomy and Histology (SIAI).

AY 2020/2021 – present

Member of IANUA – Graduate School of the University of Genoa.

2020 – present

Member of the Interdepartmental Center for Longevity and Active Aging, University of Genoa.

2015 – present

Ordinary Member of the Italian Society of Biochemistry and Molecular Biology (SIB).

October 1, 2011

First Prize “I Giovani Ricercatori” in memory of Prof. Pasquale Montagna, Professor of Clinical Neurology, 1st edition.

The award was conferred during the II Congress of Neuro-Ophthalmology: “Eye and Metabolism: New Diagnostic and Therapeutic Approaches”.

<https://www.studiodazeglio.it/ricerca-medica/corsi/item/487-occhio-e-metabolismo-nuovi-approcci-diagnostici-e-terapeutici.html>

University of Bologna

2009 – 2015

Junior Ordinary Member of the Italian Society of Biochemistry and Molecular Biology (SIB).

2007 – 2008

Junior Member of the Italian Society of Experimental Biology.

PARTICIPATION IN THE CREATION OF NEW Business entities (SPIN-OFFS), DEVELOPMENT, USE AND COMMERCIALISATION OF academic patents

July 11, 2017

U.S. Patent entitled: "Therapeutic Application of (Boc)²-creatine"

Patent No.: US 9700539 B2

Applicants: Università degli Studi di Genova

Inventors: Garbati Patrizia, Balestrino Maurizio, Adriano Enrico, Ravera Silvia, Millo Enrico, Damonte Gianluca, Salis Annalisa

(<https://ppubs.uspto.gov/dirsearch-public/print/downloadPdf/9700539>)

December 23, 2014

International Patent entitled: "Therapeutic Application of (Boc)²-creatine"

International Application No.: PCT/IB2014/067261

Applicants: Università degli Studi di Genova

Inventors: Garbati Patrizia, Balestrino Maurizio, Adriano Enrico, Ravera Silvia, Millo Enrico, Damonte Gianluca, Salis Annalisa

(<https://patentscope.wipo.int/search/en/detail.jsf?docId=WO2015097660>)

December 24, 2013

Italian Patent entitled: "Applicazione Terapeutica di un Derivato di Creatina"

Filing Number: 102013902220636 (TO2013A001070/102013902220636)

Applicant(s): Università degli Studi di Genova

Inventor(s): Garbati Patrizia, Balestrino Maurizio, Adriano Enrico, Ravera Silvia, Millo Enrico, Damonte Gianluca, Salis Annalisa

(<http://brevettdb UIBM.gov.it/>)

OTHER EXPERIENCES

The list of peer-reviewed scientific publications and bibliometric indexes can be accessed using the following link: <https://www.scopus.com/authid/detail.uri?authorId=15119975800>