Desy Salvadego

PhD, Biomedical Sciences and Biotechnology
Exercise and Integrative Physiology

My professional expertise is related to the assessment of the physiological determinants of exercise and health by an integrative approach linking the respiratory, cardiovascular, skeletal muscle systems to molecular aspects intrinsic to the oxidative metabolism, in individuals exposed to environmental stressors and chronic diseases. My current interests are directed to explore the interactions among physiological functions, emotions and cognition in humans exposed to stressors inducing vulnerability and frailty. My purpose is to help people develop a stable condition of psychophysical wellbeing through the body and its movement, as the basis for health and for specific health or athletic interventions.

WORK HISTORY

Oct 2024-Present
Associate Professor in Physiology (BIOS-06)
Saint Camillus International University of Health and Medical Sciences, UniCamillus, Rome-Venice, Italy

2023-Present
Scientific Advisor
MIndUp-Enhancement Psychology, Montecatini T. & Macerata, Italy

2018-Present
National Scientific Qualification to Associate Professor in Physiology (SSD BIO/09)
ASN-MUR Italy

2018-Present
National Scientific Qualification to Associate Professor in Sport Science (SSD M-EDF)
ASN-MUR Italy

2012-Present
Scientific Advisor
Experimental Laboratory for Auxo-Endocrinological Research, Istituto Auxologico Italiano-IRCCS, Milano & Verbania, Italy

2020-2022
Research Associate
Jozef Stefan Institute, Ljubljana-Planica, Slovenia
Team Coordinator for the international research project "Physiological adaptations to long-term hypoxia and physical inactivity: individual variability and application of countermeasures" (European Space Agency funding).

2012-2019
Postdoctoral Researcher
Dept. Medicine, University of Udine, Italy
- Unit Coordinator/ Investigator of 16 multidisciplinary research projects.
- Logistic Manager of the Exercise Physiology and Biochemistry Labs.

Researcher of International Teams

Jun-Jul 2016
National Research Council, Milan, Italy; Rifugio Casati (3269 m), Valfurva, Italy
Investigator for “BEet On Alps project: effects of dietary nitrate supplementation on exercise tolerance during prolonged exposure to hypobaric hypoxia”.

Apr-Aug 2015	**University of Physical Education-AWF, Krakow, Poland** Unit Coordinator and Investigator for “Harmonia project: effects of endurance training on skeletal muscle adaptive responses in transgenic mice with dilated cardiomyopathy”.
Jun 2012-Oct 2013	**Jozef Stefan Institute, Ljubljana, Slovenia & Royal Institute of Technology, Stockholm, Sweden** Unit Coordinator and Investigator for “Planetary Habitat Simulation project: human adaptations to long-term hypoxia and bed rest” (European Union FP VII funding).
Jul-Sept 2012	**University of Primorska-Koper, Slovenia** Investigator for "Interregional project Italy/ Slovenia: bed rest in ageing population".
Mar-Oct 2011	**Jozef Stefan Institute, Ljubljana, Slovenia & Royal Institute of Technology, Stockholm, Sweden** Unit Coordinator and Investigator for “Lunar Habitat Simulation project: human adaptations to short-term hypoxia and bed rest" (European Space Agency funding).
Jul-Aug 2010	**University of Primorska-Koper, Slovenia** Unit Coordinator and Investigator for the project "Physiological adaptations to long term resistance training".
Jul-Aug 2008	**University of Primorska-Koper, Slovenia** Investigator for the project 35-d bed rest in young adults (Italian Space Agency funding).

ACADEMIC TEACHING

2021	**PhD program in Biomedical Sciences and Bioengineering, Jozef Stefan Institute, Ljubljana, Slovenia** Module of Exercise and Environmental Physiology.
2018-2019	**Bachelor's program of Nursing, University of Udine, Pordenone, Italy** Full course of Human Physiology- BIO/09.
2012-2019	**PhD program of Biomedical Sciences, Bachelor's program of Medicine, Bachelor's and Master's program of Sport Science, University of Udine, Italy** Project supervisor and thesis tutor of undergraduate, master and PhD students.
2012-2016	**Master's program of Sport Science, University of Udine, Gemona del Friuli, Italy** Full course of Training Methodology of Endurance Running- M-EDF/02.
2012-2014	**Master's program of Sport Science, University of Udine, Italy** Module of Exercise physiology- BIO/09.
2008-2016	**Medicine, University of Udine, Italy** Module of Exercise physiology- BIO/09.

EDUCATION

2020-2021 **Psychophysiology of Emotions, *Academic Course***
University of Padova, Italy.

2018 **Mountain Medicine, *Advanced Academic Course***
University of Padova, Italy.

2008-2011 **Biomedical Sciences and Biotechnology, *Ph.D.***
Dept. Medicine, University of Udine, Italy.
Research Programme: **Functional evaluation of oxidative metabolism in health and disease. An Integrative approach.**
Mastered techniques/ methods: pulmonary gas-exchange analyses, cerebral and skeletal muscle oxygenation analyses (by near- infrared spectroscopy). Dissection of skeletal muscle tissue and preparation of saponin- permeabilized muscle fibres from human and mouse skeletal muscle samples, and analyses of mitochondrial function by high-resolution respirometry.

2010 **Mitochondrial function by High-Resolution Respirometry, *Scientific Workshop***
Oroboros Instruments GmbH - Innsbruck, Austria.

2004-2007 **Sport Science, *cum laude*, Master of Science,**
University of Udine – Gemona del Friuli, Italy.

2004-2007 **Exercise Physiology, Internship**
Dept. Medicine, University of Udine, Italy.
Research project: The bioenergetics of endurance running.
Mastered techniques/ methods: cardiopulmonary exercise testing.

2000-2004 **Human Movement Science, *Bachelor of Science***
University of Udine - Gemona del Friuli, Italy.

PERSONAL SKILLS

Mother tongue Italian

Other languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	B2	B2	C1
French	A2	A2	A2	A2	A2

Common European Framework of Reference for Languages

Communication skills

- Good interpersonal communication skills gained through my experience both in international scientific communities and in humanities.
- Ability to work successfully in a team as investigator and coordinator gained through my working and educational experiences in different national and international contexts.

Organisational / managerial skills

- Co-organizer of the explorative project "Individual variation in human responses to prolonged bed rest" funded by the European Space Agency (No. 4000124642/18/NL/PG/gm, 2018-2019).
- Member of the Task Group MitoEagle (Evolution-Age-Gender-Lifestyle-Environment: mitochondrial fitness mapping) H2020 COST Action (CA15203, 2016-2020).
- Principal Investigator and Scientific Coordinator of national and international research projects.

Other Job-related skills

- Interest and ability to develop multidisciplinary networks and working groups.
- Ability to implement new methods; ability and sensitivity to understand and integrate information from different levels of the human being and to develop individualized interventions.

Digital competence

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
Proficient user	Proficient user	Independent user	Independent user	Independent user

Levels: Basic user - Independent user - Proficient user

- Good command of graphical and statistical packages (GraphPad Software and Statistical Package Social Sciences, SPSS Software).

RESEARCH AWARDS AND FUNDED PROJECTS

2012-2023 **Istituto Auxologico Italiano, IRCCS, Milano, Italy**, **Internal Grants**, Principal Investigator, "Limitations to exercise in patients with obesity: assessments and practical applications".

2014-2017 **Italian Ministry of Health, Young Investigator Research Grant (GR2011-02348868)**, Unit Coordinator, "Exercise tolerance in patients with late-onset Pompe disease on enzyme replacement therapy: effects of exercise training and hyperproteic diet."

2016 **Fulbright visiting research scholar, USA-IT**, Principal Investigator, "A novel non-invasive approach to identify mechanisms of exercise limitation in chronic obstructive pulmonary disease". Host Institution: Los Angeles Biomedical Research Institute at Harbor-UCLA Medical Center, CA, USA.

2012 **University of Leeds, UK**, Research Award The Systems Biology of Exercise: Cardiorespiratory & Metabolic Integration with the project "Skeletal muscle oxidative function in vivo and ex vivo after long- term resistance training: two sides of the same coin?".

2009 **Italian conference in Medicine and Sports Science, Saronno, Italy**, Research Award P. Mognoni "A simple method for assessing the energy cost of running during incremental tests."

EDITORIAL ACTIVITY

Journal External Reviewer: Acta Physiologica; Journal of Applied Physiology; Am J Physiol RICP; Medicine & Science in Sports & Exercise; European Journal of Applied Physiology; Scandinavian Journal of Medicine and Science in Sports; International Journal of Sports Medicine, Analytical biochemistry, Frontiers Physiology, International Journal of Biometeorology, European Respiratory Review, European Journal of Sport Science, Scientific Reports, International Journal of Sports Medicine.

COMMUNICATIONS TO CONGRESSES

Salvadego D, Tringali G, De Micheli R, Sartorio A. Respiratory muscle interval training: a novel approach to improve exercise tolerance in young people with obesity. XXIX Congress of the Polish Physiological Society and the Federation of European Physiological Societies. Lodz (Poland), INVITED PRESENTATION.

Salvadego D, Grassi B, Keramidas ME, Eiken O, Mekjavic IB. Heterogeneity in the responses of oxidative function in vivo and ex vivo to normoxic and hypoxic bed rest. *The Physiological Society Symposium* "Variability: how to deal with it, interpret it, and learn from it". October 2020 (INVITED PRESENTATION).

Salvadego D, Marzorati M, Rasica L, Porcelli S. "BEet On Alps": Dietary Nitrate Supplementation improves Skeletal Muscle Oxidative Metabolism during Prolonged Exposure to Hypobaric Hypoxia. 7th *Mountain, Sport & Health International congress*, Rovereto (TN), Italy November, 2017 (INVITED PRESENTATION).

Salvadego D, Marzorati M, Rasica L, Porcelli S. "BEet On Alps": Effect of Dietary Nitrate Supplementation on Skeletal Muscle Oxidative Capacity during Prolonged Exposure to Hypobaric Hypoxia. 64th *ACSM Annual Meeting*. Denver, CO (USA); May 2017 (ORAL PRESENTATION).

Salvadego D, Keramidas ME, Kölegård R, Mavelli I, Rittweger J, Eiken O, Mekjavic I, Grassi B. PlanHab: responses of skeletal muscle oxidative function to bed rest and hypoxia. 36th *Annual International Gravitational Physiology Meeting*, Ljubljana (Slovenia), June 2015 (ORAL PRESENTATION).

Salvadego D. Muscle metabolic limitations to exercise following prolonged muscle inactivity and hypoxia. *The Physiology and Pathophysiology of Exercise Intolerance. Los Angeles Biomedical Research Institute at Harbor-UCLA Medical Center*, California, USA, 1 June 2015. (INVITED PRESENTATION).

Salvadego D, Keramidas ME, Domenis R, Mavelli I, Eiken O, Mekjavic I, Grassi B. Effects of hypoxia and microgravity on mitochondrial respiration and skeletal muscle oxidative function. Med Sci Sports Exerc 46 (5): 948, 2014. 61st *ACSM Annual Meeting*. Orlando, Florida (USA); May 2014 (ORAL PRESENTATION).

Salvadego D. Pulmonary limitations to exercise in obese patients. *National conference in Medicine and Sports Science*, Saronno, Italy, March 2014. (INVITED PRESENTATION).

Salvadego D, Keramidas ME, Domenis R, Mavelli I, Mekjavic I, Eiken O, Grassi B. Skeletal muscle oxidative function after a 10-day exposure to hypoxia and microgravity. 42nd *European Muscle Conference*. Amsterdam, the Netherlands, September 2013 (ORAL PRESENTATION).

Salvadego D. Skeletal muscle oxidative function in vivo and ex vivo after long-term resistance training: two sides of the same coin? *The Systems Biology of Exercise: Cardiorespiratory & Metabolic Integration Conference*, Leeds, UK, August 2012 (INVITED PRESENTATION).

Salvadego D, Keramidas ME, Domenis R, Mavelli I, Eiken O, Mekjavic I, Grassi B. Combined effects of bed rest and hypoxia on skeletal muscle oxidative function. *Med Sci Sports Exerc* 44: S24, 2012. 59th *ACSM Annual Meeting.* San Francisco, CA, USA, June 2012 (ORAL PRESENTATION).

Salvadego D, Keramidas ME, Eiken O, Mekjavic I, Grassi B. Effects of hypoxia and microgravity on skeletal muscle oxidative metabolism. 5th *Italian Society of Space Biomedicine and Biotechnology Conference*. Padova, Italy, November 2011 (ORAL PRESENTATION).

Salvadego D, Domenis R, Lazzer S, Porcelli S, Rizzo G, Šimunič B, Pišot R, Rittweger J, Mavelli I, di Prampero PE, Grassi B. Does extreme muscle hypertrophy determine an impairment of skeletal muscle oxidative metabolism? *Med Sci Sports Exerc* 43: S50, 2011. 58th *ACSM Annual Meeting.* Denver, CO, USA, June 2011 (ORAL PRESENTATION).

Salvadego D, Lazzer S, Porcelli S, Marzorati M, Rejc E, Šimunič B, Pišot R, di Prampero PE, Grassi B. Bed rest impairs skeletal muscle oxidative function independently from constraints related to cardiovascular O_2 delivery. 39th *European Muscle Conference*. Padova, Italy, September 2010 (ORAL PRESENTATION).

Salvadego D, Lazzer S, Marzorati M, Porcelli S, Rejc E, Pišot R, di Prampero PE, Grassi B. The role of skeletal muscle in the limitation of maximal O_2 uptake following bed rest. 11th *ESA Life Sciences Symposium*. Trieste, Italy, June 2010 (ORAL PRESENTATION).

Salvadego D, Lazzer S, Marzorati M, Porcelli S, Rejc E, di Prampero PE, Grassi B. Impairment of skeletal muscle oxidative metabolism during knee-extension exercise after bed rest. *Med Sci Sports Exerc* 42: S362, 2010. 57th *ACSM Annual Meeting*. Baltimore, MD, USA, June 2010.

PUBLICATIONS

International peer-reviewed scientific publications

https://pubmed.ncbi.nlm.nih.gov/?term=salvadego+d&sort=date

H-index: 15. Total number of citation: 629 (Scopus).

I hereby give consent for my personal data included in the CV to be processed for the purposes of the recruitment process in accordance with Art. 6 point 1a of the Regulation of the European Parliament and of the Council (EU) 2016/679 of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data.

November 19, 2024