

MSCA IF 2020 @UniGe

Supervisor Expression of Interest

MSCA domain Life Sciences (LIF)

- 1. Prof.ssa Sveva Bollini**
- 2. Prof.ssa Santina Bruzzone**
- 3. Prof. Francesco Saverio Papadia**
- 4. Prof. Edoardo Raposio**
- 5. Prof. Marco Testa**
- 6. Prof. Stefano Vanin**
- 7. Prof. Luigi Vezzulli**
- 8. Prof.ssa Elena Zocchi**

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Supervisor Expression of Interest

1.

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Orcid ID	0000-0003-1076-0823
Other information	https://rubrica.unige.it/personale/UkNFX19v
MSCA domain	Life Sciences (LIF)
Research focus area	Stem Cell Biology Extracellular Vesicles (EVs) and Exosomes Cardiovascular Disease ERC main reference panel: LS7_6: Gene therapy, cell therapy, regenerative medicine
Department	Department of Experimental Medicine (DIMES)
Short description of the department/laboratory/research group	<p>Our young and proactive research group is mainly interested in characterizing the regenerative paracrine potential of extracellular vesicles (EVs) and exosomes secreted by human fetal and perinatal amniotic-fluid derived stem cells.</p> <p>We mainly focus on analyzing EVs as paracrine biological conveyors of cardiac repair and heart regeneration in different preclinical rodent models of myocardial injury, such as myocardial infarction in both adult and neonatal mice and oncological drug-induced cardiotoxicity.</p> <p>We have broad expertise in stem cell biology, extracellular vesicle and exosome isolation and functional characterization and surgical murine models of cardiovascular disease using</p>

	transgenic strains (lineage trace models and fluorescent labelling of cell cycle stages).
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2.

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Last Name	Bruzzone
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Other information	https://rubrica.unige.it/personale/UkNHW1tr
MSCA domain	Life Sciences (LIF)
Research focus area	Nicotinamide Adenine Dinucleotide (NAD) acts as a crucial coenzyme in cellular metabolism, and it also regulates cell physiology by virtue of a variety of signaling activities. Indeed, NAD is also a substrate for sirtuins, poly (ADP-ribosyl) polymerases, mono (ADP-ribosyl) transferases, and CD38. Our group is interested in the role of the NAD-dependent signaling pathways (mainly mediated by sirtuins and CD38) in the regulation of a variety of physiological functions (one project is related to the mechanisms involved in brown and white adipose tissue activation; one project is related to endothelial cells and megakaryocyte differentiation). In addition, we are interested in exploiting the modulation of NAD-mediated signaling pathways as possible therapies in pathological conditions (one project is related to the possible use of sirtuin 6 inhibitors, identified by our group, in cancer).
Department	Department of Experimental Medicine (DIMES)



<p>Short description of the department/laboratory/research group</p>	<p>Our Laboratory is within the Section of Biochemistry, Department of Experimental Medicine. In our group, there are currently 3 PhD students, 1 post-docs, 2 technicians, 1 assistant professor and 2 professors of Biochemistry. Our lab is equipped with instrument for experiments in biochemistry, molecular biology and cell biology. Briefly, we have a cell culture room, also equipped for cell transfection, a confocal microscopy, different fluorometers. We can perform qPCR analysis, Western blot, HPLC analyses, different assays for measurement of intracellular metabolites, enzymatic assays and we can produce recombinant proteins.</p>
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MSCA domain	Life Sciences (LIF)
Research focus area	Surgery; bariatric surgery; minimally invasive surgery
Department	Department of surgical sciences and integrated diagnostics
Short description of the department/laboratory/research group	Experienced and established academic surgical research group with a long-standing interest in bariatric and minimally invasive surgery
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Other information	https://rubrica.unige.it/personale/VUZCU1tg
MSCA domain	Life Sciences (LIF)
Research focus area	Plastic and Reconstructive Surgery, Regenerative Medicine
Department	Department of Surgical Sciences and Integrated Diagnostics
Short description of the department/laboratory/research group	
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MSCA domain	Life Sciences (LIF)
Research focus area	Physiotherapy and Rehabilitation
Department	Department of Neuroscience, Rehabilitation, Ophthalmology, Genetics, Maternal and Child Health (DINOGLI) - Department of Excellence 2018-2022
Short description of the department/laboratory/research group	<p>The Rehabilitation and Engineering Laboratory (REHElab) is located into the Campus of Savona and was created with the aims of developing accessible high precision technologies and cutting-edge methodologies for rehabilitation professionals. Scientific research is conducted by a multidisciplinary team composed of Physiotherapists, Psychologists, Bioengineers and Physicists, through the continuous integration of clinical skills with the knowledge and the typical methods of engineering.</p> <p>ONGOING RESEARCH LINES: Human Activity Recognition (HAR) Development of Exergames in Immersive Virtual Reality</p>

	<p>Modulation of contextual factors in the treatment of musculoskeletal disorders</p> <p>Movement analysis through IMU and force sensors</p> <p>Study of kinetic parameters and force motor control of masticatory muscle</p> <p>Analysis of motor control of force in the prehensile movements of the hand</p> <p>AVAILABLE MATERIALS AND INSTRUMENTATIONS</p> <p>Immersive virtual reality system HTC VIVE® pro</p> <p>AWINDA XSENS® inertial measurement system</p> <p>KISTLER® power platform</p> <p>National Instrument® acquisition card</p> <p>ARDUINO® programmable cards</p> <p>Surface Electromyograph (64 channels)</p> <p>Microsoft KINECT® RGB-D cameras</p> <p>Ergometric system for the evaluation of the «Pinch»</p> <p>Ergometric system for the evaluation of the «Bite»</p>
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6.

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MSCA domain	Life Sciences (LIF)
Research focus area	Forensic Entomology Funerary Archeo-entomology Invasive species Chronobiology
Department	Department of Earth, Environmental and Life Sciences (DISTAV)
Short description of the department/laboratory/research group	The FLEA (Forensic Lab for Entomology and Archaeology) focus its activity on the interactions between insects and human cadavers and animal carcasses (mainly humans and mammals) both from forensic and archaeological contexts. The research deals with the description and interpretation of the faunas collected from cadavers and carcasses but as well with the analysis of the effect of the global warming and globalization (nowadays) or local trades (in the past) on the entomofauna colonizing the bodies or infesting human areas (and potential pathogen carriers). The research group owns the technologies and the knowledge to study the insect behaviour from a chronobiological point of view.

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MSCA domain	Life Sciences (LIF)
Research focus area	MARINE MICROBIOLOGY: study of the biology, ecology and epidemiology of marine vibrios through genomic, metagenomic approaches including the development and integration of bioinformatics pipelines
Department	Department of Earth, Environmental and Life Sciences (DISTAV)
Short description of the department/laboratory/research group	The Microbiology team at DISTAV is experienced in the field of Marine Microbiology and focus its research on the study of the ecology, biology and epidemiology of marine pathogenic bacteria belonging to the Vibrio genus. The laboratory is equipped with all basic and advanced instruments in the field of Microbiology and Molecular Biology including most recent updates techniques such as those based on Next Generation Sequencing. Further information can be found at https://luigivezzulli.weebly.com/
Candidate fellows must send their candidature with a short description	luigi.vezzulli@unige.it

of their profile to the following email address	
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MSCA domain	Life Sciences (LIF)
Research focus area	My research interest si focused on the development of new nutraceuticals to improve human glucose and lipid metabolism in prediabetic and diabetic subjects. Our group recently recognized the role of the new animal hormone abscisic acid (ABA) in regulating glucose consumption in muscle and adipocyte browning. ABA-containing nutraceutical products could provide ABA of vegetal origin to integrate insufficient endogenous ABA levels in humans. Preclinical studies with ABA on murine models of diabetes and obesity and clinical studies on subjects borderline for diabetes mellitus and the metabolic syndrome are ongoing or scheduled in the future.
Department	Dept. of Experimental Medicine, University of Genova
Short description of the department/laboratory/research group	The PI's research group is fully equipped for studies of biochemistry, cellular and molecular biology, with: i) a chemical lab, equipped with a Q-Star XL mass spectrometer (MALDI ionspray or nanospray source ion-trap) and with a

	<p>complete HPLC-MS-ion trap system (LC/MSD-TRAP 1100 series) for quantitation of ABA in biological samples; ii) a biochemical lab, with several HPLC systems with automated sampling and diode array detector, microplate fluorometer, protein electrophoresis and Western blot equipment, BioRad ChemiDoc imaging system; iii) a cell culture and molecular biology lab, with Real Time-PCR instruments (mouse genotyping). The Animal Facility of the IRCSS San Martino in Genova, where preclinical studies on murine models of diabetes take place, conforms to the national and international standards of animal welfare and has been acknowledged by the Italian Ministry of Health.</p>
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