CURRICULUM VITAE

Monia Savi

Associate Professor of Physiology
Department of Chemistry, Life Sciences and Environmental Sustainability
Unit of Evolutionary and Functional Biology
Laboratory of Cardiac Pathophysiology
University of Parma
Parco Area delle Scienze 11/A, 43124 Parma (PR), Italy
Tel. +39 0521 905627
E-mail: monia.savi@unipr.it

EDUCATION

25-07-2017: **National Scientific Qualification** (ASN) for the position of **Associate Professor** in the competition sector **05/D1 – Physiology**. Call D.D. 1532/2016. Valid from 25/07/2017 to 25/07/2028 (Art. 16, paragraph 1, Law 240/2010).

27-09-2009: **PhD in Systemic Pathophysiology** (20th cycle), University of Parma, Parma, Italy. Dissertation title: "Cardiac electromechanical performance following stem cell based regenerative therapies in infarcted rat heart". Scientific Disciplinary Sector (SSD): BIO/09 – Physiology *Supervisor*: Prof. Ezio Musso.

2005 - 2008: **Doctoral Program in Systemic Pathophysiology** (20th cycle), University of Parma, Parma, Italy.

2005: **Professional Qualification to Practice as a Biologist,** University of Parma, Parma, Italy (Second session, 2005). Final score: 144/150.

09-11-2004: **Degree in Biological Sciences (Pathophysiology curriculum),** University of Parma, Parma, Italy, summa cum laude (110/110). Thesis title: "Effects of the alpha2-adrenergic/DA2-dopaminergic agonist CHF-1024 in preventing ventricular arrhythmogenesis and myocyte electrical remodeling, in a rat model of pressure-overload cardiac hypertrophy". Research carried out in collaboration with Chiesi Farmaceutici. SSD: BIO/09 – Physiology *Supervisor*: Prof.ssa Donatella Stilli.

2002 - 2004: Undergraduate thesis internship, Department of Evolutionary and Functional Biology – Physiology Section, University of Parma, Italy.

1994: **Scientific High School Diploma,** Liceo Scientifico G. Marconi, Parma, Italy. Final score: 46/60.

WORK EXPERIENCE

10/2024 - present: **Associate Professor (full-time)**, Department of Chemistry, Life Sciences and Environmental Sustainability, University of Parma, Italy. Competition Sector: 05/D1–Physiology. Scientific Disciplinary Sector: BIOS-06/A – Physiology.

10/2021 - 09/2024: **Fixed-term Researcher Type B (RTDb, full-time)**, Department of Chemistry, Life Sciences and Environmental Sustainability, University of Parma, Italy. Competition Sector: 05/D1 – Physiology. Scientific Disciplinary Sector: BIOS-06/A – Physiology.

12/2018 - 09/2021: **Fixed-term Researcher Type A (RTDa, full-time)**, Department of Chemistry, Life Sciences and Environmental Sustainability, University of Parma, Parma, Italy. Competition Sector: 05/D1 – Physiology. Scientific Disciplinary Sector: BIOS-06/A – Physiology.

04/2018 - 11/2018: **Postdoctoral research fellow,** Dept. of Chemistry, Life Sciences and Environmental Sustainability, University of Parma, Parma, Italy. *Project*: "In vitro/ex vivo study on the effects of phenolic compound administration on cardiomyocyte mechanical properties and intracellular calcium dynamics in the diabetic heart". *Scientific Supervisor*: Prof. Donatella Stilli. SSD: BIO/09 – Physiology.

01/2015 - 01/2018: **Research Associate**, Department of Food and Drug, University of Parma. *Project*: Biological activity of polyphenol metabolites of nutritional interest. Objectives: The evaluation of the biological activity of the most relevant phenolics of plant food origin, with particular reference to their mechanisms of action in the framework of cardiovascular complications and diabetes onset. Sector: MED/49 – Applied Dietetic Sciences (related sector: BIO/09, according to Ministerial Decree 4 Oct 2000, Annex D). *Research objectives*: Evaluation of the bioactivity of major polyphenolic compounds present in plant-derived foods, focusing on mechanisms involved in the prevention of cardiovascular complications and diabetes. *Supervisor*: Prof. Daniele Del Rio.

11/2013 - 11/2014: **Research Collaboration Contract** funded by INAIL (ex ISPESL) at CERT (Center of Excellence for Toxicological Research), University of Parma. *Project (PMS 53/09)*: Arrhythmogenicity of Diesel Exhaust Nanoparticles in Healthy and Failing Hearts: Focus on Mechanisms. (GR-2009-1530528). *Scientific Supervisor*: Prof. Michele Miragoli.

11/2011 - 10/2013: **Research Associate**, Department of Clinical and Experimental Medicine, University of Parma. *Project*: Functional studies of normal and cancer stem cells. Sector: MED/06 – Medical Oncology. *Research objective*: Investigation of mechanisms regulating the cell cycle, self-renewal, and fate of normal and cancer stem cells, aimed at identifying molecular events underlying malignant transformation. *Supervisor*: Prof. Federico Quaini.

02/2011 - 07/2011: **Research Collaboration Contract** funded by the National Institute for Cardiovascular Research (INRC), Department of Evolutionary and Functional Biology (Physiology Section), University of Parma. *Project*: Cardiac electromechanical performance following pharmacologically active microcarriers releasing growth factors (HGF e IGF-1) and/or transporting adipose derived stem cell (hADSCs) therapies, in infarcted rat heart. *INRC Unit Supervisor*: Prof. Ezio Musso SSD: BIO/09 – Physiology.

10/2010 - 01/2011: **Postdoctoral research fellow** funded by Interdepartmental Center for the Study of Biology and Clinical Application of Cardiac Stem Cell (CISTAC), University of Parma, Italy. *Project*: Electrophysiological properties of the myocardium regenerated by resident cardiac stem cells mobilized/pre-treated with growth factors, in a rat model of chronic myocardial infarction. *Scientific Supervisor*: Prof. Ezio Musso. SSD: BIO/09 – Physiology.

03/2009 - 08/2010: **Research Collaboration Contract** funded by the National Institute for Cardiovascular Research (INRC), Department of Evolutionary and Functional Biology

(Physiology Section), University of Parma. *Project*: Electromechanical competence of the heart regenerated by biopolymers engineered with autologous stem cells, in rat models of chronic myocardial infarction. *INRC Unit Supervisor*: Prof. Ezio Musso. SSD: BIO/09 – Physiology.

TEACHING ACTIVITY

Academic Year 2018/2019 - present: **Course Director – Systems Physiology**, MSc in Biology and Biomedical Applications (AY 2018/2019; 2019/2020) and MSc in Translational Biomedical Sciences (from AY 2020/2021), University of Parma, Italy. **9 ECTS** (72 hours of lectures).

Academic Year 2022/2023 - present: **Course Director – General Physiology I,** BSc in Biology, University of Parma, Italy. **6 ECTS** (48 hours of lectures).

AY 2018/2019 - present: Member of the **PhD Faculty Board** in *Molecular Medicine*, University of Parma.

2018 - present: **Master's and Bachelor's Thesis Supervisor**:

- 26 MSc students, Biology and Biomedical Applications / Translational Biomedical Sciences.
- 30 BSc students, Biology.

10/03/2025: Member of the **PhD Final Examination Committee** in Molecular Medicine (37th cycle), University of Parma, Parma, Italy.

18/03/2021: Member of the **PhD Final Examination Committee** in Molecular Medicine (33rd cycle), University of Parma, Parma, Italy.

2021 - 2024: **PhD Research Tutor**, PhD Program in Molecular Medicine, University of Parma, Parma, Italy.

- Iolanda Bilotti (37th cycle) — Cardiac Pathophysiology.
  Project: *In vivo* administration of Cerium Oxide Nanoparticles restores cardiac dysfunction in a rat model of early diabetes.

2017 - 2020: **PhD Co-Tutor**, PhD Program in Molecular Medicine, University of Parma, Parma, Italy.

- Rocchina Vilella (33rd cycle) — Cardiac Pathophysiology.
  Project: Effects of in vivo green tea extract administration on contractile performance and mithocondrial function of ventricular cardiomyocytes, in healty and diabetic rats.

2008 - 2015: **PhD Co-Tutor**, PhD Program in Systemic Pathophysiology (SSD: BIO/09), University of Parma.

- Francesca Delucchi (23rd cycle)
  Project: Early treatment with the natural antioxidant polyphenol resveratrol as an adjuvant therapeutic strategy to prevent diabetic cardiomyopathy in experimental type 1 diabetes.
- Maria Cristina Florio (28th cycle)
  Project: Modulation of SERCA2 function by acetylation following treatment with the histone deacetylase inhibitor SAHA.

2009 - present: Member of **Degree Examination Committees** in Biology, Biology and Biomedical Applications, and Translational Biomedical Sciences, University of Parma.

2009 - 2017: **Undergraduate and Master's Thesis Co-Supervisor**

- 3 BSc students in Biology.
- 4 MSc students in Biology and Biomedical Applications.

2009 - present: **Subject Expert (Cultore della Materia)** in Physiology (SSD: BIO/09).

2009 - 2010: **Scientific Seminars**, Department of Evolutionary and Functional Biology, University of Parma:

- Stem cell plasticity: the growing potential of cellular therapy.
- Stem cell therapy for cardiac repair.
- Cardiac stem cells and mechanisms of myocardial regeneration.
- Cardiac electromechanical performance following stem cell-based regenerative therapies in infarcted rat heart.
- Cardiotoxicity of targeted cancer therapeutics: underlying mechanisms.
- Cardiotoxicity of targeted cancer therapeutics: a cardiac stem cell disease?

INSTITUTIONAL ROLES

2019 - present: Member of the **PhD Faculty Board** in Molecular Medicine, University of Parma.

2019 - present: **Academic Tutor**, MSc in Translational Biomedical Sciences, University of Parma.

2019 - present: **Programme Reference Faculty Member**, MSc in Translational Biomedical Sciences, University of Parma *(official faculty contact person for students and academic matters).*

2019 - present: Member of the **Programme Review and Quality Assurance Committee** (Gruppo del Riesame), University of Parma.

2021 - present: **Delegate for Student Recruitment and Outreach**, MSc in Translational Biomedical Sciences, University of Parma.

RESEARCH PROJECTS

2024: **Research Service Contract funded by Chiesi Farmaceutici S.p.A.**
Project: "Contractility measurements in isolated cardiomyocytes from adult rat hearts during *ex vivo* perfusion with Nav1.7 inhibitory components."
Duration: 12 months.
Role: Principal Investigator.

2023: **Research Service Contract funded by Chiesi Farmaceutici S.p.A.**
Project: "Isolation of cardiomyocytes from healthy adult rats or rats with pulmonary hypertension induced by Sugen/chronic hypoxia or monocrotaline."
Duration: 12 months.
Role: Principal Investigator.

2023: **University Research Call 2022 — Action B (Young Researchers Projects), University of Parma**.
Project: "Mitochondrial impairment in psychosocial stress-induced cardiac dysfunction: an epigenetic perspective."
Duration: 12 months.

Role: Participant.
PI: Prof. Luca Carnevali

2012: **Italian Ministry of Health - Young Research Project (PMS 53/09).**
Project: "Arrhythmogenicity of Diesel Exhaust Nanoparticles in Healthy and Failing Hearts: Focus on Mechanisms".
Duration: 36 months.
Role: Participant.
PI: Prof. Michele Miragoli.

2008: **FP7 European Project No. 214539 (FP7-NMP-2007).**
Project: "BIOSCENT- Bioactive highly porous and injectable scaffolds controlling stem cell recruitment, proliferation and differentiation and enabling angiogenesis for cardiovascular engineered tissues".
Duration: 48 months.
Role: Participant.
Unit PI: Prof. Federico Quaini.

2007: **PRIN MIUR (2007AL2YNC_005 – Area 05).**
Project: Role of cardiac stem cells in anticancer drug-induced cardiotoxicity.
Duration: 24 months.
Role: Participant.
Unit PI: Prof. Ezio Musso.

2007: **University of Parma Research Program (FIL 2007).**
Project: "Cellular and molecular mechanisms maintaining normal cardiac function in early diabetes".
Duration: 12 months.
Role: Participant.
Unit PI: Prof.ssa Donatella Stilli.

2006: **University of Parma Research Program (FIL 2007).**
Project: "Morpho-functional remodeling of ventricular myocardium and electromechanical efficiency of the diabetic heart".
Duration: 12 months.
Role: Participant.
Unit PI: Prof.ssa Donatella Stilli.

2005: **PRIN MIUR (2005062944_003 – Area 06).**
Project: "Mechanical and electrical competence of regenerated heart tissue using cardiac stem cells in rat myocardial infarction models".
Duration: 24 months.
Role: Participant.
Unit PI: Prof. Ezio Musso.

2005: **University of Parma Research Program (FIL 2005).**
Project: "Morpho-functional remodeling of ventricular myocardium and electromechanical efficiency of the diabetic heart".
Duration: 12 months.
Role: Participant.
Unit PI: Prof.ssa Donatella Stilli.

2004: **Research Project funded by Chiesi Farmaceutici S.p.A.**
Project: "Anti-arrhythmic characterization of CHF1024 in the hypertrophic heart".
Duration: 12 months.
Role: Participant.
PI: Prof.ssa Donatella Stilli.

RESEARCH INTERESTS

i. Cardiometabolic Pathophysiology and Nutraceutical Interventions: Investigation of the bioactivity of plant-derived polyphenols and biomedical nanomaterials (e.g., cerium oxide nanoparticles), focusing on mechanisms preventing cardiovascular complications of diabetes and metabolic syndrome. Cardiac function is evaluated at organ, cellular, and molecular levels in experimental rat models.

ii. Cardiovascular Effects of Environmental Nanoparticles: Assessment of cardiac effects of exposure to ultrafine particulate matter and nanoplastics. Mechanical and electrical cardiac function are studied at organ (invasive hemodynamics, ECG), cellular (contractility and calcium dynamics), and molecular levels.

iii. Drug Effects on Single Cardiomyocytes: Effects of drugs used for pulmonary hypertension and chronic cough are studied in enzymatically isolated cardiomyocytes obtained via Langendorff perfusion, focusing on contractile function and intracellular calcium handling.

iv. Cardiac Remodeling and Regeneration: Morphological and functional remodeling and regenerative processes in diabetic cardiomyopathy, myocardial infarction, and chemotherapy-induced cardiomyopathy.

v. Cardiac Electrophysiology in Neuromuscular Disease: Assessment of cardiac electrical activity in mouse models of Duchenne muscular dystrophy, with evaluation of electrophysiological alterations at organ and cellular levels.

vi. Mechanisms of Arrhythmogenesis: Investigation of tissue, cellular, and molecular mechanisms underlying arrhythmogenesis in the normal and hypertrophic heart, focusing on structural remodeling, ion channel alterations, and excitation–contraction coupling dysregulation.

RESEARCH GROUP MEMBERSHIP AND COORDINATION

2005 - present: **Coordinator, Cardiac Pathophysiology Research Laboratory**, Unit of Evolutionary and Functional Biology, Department of Chemistry, Life Sciences and Environmental Sustainability, University of Parma, Italy (formerly Physiology Section, Department of Biosciences; previously Physiology Section, Department of Evolutionary and Functional Biology). The research team includes postdoctoral fellows, researchers, and faculty members and collaborates with several national and international institutions (as evidenced b yco-authorship in publications and research projects). During this period, participation in national research projects (PRIN 2005, PRIN 2007) and University research programs (FIL 2005, FIL 2006, FIL 2007). *Former group coordinators*: Prof.ssa Donatella Stilli; Prof. Ezio Musso (January 2005–November 2012).

2007 - present: Member of a **Cardiac Pathophysiology Research Group**, Department of Medicine and Surgery (formerly Department of Clinical and Experimental Medicine), University of Parma, Italy. Research focuses on cardiac pathophysiology. The group includes postdocs, researchers, and associate professors and collaborates with several national and international institutions (evidenced by co-authorship, participation in the European FP7 Project No. 214539, and joint research activities). *Group coordinators*: Prof.ssa Costanza Lagrasta; Prof. Federico Quaini (until 2019).

2013 - present: Member of a research group within the **Human Nutrition Unit**, Department of Food and Drug Sciences, University of Parma, Italy. Research focuses on the effects of natural bioactive compounds on cardiac physiology. The group typically includes more than 10

members (PhD students, postdocs, research fellows, faculty) and collaborates with several national and international institutions. *Group coordinator*: Prof. Daniele Del Rio.

2020 - present: Member of the **Microbiology Research Group**, Department of Food and Drug Sciences, University of Parma, Italy. Research focuses on the effects of polyphenol-rich fermented juices on cardiac physiology in diabetic cardiomyopathy. The group includes PhD students, postdocs, researchers, and faculty members and collaborates with Italian and international universities as well as food industry partners. Group coordinator: Prof.ssa Camilla Lazzi.

2013 - 2014: Member of a research group at the **Toxicological Research Center of Excellence (CERT)**, Department of Biosciences – Physiology Section, University of Parma, Italy. Project: *"Arrhythmogenicity of Diesel Exhaust Nanoparticles in Healthy and Failing Hearts: Focus on Mechanisms". Group coordinator*: Prof. Michele Miragoli.

COLLABORATIONS

- Prof. Daniele Del Rio, Prof. Pedro Mena, Prof.ssa Letizia Bresciani, Department Food and Drug, University of Parma, Parma, Italy.
- Prof.ssa Camilla Lazzi, Microbiology Unit, Department of Food and Drug, University of Parma, Italy.
- Prof. Federico Quaini, Prof.ssa Costanza Lagrasta, Department of Medicine and Surgery, University of Parma, Parma, Italy.
- Alan Crozier Department of Nutrition, Honorary Senior Research Fellow, School of Medicine, Dentistry & Nursing, University of Glasgow, Glasgow, G12 8QQ, Scotland.
- Prof. Giulio Gabbiani and Prof. Christine Chaponnier, Department of Pathology and Immunology, University of Geneva, CMU, Switzerland.
- Dott. Christian Zuppinger, Bern University Hospital, Switzerland.
- Dott. Konrad Urbanek, Università degli Studi di Catanzaro "Magna Grecia", Catanzaro, Italy.
- Prof. Marcello Rota, Associate Professor of Physiology, Department of Physiology, New York Medical College, Valhalla, NY 10595, United States.

PROFESSIONAL SOCIETY MEMBERSHIPS

2008 - present: Italian Cardiovascular Research Society (SIRC).
2013 - present: Working Group on Cardiac Cellular Electrophysiology, European Society of Cardiology (ESC).
2013 - present: European Society of Cardiology (ESC).
2016 - present: Working Group on Cellular Biology of The Heart, European Society of Cardiology (ESC).

JOURNAL REFEREE ACTIVITY

Reviewer for the following peer-reviewed international journals:
- Scientific Reports (Nature Portfolio).
- Molecular, Nutrition & Food Research.
- American Journal Physiology.
- International Journal of Food Sciences and Nutrition.
- PLOS ONE.
- Molecules (MDPI).
- Nutrients (MDPI).

- International Journal of Molecular Sciences (MDPI).
- Frontiers in Physiology.

TECHNICAL SKILLS

Small animal microsurgery, including implantation of telemetric transmitters for ECG recording, right jugular vein cannula cannulation for blood sampling, induction of cardiac hypertrophy by abdominal aortic constriction, induction of myocardial infarction and intracardiac microinjections, intramyocardial injections, invasive hemodynamic measurements.
Recording and automated analysis of electrocardiographic signals.
Measurement of contractile properties and intracellular calcium dynamics in isolated cardiomyocytes (IonOptix system).
Isolation of cardiomyocytes (neonatal and adult) and cardiac progenitor cells.
Cell culture techniques.
Cellular electrophysiology (patch-clamp) and tissue electrophysiology using *in vivo* and *in vitro* microelectrode array (MEA) systems.
Western blot analysis.
Morphometric analysis in light microscopy.
Immunohistochemistry.
Use of specialized software for biological data processing and statistical analysis.

COMPUTER SKILLS

Operating Systems: MS Windows (95/98/NT/2000/Vista/7/10/11), macOS, Linux.
Data Analysis Software: SPSS, X-Win32 5.3, Chart5, AcqKnowledge 3.9.1, IonWizard Core & Analysis (IonOptix), Clampex 10.2, Image-Pro Plus, Adobe Photoshop, Adobe Illustrator.
Productivity Applications: Microsoft Excel, Word, PowerPoint, Adobe Acrobat Reader.
Specialized software for biological data processing and statistical analysis.

SCIENTIFIC MEETINGS & CONFERENCES

2021: - XXIII National Congress of the Italian Society for Cardiovascular Research (SIRC), Imola, Italy, 28–30 October 2021.

2016: - Risk Assessment and Communication in Food Safety and Nutrition — Scientific Workshop, Parma, Italy, 6 October 2016.
- Rebuilding the Failing Heart — Scientific Symposium organized by Cardiocentro Ticino and the Swiss Institute for Regenerative Medicine (SIRM), Lugano, Switzerland, 9–10 May 2016.

2015: - 2nd Parma NANO-DAY — Scientific Workshop, Parma, Italy, 3–4 December 2015.
- XX National Congress of the Italian Society for Cardiovascular Research (SIRC), Imola, Italy, 26–28 November 2015.

2014: - 1st Parma NANO-DAY — Scientific Workshop, Parma, Italy, 28 November 2014.
- 38th Meeting of the European Working Group on Cardiac Cellular Electrophysiology (ESC), Maastricht, The Netherlands, 20–22 September 2014.

2013: - 36th National Congress of the Italian Society of Pharmacology (SIF), Turin, Italy, 23–26 October 2013.
- 64th National Congress of the Italian Physiological Society (SIF), Portonovo (Ancona), Italy, 18–20 September 2013.

2012: - 85th National Congress of the Italian Society of Experimental Biology, Parma, Italy, 29–30 November 2012.

2011: - Congress of the National Institute for Cardiovascular Research (INRC), Ferrara, Italy, 18 November 2011.
- XVIII National Congress of the Italian Society for Cardiovascular Research (SIRC), Imola, Italy, 21–22 October 2011.

2010: - XVII National Congress of the Italian Society for Cardiovascular Research (SIRC), Imola, Italy, 7–9 October 2010.
- VII Monothematic Congress of the Italian Society of Pharmacology, Naples, Italy, 6–7 October 2010.
- TERMIS-EU 2010 Meeting (Tissue Engineering and Regenerative Medicine International Society), Galway, Ireland, 13–17 June 2010.

2009: - 51st American Society of Hematology (ASH) Annual Meeting, New Orleans, USA, 5–8 December 2009.
- American Heart Association (AHA) Scientific Sessions 2009, Orlando, USA, 15–17 November 2009.
- World Conference on Regenerative Medicine, Leipzig, Germany, 29–31 October 2009.
- XVI National Congress of the Italian Society for Cardiovascular Research (SIRC), Imola, Italy, 29–31 October 2009.
- 60th National Congress of the Italian Physiological Society (SIF), Siena, Italy, 23–25 September 2009.
- INRC Workshop, Parma, Italy, 18–19 June 2009.

2008: - V INRC Workshop, Turin, Italy, 4–5 November 2008.
- American Heart Association (AHA) Scientific Sessions 2008, New Orleans, USA, 8–12 November 2008.
- XV National Congress of the Italian Society for Cardiovascular Research (SIRC), Imola, Italy, 9–11 October 2008.
- 59th National Congress of the Italian Physiological Society (SIF), Cagliari, Italy, 17–19 September 2008.

2007: - XIV National Congress of the Italian Society for Cardiovascular Research (SIRC), Imola, Italy, 27–29 September 2007.
- 58th National Congress of the Italian Physiological Society (SIF), Lecce, Italy, 19–21 September 2007.
- XIX World Congress of the International Society for Heart Research (ISHR), Bologna, Italy, 22–25 June 2007.
- IV INRC Workshop, Turin, Italy, 24–25 May 2007.

2006: - 57th National Congress of the Italian Physiological Society (SIF), Ravenna, Italy, 25–27 September 2006.
- XIII National Congress of the Italian Society for Cardiovascular Research (SIRC), Imola, Italy, 21–23 September 2006.
- EuroStemCell International Conference: Advances in Stem Cell Research, Lausanne, Switzerland, 8–10 September 2006.
- III INRC Workshop, Turin, Italy, 24–25 March 2006.

SCIENTIFIC PUBLICATIONS (IF = impact factor in year of publication; cit = citations)

PUBLICATIONS IN PEER-REVIEWED JOURNALS:

1. Barbetti M, Smiley CE, **Savi M**, Sgoifo A, Wood SK, Carnevali L. Not just a witness: Highlighting the utility of witness social defeat stress for the examination of neuroimmune-cardiovascular interactions across diverse populations. *Neurobiol Stress*. 2025; 38:100751. doi: 10.1016/j.ynstr.2025.100751. **(IF 2025: 3.6; cit: 1).**

2. Barbetti M, Vilella R, Naponelli V, Bilotti I, Magistrati M, Dallabona C, Ielpo D, Andolina D, Sgoifo A, Savi M, Carnevali L. Repeated witness social stress causes cardiomyocyte contractile impairment and intracellular Ca^{2+} derangement in female rats. *Physiol Behav*. 2023; 271:114339. doi: 10.1016/j.physbeh.2023.114339 **(IF 2023: 2.5; cit: 5)**.

3. Vilella R, Izzo S, Naponelli V, **Savi M**, Bocchi L, Dallabona C, Gerra MC, Stilli D, Bettuzzi S. In Vivo Treatment with a Standardized Green Tea Extract Restores Cardiomyocyte Contractility in Diabetic Rats by Improving Mitochondrial Function through SIRT1 Activation. *Pharmaceuticals (Basel)*. 2022; 15:1337. doi: 10.3390/ph15111337. **(IF 2021: 5.215; cit.: 13).**

4. Barbetti M, Vilella R, Dallabona C, Gerra MC, Bocchi L, Ielpo D, Andolina D, Sgoifo A^, **Savi M^**, Carnevali L^. Decline of cardiomyocyte contractile performance and bioenergetic function in socially stressed male rats. *Heliyon*. 2022; 15:1337. doi: 10.3390/ph15111337. **^co-corresponding authors. (IF 2021: 3.776; cit.: 7).**

5. Andolina D, **Savi M**, Ielpo D, Barbetti M, Bocchi L, Stilli D, Ventura R, Lo Iacono L, Sgoifo A, Carnevali L. Elevated miR-34a expression and altered transcriptional profile are associated with adverse electromechanical remodeling in the heart of male rats exposed to social stress. *Stress*. 2021; 24:621-634. doi: 10.1080/10253890.2021.1942830. **(IF 2020: 2.94; cit.: 10).**

6. **Savi M^**, Bocchi L, Cacciani F, Vilella R, Buschini A, Perotti A, Galati S, Montalbano S, Pinelli S, Frati C, Corradini E, Quaini F, Ruotolo R, Stilli D, Zaniboni M^. Cobalt oxide nanoparticles induce oxidative stress and alter electromechanical function in rat ventricular myocytes. *Part Fibre Toxicol*. 2021; 18:1. doi: 10.1186/s12989-020-00396-6. **^co-corresponding authors. (IF 2019: 7.546; cit.: 28).**

7. Vilella R, Sgarbi G, Naponelli V, **Savi M**, Bocchi L, Liuzzi F, Righetti R, Quaini F, Frati C, Bettuzzi S, Solaini G, Stilli D, Rizzi F, Baracca A. Effects of Standardized Green Tea Extract and Its Main Component, EGCG, on Mitochondrial Function and Contractile Performance of Healthy Rat Cardiomyocytes. *Nutrients*. 2020; 12:2949. doi: 10.3390/nu12102949. **(IF 2019: 4.546; cit.: 11).**

8. Marchesini M, Gherli A, Montanaro A, Patrizi L, Sorrentino C, Pagliaro L, Rompietti C, Kitara S, Heit S, Olesen CE, Møller JV, **Savi M**, Bocchi L, Vilella R, Rizzi F, Baglione M, Rastelli G, Loiacono C, La Starza R, Mecucci C, Stegmaier K, Aversa F, Stilli D, Lund Winther AM, Sportoletti P, Bublitz M, Dalby-Brown W, Roti G. Blockade of Oncogenic NOTCH1 with the SERCA Inhibitor CAD204520 in T Cell Acute Lymphoblastic Leukemia. *Cell Chem Biol*. 2020; 27:678-697.e13. doi: 10.1016/j.chembiol.2020.04.002. **(IF 2019: 7.739; cit.: 34).**

9. Angelino D, Carregosa D, Domenech-Coca C, **Savi M**, Figueira I, Brindani N, Jang S, Lakshman S, Molokin A, Urban JF, Jr Davi CD, Brito MA, Kim KS, Brighenti F, Curti C, Bladé C, Del Bas JM, Stilli D, Solano-Aguilar GI, Santos C, Del Rio D, Mena, P. 5-(Hydroxyphenyl)-γ-Valerolactone-Sulfate, a Key Microbial Metabolite of Flavan-3-ols, Is Able to Reach the Brain: Evidence from Different in Silico, In Vitro and In Vivo Experimental Models. *Nutrients*. 2019; 11:2678. doi: 10.3390/nu11112678. **(IF 2019: 4.546; cit.: 77).**

10. Rossi S^, **Savi M^**, Mazzola M, Pinelli S, Alinovi R, Gennaccaro L, Pagliaro A, Meraviglia V, Galetti M, Lozano-Garcia O, Rossini A, Frati C, Falco A, Quaini F, Bocchi L, Stilli D, Lucas S, Goldoni M, Macchi E, Mutti A, Miragoli M. Subchronic exposure to titanium dioxide nanoparticles modifies cardiac structure and performance in spontaneously hypertensive rats. *Part Fibre Toxicol*. 2019; 16:25. doi: 10.1186/s12989-019-0311-7. **^contributed equally to the work. (IF 2019: 7.546; cit.: 47).**

11. Bocchi L^, Motta BM^, **Savi M^**, Vilella R, Meraviglia V, Rizzi F, Galati S, Buschini A, Lazzaretti M, Pramstaller PP, Rossini A, Stilli D. The Histone Deacetylase Inhibitor Suberoylanilide Hydroxamic Acid (SAHA) Restores Cardiomyocyte Contractility in a Rat Model of Early Diabetes. *Int J Mol Sci*. 2019; 20. doi: 10.3390/ijms20081873. **^contributed equally to the work. (IF 2019: 4.556; cit.: 15).**

12. Bocchi L^, **Savi M^**, Naponelli V, Vilella R, Sgarbi G, Baracca A, Solaini G, Bettuzzi S, Rizzi F, Stilli D. Long-Term Oral Administration of Theaphenon-E Improves Cardiomyocyte Mechanics and Calcium

Dynamics by Affecting Phospholamban Phosphorylation and ATP Production. *Cell Physiol Biochem*. 2018; 47:1230-1243. doi: 10.1159/000490219. **^contributed equally to the work. (IF 2017: 5.500; cit.: 15).**

13. **Savi M**, Bocchi L, Bresciani L, Falco A, Quaini F, Mena P, Brighenti F, Crozier A, Stilli D, Del Rio D. Trimethylamine-N-Oxide (TMAO)-Induced Impairment of Cardiomyocyte Function and the Protective Role of Urolithin B-Glucuronide. *Molecules*. 2018; 23. pii: E549. doi: 10.3390/molecules23030549. **(IF 2018: 3.060; cit.: 95).**

14. Meraviglia V, Bocchi L, Sacchetto R, Florio MC, Motta BM, Corti C, Weichenberger CX, **Savi M**, D'Elia Y, Rosato-Siri MD, Suffredini S, Piubelli C, Pompilio G, Pramstaller PP, Domingues FS, Stilli D, Rossini A. HDAC Inhibition Improves the Sarcoendoplasmic Reticulum Ca2+-ATPase Activity in Cardiac Myocytes. *Int J Mol Sci*. 2018; 19. pii: E419. doi: 10.3390/ijms19020419. **(IF 2018: 4.183; cit.: 22).**

15. Giuliani A, Mencarelli M, Frati C, **Savi M**, Lagrasta C, Pompilio G, Rossini A, Quaini F. Phase-contrast microtomography: are the tracers necessary for stem cell tracking in infarcted hearts? *Biomedical Physics and Engineering Express*. 2018; 4:055008. doi: 10.1088/2057-1976/aad570. **(IF 2018: 1.100; cit.: 1)**

16. **Savi M**, Frati C, Cavalli S, Graiani G, Galati S, Buschini A, Madeddu D, Falco A, Prezioso L, Mazzaschi G, Galaverna F, Lagrasta CAM, Corradini E, De Angelis A, Cappetta D, Berrino L, Aversa F, Quaini F, Urbanek K. Imatinib mesylate-induced cardiomyopathy involves resident cardiac progenitors. *Pharmacol Res*. 2018; 127:15-25. doi: 10.1016/j.phrs.2017.09.020. **(IF 2018: 5.574; cit.: 16).**

17. **Savi M**, Bocchi L, Mena P, Dall'Asta M, Crozier A, Brighenti F, Stilli D, Del Rio D. In vivo administration of urolithin A and B prevents the occurrence of cardiac dysfunction in streptozotocin-induced diabetic rats. *Cardiovasc Diabetol.* 2017; 16:80. doi: 10.1186/s12933-017-0561-3. **(IF 2017: 5.235; cit.: 125).**

18. **Savi M**, Bocchi L, Sala R, Frati C, Lagrasta C, Madeddu D, Falco A, Pollino S, Bresciani L, Miragoli M, Zaniboni M, Quaini F, Del Rio D, Stilli D. Parenchymal and Stromal Cells Contribute to Pro-Inflammatory Myocardial Environment at Early Stages of Diabetes: Protective Role of Resveratrol. *Nutrients.* 2016; 8:729-750. doi: 10.3390/nu8110729. **(IF 2016: 3.550; cit.: 14).**

19. **Savi M**, Bocchi L, Rossi S, Frati C, Graiani G, Lagrasta C, Miragoli M, Di Pasquale E, Stirparo GG, Mastrototaro G, Urbanek K, De Angelis A, Macchi E, Stilli D, Quaini F, Musso E. Antiarrhythmic effect of growth factor-supplemented cardiac progenitor cells in chronic infarcted heart. *Am J Physiol Heart Circ Physiol.* 2016; 310:H1622-H1648. doi: 10.1152/ajpheart.00035.2015. **(IF 2016: 3.348; cit.: 25).**

20. **Savi M**, Bocchi L, Fiumana E, Karam JP, Frati C, Bonafé F, Cavalli S, Morselli PG, Guarnieri C, Caldarera CM, Muscari C, Montero-Menei CN, Stilli D, Quaini F, Musso E. Enhanced engraftment and repairing ability of human adipose-derived stem cells, conveyed by pharmacologically active microcarriers continuously releasing HGF and IGF-1, in healing myocardial infarction in rats. *J Biomed Mater Res A.* 2015; 103:3012-3025. doi: 10.1002/jbm.a.35442. **(IF 2015: 3.263; cit.: 38).**

21. Sala R^, Mena P^, **Savi M^**, Brighenti F, Crozier A, Miragoli M, Stilli D, Del Rio D. Urolithins at physiological concentrations affect the levels of pro-inflammatory cytokines and growth factor in cultured cardiac cells in hyperglucidic conditions. *J Funct Foods*. 2015; 15:97-105. doi: 10.1016/j.jff.2015.03.019. **^contributed equally to the work. (IF 2015: 3.973; cit.: 52).**

22. Urbanek K, Frati C, Graiani G, Madeddu D, Falco A, Cavalli S, Lorusso B, Gervasi A, Prezioso L, **Savi M**, Ferraro F, Galaverna F, Rossetti P, Lagrasta CA, Re F, Quaini E, Rossi F, Angelis A, Quaini F. Cardioprotection by Targeting the Pool of Resident and Extracardiac Progenitors. *Curr Drug Targets*. 2015; 16:884-894. Review. doi: 10.2174/1389450116666150126105002. **(IF 2015: 3.029; cit.: 8).**

23. **Savi M**, Rossi S, Bocchi L, Gennaccaro L, Cacciani F, Perotti A, Amidani D, Alinovi R, Goldoni M, Pinelli S, Petyx M, Frati C, Gervasi A, Quaini F, Buschini A, Stilli D, Rivetti C, Macchi E, Mutti A, Miragoli M, Zaniboni M. Titanium dioxide nanoparticles promote arrhythmia via a direct interaction with rat

cardiac tissue. *Part Fibre Toxicol*. 2014; 11:63. doi:10.1186/s12989-014-0063-3. **(IF 2014: 7.113; cit.: 90).**

24. **Savi M**, Bocchi L, Fiumana E, Frati C, Bonafé F, Cavalli S, Morselli PG, Karam J-P, Montero-Menei C, Caldarera CM, Guarnieri C, Muscari C, Stilli D, Quaini F, Musso E. Cardiac regeneration by pharmacologically active microcarriers releasing growth factors and/or transporting adipose-derived stem cells. *Journal of Biological Research (Italy)*. 2014; 87:2141. PROCEEDINGS OF THE 85TH SIBS CONGRESS. doi: 10.4081/jbr.2014.2141. **(IF 2014: 0.06; cit.: 0).**

25. Bresciani L, Calani L, Bocchi L, Delucchi F, **Savi M**, Ray S, Brighenti F, Stilli D, Del Rio D. Bioaccumulation of Resveratrol Metabolites in Myocardial Tissue is Dose-Time Dependent and Related to Cardiac Hemodynamics in Diabetic Rats. *Nutr Metab Cardiovasc Dis*. 2014; 24:408-415. doi: 10.1016/j.numecd.2013.09.008. **(IF 2014: 3.323; cit.: 58).**

26. Bianchi F, Caffarri E, Cavalli S, Lagrasta C, Musci M, Quaini F, **Savi M**. Development and validation of an high performance liquid chromatography–tandem mass spectrometry method for the determination of imatinib in rat tissues. *J Pharm Biomed Anal*. 2013; 73:103-107. doi: 10.1016/j.jpba.2012.05.034. **(IF 2013: 2.829; cit.: 18)**

27. Frati C, **Savi M**, Graiani G, Lagrasta C, Cavalli S, Prezioso L, Rossetti P, Mangiaracina C, Ferraro F, Madeddu D, Musso E, Stilli D, Rossini A, Falco A, Angelis AD, Rossi F, Urbanek K, Leri A, Kajstura J, Anversa P, Quaini E, Quaini F. Resident cardiac stem cell. *Curr Pharm Des*. 2011; 17:3252-3257. doi:10.2174/138161211797904181. Review. **(IF 2011: 3.870; cit.: 32).**

28. Bocchi L^, **Savi M^**, Graiani G, Rossi S, Agnetti A, Stillitano F, Lagrasta C, Baruffi S, Berni R, Frati C, Vassalle M, Squarcia U, Cerbai E, Macchi E, Stilli D, Quaini F, Musso E. Growth factor-induced mobilization of cardiac progenitor cells reduces the risk of arrhythmias, in a rat model of chronic myocardial infarction. *PLoS ONE*. 2011; 6:e17750. doi: 10.1371/journal.pone.0017750. **^contributed equally to the work. (IF 2011: 4.092; cit.: 32).**

29. Giuliani A, Frati C, Rossini A, Komlev VS, Lagrasta C, **Savi M**, Cavalli S, Gaetano C, Quaini F, Manescu A, Rustichelli F. High-resolution X-ray microtomography for three-dimensional imaging of cardiac progenitor cell homing in infarcted rat hearts. *J Tissue Eng Regen Med*. 2011; 5:e168-e178. doi: 10.1002/term.409. **(IF 2011: 3.278; cit.: 24)**

30. Colussi C, Berni R, Rosati J, Straino S, Vitale S, Spallotta F, Baruffi S, Bocchi L, Delucchi F, Rossi S, **Savi M**, Rotili D, Quaini F, Macchi E, Stilli D, Musso E, Mai A, Gaetano C, Capogrossi MC. The Histone Deacetylase Inhibitor Suberoylanilide Hydroxamic Acid Reduces Cardiac Arrhythmias In Dystrophic Mice. *Cardiovasc Res*. 2010; 87: 73-82. doi: 10.1093/cvr/cvq035. **(IF 2010: 6.051; cit.: 43).**

31. Prezioso L, Tanzi S, Galaverna F, Frati C, Testa B, **Savi M**, Graiani G, Lagrasta C, Cavalli S, Galati S, Madeddu D, Lodi Rizzini E, Ferraro F, Musso E, Stilli D, Urbanek K, Piegari E, De Angelis A, Maseri A, Rossi F, Quaini E, Quaini F. Cancer Treatment-Induced Cardiotoxicity: a Cardiac Stem Cell Disease? *Cardiovasc Hematol Agents Med Chem* (Formerly Current Medicinal Chemistry - Cardiovascular & Hematological Agents). 2010; 8: 55-75. doi: 10.2174/187152510790796165. Review. **(IF 2014: 1.41; cit.: 25)**

32. Berni R, **Savi M**, Bocchi L, Delucchi F, Musso E, Chaponnier C, Gabbiani G, Clement S, Stilli D. Modulation of actin isoform expression before the transition from experimental compensated pressure-overload cardiac hypertrophy to decompensation. *Am J Physiol Heart Circ Physiol*. 2009; 296:H1625-H1632. doi: 10.1152/ajpheart.01057.2008. **(IF 2009: 3.712; cit.: 23).**

33. Stilli D, Lagrasta C, Berni R, Bocchi L, **Savi M**, Delucchi F, Graiani G, Monica M, Maestri R, Baruffi S, Rossi S, Macchi E, Musso E, Quaini F. Preservation of ventricular performance at early stages of diabetic cardiomyopathy involves changes in myocyte size, number and intercellular coupling. *Basic Res Cardiol*. 2007; 102:488-499. doi: 10.1007/s00395-007-0665-0. **(IF 2007: 4.333; cit.: 30).**

34. Berni R, Cacciani F, Zaniboni M, **Savi M**, Bocchi L, Lapucci S, Razzetti R, Pastore F, Musso E, Stilli D. Effects of the alpha2-adrenergic/DA2-dopaminergic agonist CHF-1024 in preventing ventricular arrhythmogenesis and myocyte electrical remodeling, in a rat model of pressure-overload cardiac hypertrophy. *J Cardiovasc Pharmacol*. 2006; 47:295-302. doi: 10.1097/01.fjc.0000203974.31675.f6. **(IF 2006: 1.625; cit.: 5).**

CONFERENCE PAPER

1. Miragoli M, Rossi S, **Savi M**, Goldoni M, Pinelli S, Alinovi R, Galetti M, Stilli D, Macchi E, Zaniboni M, Mutti A. Nanoparticles exposure: In-vitro and in-vivo investigation to evaluate cardiovascular risk factors in normal and failing cardiac tissue. *Giornale Italiano di Medicina del Lavoro ed Ergonomia*. 2016; 38(3):146-150. 79th National Congress of SIMLII, Rome, Italy, 21–23 September 2016. **(IF 2016: 0.145; cit.: 1)**.

MONOGRAPH:

1. **Savi M**. *Stem cell based regenerative therapies in healed myocardial infarction: Cardiac electromechanical performance of the mended heart.* LAP LAMBERT Academic Publishing, 2010. ISBN-10: 3838385225 | ISBN-13: 978-3838385228.

CONFERENCE ABSTRACT & PROCEEDINGS

Total contributions in conference proceedings: 55

ABSTRACT PUBLISHED IN INDEXED JOURNAL PROCEEDINGS

Several conference contributions have been published as proceedings in international peer-reviewed scientific journals, including:

- IBRO Neuroscience Reports (Elsevier)
- Vascular Pharmacology (Elsevier)
- Circulation (American Heart Association)
- Blood (American Society of Hematology)
- Journal of Molecular and Cellular Cardiology (ISHR)
- Acta Physiologica

ORAL PRESENTATION

2011: Congress of the Italian National Cardiovascular Research Institute, Ferrara, Italy.
Pharmacologically active microcarriers conveying human adipose-derived stem cells and/or releasing growth factors in myocardial regeneration

2009: XVI National Congress of the Italian Society for Cardiovascular Research (SIRC), Imola, Italy.
Mobilization of cardiac progenitor cells by HGF and IGF-1 for repairing chronic myocardial infarction is not proarrhythmic.

2008: XV National Congress of the Italian Society for Cardiovascular Research (SIRC), Imola, Italy.
Amelioration of cardiac electrical performance following stem cell-based regenerative therapies in infarcted rat heart.

2006: III Workshop of the Italian National Cardiovascular Research Institute, Turin, Italy.
Evaluation of the regenerative efficacy of resident cardiac stem cell mobilization in a rat model of myocardial infarction.

POSTER PRESENTATIONS (SELECTED)

2021: XXIII National Congress of the Italian Society for Cardiovascular Research (SIRC), Imola, Italy.
Polyphenol-enriched fermented juices as a promising adjuvant therapy for diabetic cardiomyopathy.

2013: 64th National Congress of the Italian Physiological Society, Portonovo, Italy.
Effects of acute exposure to titanium dioxide nanoparticles on ventricular cardiomyocytes.

2012: 85th National Congress of the Italian Society of Experimental Biology, Parma, Italy.
Cardiac regeneration by pharmacologically active microcarriers releasing growth factors and/or transporting adipose-derived stem cells.

2011: XVIII National Congress of the Italian Society for Cardiovascular Research (SIRC), Imola, Italy.
Functional recovery of the infarcted heart mediated by pharmacologically active microcarriers.

2009: Workshop of the Italian National Cardiovascular Research Institute, Parma, Italy.
Cardiac electromechanical performance following stem cell-based regenerative therapies.

2008: 59th National Congress of the Italian Physiological Society, Cagliari, Italy.
Electrical stability of infarcted rat hearts following stem cell treatment.

2006: Euro Stem Cell International Conference, Lausanne, Switzerland.
Electro-mechanical competence of regenerated heart in stem cell-based therapy

OTHER CONFERENCE CONTRIBUTIONS

Additional presentations at international and national congresses including AHA Scientific Sessions, ASH Annual Meeting, TERMIS-EU, ISHR World Congress, SIF, and SIRC meetings (full list available upon request).

BIBLIOMETRIC INDICATORS (updated February 4, 2026)

SCOPUS

Total publications: 3
H-index: 19
Citations: 1043

GOOGLE SCHOLAR

Citations: 1317
H-index: 21
i10-index: 30

PROFESSIONAL AND INSTITUTIONAL TRAINING

Completed certified institutional training at the University of Parma and the Emilia-Romagna Region in the areas of:

- Occupational health and laboratory safety
- Fire safety and biological risk management
- Data protection and privacy
- Ethics, legality, transparency and anti-corruption
- Whistleblowing regulations
- Cybersecurity
- Gender-based violence and harassment prevention

(2016–2025)

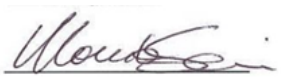
THIRD MISSION & PUBLIC ENGAGEMENT ACTIVITIES

2023 - 2025: Engagement and outreach activities with secondary schools — **Biology Open Day 2023**, University of Parma.
Geographic impact: **national**.

2020: Public engagement initiative — Workshop *"The Value of Complexity"*, COMP-HUB Laboratory, Department of Chemistry, Life Sciences and Environmental Sustainability, University of Parma.

Geographic impact: **local**.

2018: Participation in the **European Researchers' Night**.

Parma, il 04/02/2026 Firma 

The undersigned declares to be aware that, pursuant to Article 76 of Presidential Decree no. 445 of 28 December 2000, false statements, falsification of documents, and the use of false documents are punishable under the Italian Criminal Code and the relevant special laws. The undersigned authorizes the processing of the personal data contained in this document in accordance with Regulation (EU) 2016/679 (GDPR) and Legislative Decree no. 196/2003, as amended by Legislative Decree no. 101/2018..