



1. FULL NAME AND DATE

- surname, given names: **Mutoli Martina**
- gender: **Female**
- date of writing the CV: **28/01/2026**

2. DATE AND PLACE OF BIRTH, NATIONALITY, CURRENT RESIDENCE

- date and place of birth: **15/04/1994, Empoli, Tuscany, Italy**
- citizenship: **Italian**
- current residence: **Via Barigozzi 20, zipcode 20138, Milan, Lombardy, Italy**
- Phone number: **+39 327 7852 155**
- E-mail contact: martina.mutoli@multimedica.it

3. EDUCATION AND DEGREES AWARDED

PhD student in Life Science and Biotechnology at the Università degli studi dell'Insubria di Varese, department of Life Sciences and Biotechnology since October 2023, studying the molecular crosstalk between immune and cardiovascular cells in atherosclerosis.

MSc in Molecular and Health Biology, issued with an evaluation of 110/110 cum laude by Università degli Studi di Palermo, department of Biological, Chemical and Pharmaceutical Sciences and Technologies on October 16th, 2020, discussing a thesis entitled 'Role of circular RNA circANKRD12 in the endothelial response to oxidative stress', supervised by Dr. Christine Vollenkle, PhD, (IRCCS San Donato, Milano, Italy) and Prof. Laura Lentini (Università degli Studi di Palermo). Duration of the courses: from November 2017 to October 2020.

BSc in Biological Sciences, issued with an evaluation of 108/110 by the Università degli Studi di Palermo, department of Biological, Chemical and Pharmaceutical Sciences and Technologies, on October 20th, 2017, discussing a thesis entitled 'Conventional cytogenetic analysis applied to the study of a structural genetic alteration of chromosome Y', supervised by prof. Fabio Caradonna (Università degli Studi di Palermo) and Dr. Marcella Vita Mazara (Azienda Ospedaliera Ospedali Riuniti Villa Sofia-Cervello, Palermo, Italy). Duration of the courses: from October 2013 to October 2017.

- Contact details for degree verification: **Rita Tristano - Administrative Technical Staff-** Department Unit of issuance and confirmation of academic qualifications and database management. Phone number: +39 091 238 90 778. E-mail contact: rita.tristano@unipa.it

4. OTHER EDUCATION AND TRAINING, QUALIFICATIONS AND SKILLS

- **State certification exam as a Biologist**, earned in November 2020 at the University of Palermo with the evaluation of 41/50.
- Proficient with **Excel, Word, Power Point, Image J, Graphpad Prism, Biorender, FlowJo, MultiExperiment Viewer (MeV), NDP view 2 and R studio**.
- **Continuing Professional Development (ECM) (2020-2022) focused on:**
 - Technical and professional competencies in biological sciences;
 - Analytical, diagnostic and screening methodologies;
 - Data acquisition, processing and analysis;
 - Environmental health and hygiene (air, water and soil);
 - Food safety, nutrition and related health issues;
 - Special topics related to National Health System priorities and public health emergencies;
- **Biosafety level 2 training course** at IRCCS Multimedica (2021).
- **Biobanking course** at IRCCS Multimedica (2021).
- Certificate of attendance of technical training on the **PAP-8E Platelet Aggregometer** (2023).
- Certificate of attendance at the **“Know and prevent cyberattacks: Phishing”** online course proposed by IRCCS Multimedica (2024).
- Certificate of attendance at the **“Cybersecurity”** online course proposed by IRCCS Multimedica (2024).
- **Online Optical Microscopy Course**, proposed by IRCCS Humanitas Research Hospital (January 13th-14th, 2025).
- **Basic and Advanced Flow Cytometry Course** at IRCCS Humanitas Research Hospital (17th February 2025).
- **Metabolomics: online basic training course** proposed by IRCCS Humanitas Research Hospital (May 6th, 2025).
- Certificate of attendance at the **“Clinical research and international ethical principles”** online course (2025).
- Responsible for **social media posting** on behalf of the Scientific and Technological Pole (PST) at IRCCS Multimedica for **scientific research dissemination**.
- Ability to work as team player and under time pressure.
- Determined and organized.

5. LINGUISTIC SKILLS

- mother tongue: **Italian**

- other languages:

English, B2 level, certified on October 10th, 2025 by Wall Street English School.

Spanish, A2 level, self-evaluated

6. CURRENT POSITION (please choose one of the following)

January 2021-Current days:

Research biologist, under the supervision of Principal Investigator Dr. Gaia Spinetti, at the Cardiovascular Pathophysiology and Regenerative Medicine Laboratory at IRCCS Multimedica, Milan, Lombardy, Italy. My main duties in this professional experience encompass cell isolation and culture, handling of blood samples at BL.2 safety level, transcript expression analysis including mRNAs, long non-coding RNAs and microRNAs by qPCR and digital PCR, proteomic quantification and analysis, immunofluorescence analysis, quantitative flow cytometry measurements and analysis, platelet aggregation testing, writing of scientific projects, experimental designs, and scientific papers.

7. PREVIOUS WORK EXPERIENCE

April 2019 to February 2020:

Full time **Internship** at the Molecular Cardiology Laboratory of IRCCS Policlinico San Donato, Milan, Italy. During this experience, I was under the supervision of Dr. Christine Vollenkle in Dr. Fabio Martelli's research group. My responsibilities were related to cell culture of human umbilical cord derived endothelial cells, qPCR primers design and quality check by melting curve analysis, qPCR efficiency test and amplicon size verification by agarose gel electrophoresis. Other duties I had were: total RNA isolation and long non-coding RNAs expression analysis by real time RT-qPCR in endothelial cells under normal, oxidative stress and hypoxic conditions, short-interfering RNA transfection and performance of capillary-like network formation and proliferation assays.

June to September 2017:

Full time **Internship** at Azienda Ospedaliera Ospedali Riuniti Villa Sofia Cervello. During my BSc internship I was under the supervision of prof. Fabio Caradonna and I performed cytogenetic testing by conventional karyotyping on peripheral blood and amniotic fluid samples.

8. OTHER ACADEMIC MERITS

- Member of the **Sicilian Order of Biologists**.
- Member of the **AtheroNET COST Action**, an organization with the aim to implement multiomics in atherosclerotic cardiovascular disease research.
- Winner of an internal call by IRCCS MultiMedica named "New Ideas Award" with the project "**CD34⁺ HSPCs as a tool to identify high-risk atherosclerotic patients through their frequency, functional and molecular analysis**".
- Co-supervisor of Specialization Thesis in Vascular Surgery titled "**Fat attenuation index e marcatori immunitari in chirurgia vascolare: verso una stratificazione personalizzata del rischio aterosclerotico**" (Candidate: Dr. Chiara Pisani, Università degli studi di Milano, Academic Year: 2023-2024).

9. SCIENTIFIC PUBLICATIONS

1. Voellenkle C, Fuschi P, Mutoli M, Carrara M, Righini P, Nano G, Gaetano C, Martelli F. **CircANKRD12 Is Induced in Endothelial Cell Response to Oxidative Stress**. Cells. 2022 Nov 9;11(22):3546. doi: 10.3390/cells11223546.
2. Rampin A, Carrabba M, Mutoli M, Eman CL, Testa G, Madeddu P, Spinetti G. **Recent Advances in KEAP1/NRF2-Targeting Strategies by Phytochemical Antioxidants, Nanoparticles, and**

Biocompatible Scaffolds for the Treatment of Diabetic Cardiovascular Complications. Antioxid Redox Signal. 2022 Apr;36(10-12):707-728. doi: 10.1089/ars.2021.0134.

3. Spinetti G*, Mutoli M*, Greco S, Riccio F, Ben-Aicha S, Kenneweg F, Jusic A, de Gonzalo-Calvo D, Nossent AY, Novella S, Kararigas G, Thum T, Emanuelli C, Devaux Y, Martelli F. **Cardiovascular complications of diabetes: role of non-coding RNAs in the crosstalk between immune and cardiovascular systems.** Cardiovasc Diabetol. 2023 May 24;22(1):122. doi: [10.1186/s12933-023-01842-3](https://doi.org/10.1186/s12933-023-01842-3).

*Authors contributed equally

4. Mutoli M, Martelli F, Spinetti G. **TfR1 gene expression as a potential biomarker for iron deficiency in heart failure.** Int J Cardiol. 2023 Sep 1;386:95-97. doi: [10.1016/j.ijcard.2023.05.029](https://doi.org/10.1016/j.ijcard.2023.05.029). Epub 2023 May 23.
5. Greco S*, Madè A*, Mutoli M*, Zhang L, Piella S, Vausort, M, Lumley A, Beltrami A, Srivast P, Milani V, Boveri S, Ranucci M, Valentina L, Firat H, Bruno A, Spinetti G, Emanuelli, C, Devaux, Y, Martelli F. **HCG18, LEF1AS1 and lncCEACAM21 as biomarkers of disease severity in the Peripheral Blood Mononuclear Cells of COVID-19 patients.** Journal of Translational Medicine. October 26, 2023. doi: 10.1186/s12967-023-04497-6.

*Authors contributed equally

6. Andrea Rampin, Martina Mutoli, Massimiliano Martelli, Alberto M. Settembrini, Fabio Martelli, Tijana Mitic, Miron Sopic, Antonino Bruno, Gaia Spinetti; AtheroNET COST Action CA21153. **MicroRNAs in the progression of atherosclerosis: rise and fall of the atherosclerotic plaque.** European Atherosclerosis Journal. July 31, 2024. doi: 10.56095/eaj.v3i2.63.
7. Martina Mutoli, Andrea Rampin, Alberto M. Settembrini, Giovanni Nano, Massimiliano Martelli, Antonino Bruno, and Gaia Spinetti. **Coupling ncRNA transcriptomics with proteomics, genomics, and the immune cell landscape for optimizing the diagnosis, prognosis, and therapy of atherosclerosis.** “Technological Leaps in Vascular Surgery”, annual book of the Italian Vascular Surgery Society (SCIVE). Edizioni Minerva Medica, 2024, pp. 157-166.

Manuscripts submitted for publication:

Maria Teresa Palano; Federica Riccio; Luisa Sambado; Elena Tagliabue; Milena Bertolotti; Marzia Campanile; Martina Mutoli; Andrea Rampin; Cristian Rubuano; Giorgia Maspero; Antonio Antico; Francesca Pitzalis; Matteo Fassan; Piero Maria Stefani; Paola Ostano; Giovanna Chiorino; Nicolò Baranzini; Laura Pulze; Annalisa Grimaldi; Antonino Bruno; Maria Sambataro; Gaia Spinetti.

Circulating Natural Killer Cells in Patients with Type 2 Diabetes and Peripheral Neuropathy Are Altered in Their Frequency and Exhibit Impaired Functions and Angiogenic Activities. The FASEB Journal. Submitted for publication on 15 January, 2026.

Martina Mutoli*; Andrea Rampin*, Ph.D.; Alisia Madè; Elena Tagliabue; Marzia Campanile; Barbara Bianchi; Ermanno Longhi; Lorenzo Drago; Alexis Elias Malavazos; Rosanna Cardani; Marco

Ranucci; Fabio Martelli; Giuseppe Ambrosio. **Inflammation and Iron Metabolism Dysregulation in COVID-19: Correlations with Disease Severity**. European Journal of Internal Medicine. Submitted for publication on 27 January, 2026.

*Authors contributed equally

10. PARTICIPATION TO SCIENTIFIC MEETINGS AND TO OTHER ACTIVITIES

- **Poster presentation** with an abstract entitled **“Expression levels of COVID-19-associated long non-coding RNAs in inflammatory cells”** at the **“8th MC & WG meeting of the EU-CardioRNA COST Action”**, Pavia, Italy (May 25-27th, 2022).
- **Attendance** at the **"3rd AtheroNET CA21153 Meeting"**, Vlorë, Albania (September 27-29th, 2023).
- **Attendance** at the congress **"Update on Diabetes and CVD"**, organized in collaboration with the Diabetes and CVD Study Group (a reference group of the EASD), Hilton Hotel, Milan, Italy (January 12–13th, 2024).
- **Attendance** at the congress **"Acute Heart Failure and the Vulnerable Phase: Paving New Ways to Master Acute and Chronic Heart Failure Management"**, IRCCS MultiMedica, Sesto San Giovanni, Italy (March 7–8th, 2024).
- **Attendance** at the **"MACS Imaging and Spatial Biology Days 2024"**, organized by Miltenyi Biotec, Bergisch Gladbach, Germany (September 4–5th, 2024).
- **Attendance** at the **"European Researchers' Night"** with the public engagement activity **"Recognize and Prevent the Effects of Obesity on Cardiovascular and Metabolic Health"** Duomo Square, Milan, Italy (September 17th, 2024).
- **Attendance** at the **"CardioSCOPE/AtheroNET Training School"** titled **"Shaping Scientific Careers in Cardiovascular Research: Within and Beyond Academia"** (September 3–5th, 2025).
- **Attendance** at the **"European Researchers' Night"** with the public engagement activity **"Recognize and Prevent the Effects of Obesity on Cardiovascular and Metabolic Health"**, Loggia dei Mercanti, Milan, Italy (September 26th, 2025).
- **Attendance** at the **“SID Congress-II peso della glicemia: diabete e obesità tra rischio cardio-renale, epatico e neurologico"**, IRCCS MultiMedica, Sesto San Giovanni, Italy (September 27th, 2025).
- **Oral presentation** with an abstract entitled **“Role of CD34⁺ HSPCs in the early identification of patients at high atherosclerotic risk”** at the **“SISA Regional Section Lombardy Congress (XXIV Study Day)”**, Starhotels Rosa Grand, Milan, Italy (October 23-25th, 2025).
- **Attendance** at the **“AMD-SID Lombardy Congress”**, Como, Italy (November 21th, 2025). **Poster (co-author): “BPIFB4 and its Longevity-Associated Variant protect against platelet dysfunction in Type 2 Diabetes Mellitus”**.